Albert P. Pisano, Ph. D.

Curriculum Vitae

May 2018

Present Position:

Professor and Dean, Jacobs School of Engineering, UC San Diego (Sep 2013 - present)
Walter J. Zable Distinguished Endowed Chair of Engineering (Sep 2013 - present)

Member, National Academy of Engineering (2001 - present)
Fellow, American Society of Mechanical Engineering (2004 - present)
FANUC Endowed Chair of Mechanical Systems (1999 - 2014)
Awardee, The Thomas Egleston Medal, awarded to the most distinguished alumnus of Fu Foundation School of Engineering and Applied Science, Columbia University in the City of New York, 2010.
Awardee, The Berkeley Citation, awarded to those whose contributions to UC Berkeley go beyond the call of duty and whose achievements exceed the standards of excellence in their fields, 2013.

7313 Jacobs Hall
9500 Gilman Drive #0403
La Jolla, CA 92093-0403

Office Phone: (858) 534-6237
Mobile: (925) 786-8426
E-mail: appisano@eng.ucsd.edu
Web Page: http://www.jacobsschool.ucsd.edu
http://prime.eng.ucsd.edu

Education:

Ph. D. (Mechanical Engineering) Graduate School of Arts and Sciences, Columbia University, May 1981.
Dissertation topic: The Analytic Development and Experimental Verification of a Model of a High-Speed, Cam-Follower System. Advisor: Professor Ferdinand Freudenstein.

M. Phil. (Mechanical Engineering) Graduate School of Arts and Sciences, Columbia University, Jan 1980.

MS (Mechanical Engineering) School of Engineering and Applied Science, Columbia University, May 1977.

BS (Mechanical Engineering) School of Engineering and Applied Science, Columbia University, May 1976.

Leadership Roles, Responsibilities and Accomplishments:

Dean of the Jacobs School of Engineering, UC San Diego (Sep 2013 - present)

- Responsible for simultaneous improvements in growth, quality and diversity via a 7-year trajectory that is used internally to guide strategic investment toward "The Collaboratories for the Digital Future".
- Raised rankings from 17 to 12 over 3 years. (US News & World Report, Engineering Schools offering Ph.D.)
- Achieved $178M annual research expenditure, representing a gain of 18.5% over 3 years.
- Achieved #1 ranking of annual research expenditure per faculty capita among all public engineering schools.
- Achieved a hiring rate of 40% women faculty, 32% women in undergrad first year, 24% in graduate program.
- Increased faculty from 184 to 255, with diversity candidates comprising 40% of faculty hired per year.
- Raised student diversity simultaneously with student quality, reinforced by a Student Success Initiative.
- Inaugurated 10 engineering interdisciplinary research centers and 3 joint institutes in the last 3 years.
- Arranged $153M of $180M toward Franklin Antonio Hall, including a $30M gift from the naming donor.

Founding Faculty Director of the Office of Operational Excellence, UC Berkeley (Jun 2010 - Jan 2011)

- Responsible for the campus-wide administrative mission of 14,000 staff, including 2,000 middle managers.
- Developed and implemented campus-wide initiatives in Organizational Simplification, High-Performance Culture, Procurement, Student Services, Energy, New Financial Model and Information Technology.
- Achieved a savings in administrative expenditures of over $75M per year via change management.
- Set the stage for subsequent out-year savings reaching $140M per year.
- Maintained the values of diversity, equity, inclusion, transparency, stakeholder engagement, bottoms-up idea generation, top-down vision-setting with clear roles and responsibilities for those in the process.

Acting Dean, UC Berkeley (Jan 2010 - Jun 2010)

- Managed 230 faculty, 100 staff and 4500 students in seven academic departments.
- Consolidated curriculum and engineering support staff, including college-wide IT program.
- Developed new academic strategic plan to guide future faculty hiring.
- Secured $20M in gifts for Fung Institute for Engineering Leadership and for capital improvements.
- Launched campaigns for an additional $25M, subsequently completed.

Chair of Mechanical Engineering Department, UC Berkeley (Jul 2004 - Dec 2009)

- Represented 620 undergraduate students, 340 graduate students, 44 faculty and 20 staff.
- Raised departmental ranking from #5 to #2 (NRC as well as US News & World Report).
- Established the first industrial advisory board and initiated departmental fundraising.
- Secured $32M in philanthropic and research monies.
- Instituted new administrative procedures with monthly budget reviews.
- Developed 10,000 sq.ft. prototyping facility shared with 2 other departments.

Director of the Electronics Research Laboratory, UC Berkeley (Aug 2000 - Jun 2004)

- Supervised the largest research funds management facility on the UC Berkeley campus.
- Managed research funds for 110 faculty researchers and 600 graduate students.
- Increased annual budget from $37M to $63M.

Program Manager, Microelectromechanical Systems, DARPA (Jul 1997 - Sep 1999)

- Managed the largest federal research portfolio for MEMS in the USA.
- Increased research contracts from 37 to over 85, with annual funding in excess of $72M.
- Increased program expenditures to approximately $168M total over 3 fiscal years.

Personal Interests:

A dedicated husband, father and grandfather, Professor Pisano enjoys wine, cooking, hiking, biking, touring, reading, playing the occasional tennis game, and restoring (albeit, slowly) his 1960 MG Type-A classic automobile.

Research Interests:

Primary: Invention, design, fabrication, modeling and optimization of micro electromechanical systems (MEMS): harsh environment sensors, micro thermal heat management devices for integrated circuits, micro power generation/harvesting devices, micro resonators for RF communication, micro fluidic systems for nano manufacturing, micro inertial instruments, nanolattice metamaterials and nanoimprinted sensors & electronics.
Secondary: Rapid prototyping. Optimal mechanical design. Kinematics and dynamics of machines.

Professor Pisano has authored or co-authored over 400 refereed publications and has graduated nearly 70 Ph. D. students and over 75 Masters students from the University of California in his 34-year career. Professor Pisano frequently serves as a consultant to industry managers, academic administrators, engineering society managers and government policymakers on the issues of MEMS research, design, application and commercialization. Professor Pisano is listed as inventor or co-inventor on 36 patents. The ISI Web of Science calculates an overall h-index of 38 for Professor Pisano.

Academic Experience (University of California, San Diego, Sep 2013 - present):

Professor Pisano transitioned from UC Berkeley to UC San Diego to become the Dean of the Jacobs School of Engineering. The Jacobs School, named for its major donor, Irwin Jacobs (founder of Qualcomm, a dominant company in wireless communication), is the largest school of engineering in California, placing almost 2900 students into the workforce this past year, currently expending over $178 million in research effort per year, and generating over 30 patents per year. Dean Pisano quickly re-organized the school, placing it on a strong growth trajectory, and has been building new processes and programs to keep the school on a 7-year expansion trajectory. The new "Strategy for Excellence" includes 1) managed growth, 2) strategic initiatives to enhance research productivity, and 3) growth in infrastructure. Dean Pisano follows several mantras, such as "engineering as a force for the public good" as well as "the great engineering schools of the next decade will collaborate their way to relevance", and "you're an engineer from day one". Diversity is a very strong theme in the School, and current achievements include a hiring rate of 40% women faculty, 32% women in undergrad first year, 24% in graduate program.

Managed growth is being achieved by balancing the myriad resource streams within the school, and that means keeping student enrollment (undergraduate as well as graduate) in balance with faculty headcount and research productivity. Faculty research productivity is very high, at an average of approximately $730k per year per faculty. Professor Pisano engaged the Jacobs School of Engineering in a 7-year plan to bring faculty from 184 to 280, research from $150 million to $260 million annually, all while maintaining a student population of over 8,000 students, with an approximate ratio of two undergraduates per graduate student. Within one year of initiating the trajectory, the School reached 224 faculty, $168 million research annually, and 8,700 students, and is currently on-track toward its 7-year goals.

Strategic initiatives have been initiated to enhance research productivity include the building of 8 interdisciplinary institutes (3 have been completed in 2 years) as well as 15 agile research centers (10 have been founded in 3 years). The Jacobs School is achieving these aggressive goals all the while improving the student experience. New programs in experiential engineering, technology management and entrepreneurship and data science have been launched, as well as reforms made to the curriculum. Dean Pisano is particularly proud of the school-wide Student Success Initiative, aimed at increasing retention and diversity in engineering via academic support, community building and leadership opportunities. This program is integrated with campus-wide programs.

Growth in infrastructure is essential to a growing, expanding engineering school. The primary theme for infrastructure growth is "The Collaboratories for the Digital Future", part of which is the building of a new collaboration-laboratory with approximately 137 ksf assignable space. The Jacobs School has secured, in the last 3 years, $153 million of the

$180 million required to finish the project. The Jacobs School making excellent overall progress in its capital campaign for a total of $200 million and currently in "public mode", with a public launch in March 2017.

Other reforms include a new administrative best practices program and a faculty climate survey, as well as a faculty salary equity review. These reforms have been put in place this year, and improvements have already been shown. Dean Pisano is a visible figure nationally, in the region and on the campus, and participates in over 75 speaking engagements per year.

Academic Experience (University of California, Berkeley, Jul 1983 - Aug 2013):

Diversity Efforts: In the course of service, teaching and research, Professor Pisano has been extremely active in promulgating diversity at the University of California, Berkeley.

As the Faculty Head of Operational Excellence, he took strong actions to guarantee diversity not only in the ranks of the staff who serve the University, but also in the building and operation of the Operational Excellence effort itself. In this regard, Professor Pisano was extremely aware of "disparate impact" of the effects of headcount reduction among the staff. He also guaranteed avenues for the voices of faculty, staff and students to be heard. Professor Pisano personally visited organizations that represent students (Associated Students of UC (ASUC) Senate, Gradate Assembly (GA) President, ASUC President) as well as staff groups (Berkeley Staff Assembly (BSA), Center for Organizational and Workforce Effectiveness (COWE), Campus Staff Organizations (CSO)).

As the Chair of Mechanical Engineering, Professor Pisano prosecuted a strong agenda of diversity, working diligently toward equity and inclusion for faculty, staff and students of the department. Using externally-raised philanthropic funds, Professor Pisano established a $50,000 per year fund (to run for 5 years for a total of $250,000) for Equity and Inclusion in the Department of Mechanical Engineering as well as in the College of Engineering. Professor Pisano re-constituted the Mechanical Engineering Department Committee for Affirmative Action, changing it to the Mechanical Engineering Department Committee for Equity and Inclusion, and reformulated the committee membership to include student and staff membership (3 faculty, 2 staff and 7 students). Retention of female faculty has always been a top priority to Professor Pisano. In one instance, Professor Pisano successfully convinced the faculty member to return to UC Berkeley **after** she had accepted the position at Notre Dame, bought a home in Indiana, and packed her belongings on the moving van. To help increase the diversity of the staff of the department, Professor Pisano has hired an African American, an African, an Indian, two Filipina and a Hispanic to the Department staff. Of these 6 new hires there were 5 women. To demonstrate the sincerity of the department's commitment to equity and inclusion for students, Professor Pisano instituted semester meetings between the Department Chair and all student groups. He also initiated a policy of significant financial support ($1,000 per semester per student group) for student groups who were engaged in the cause of diversity. These student groups include Society of Women Engineers (SWE), Black Engineering and Science Students Association (BESSA), Black Graduate Engineering and Science Students Association (BGESS), Latino/a Association for Graduate Students in Engineering and Science (LAGSES), Pi Tau Sigma Mechanical Engineering Student Honor Society (PTS), Tau Beta Pi Engineering Student Honor Society (TBP), American Society of Mechanical Engineers (ASME) student chapter, UC Berkeley Solar Car Team (CalSol), UC Berkeley Formula SAE Racing Car Team (Formula SAE).

Professor Pisano has worked hard to recruit women and underrepresented minorities to his research laboratory. During his later years at UC Berkeley, Professor Pisano was the Ph.D. advisor to 13 female graduate students and 12 male graduate students. This is a 52% ratio of women to men in a lab in a Department where the overall percentage of women is less than 12%.

Professor Pisano has worked hard for the cause of diversity, prosecuting a strong program of research in sickle cell anemia. This disease is dominant in black and Latino communities, and Professor Pisano's work (along with his African-American graduate student) helped to solve a major question in sickle cell anemia: *Does a reduction in red blood cell metabolism cause sickle cell anemia? Or, does the onset of the disease reduce the red blood cell metabolic rate?* Researchers attempting to isolate the specific cause of the disease have debated this issue for over a decade with no clear answer achieved. This work continues today.

Jan 2011 - Dec 2011: On sabbatical at Tohoku University, Sendai, Japan. At Tohoku University, Professor Pisano has pursued an aggressive program of i) joint research collaboration with the number-one top-ranked MEMS research laboratory in Japan, the World Premier International Research Center (WPI) of Professor Masayoshi Esashi, ii) fund-raising in Japan for collaborative research with Japanese industry and iii) development of a new undergraduate course (offered Spring 2012) in Mechanical Engineering in the optimal design of mechanical subsystems. The World Premier International Research Center Initiative (WPI) was launched in 2007 by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) in a drive to build within Japan "globally visible" research centers that boast a very high research standard and outstanding research environment, sufficiently attractive to prompt frontline researchers from around the world to want to work in them. These centers are given a high degree of autonomy, allowing them to virtually revolutionize conventional modes of research operation and administration in Japan. The topic of collaboration between Professor Pisano and Professor Esashi was the development of high-temperature (600°C), harsh environment integrated sensor/electronic systems that could make possible the acquisition of data from geothermal wells, oil and gas wells, industrial gas turbines, internal combustion engines, and other equipment essential in the field of energy and power.

Jun 2010 - Jan 2011: Founding Faculty Head, Program Office for Operational Excellence, University of California at Berkeley. Operational Excellence (OE) at the University of California at Berkeley was charged with the responsibility to engage the process of deep institutional change in order to make a major restructuring of the administrative mission of the campus, improving the administrative operations in order to achieve a savings of over $75 million per year. The administrative mission of the campus is prosecuted by approximately 14,000 staff, including 2,000 staff middle managers distributed over a large array of (sometimes overlapping) administrative organizations. This position of Faculty Head of the Program Office reported directly to the Chancellor of the Campus, and was immediately governed by a four-person Executive Committee which consisted of the Chancellor, Executive Vice-Chancellor & Provost, Vice-Chancellor of Administration and Professor Pisano in his role as Faculty Head of the Program Office. Professor Pisano was responsible for the formation of the Program Office, the staffing of all initiatives, the communications to the campus stakeholders as well as the campus management, Program Office budget and resources, management structure within the Program Office, stakeholder (faculty, staff and students) engagement and programmatic direction. In seven months, Professor Pisano was able to set up the Program Office, assemble seven teams for special initiatives and identify over $20 million annually in savings. The seven initiatives were Organizational Simplification, High-Performance Culture, Procurement, Student Services, Energy, New Financial Model and Information Technology. To both preserve the fundamental cultural values of the University of California at Berkeley and to introduce new concepts of change management to the campus, Professor Pisano assembled teams drawn from the campus community to staff these important initiatives. Each initiative was led by a duo of faculty/staff Initiative Sponsors. These initiatives were supported by a staff Initiative Manager and populated with a working team of 7 to 24 faculty/staff members. Professor Pisano was instrumental in setting the communication pattern and tone for the Program Office, and maintained the values of diversity, equity, inclusion, transparency, stakeholder engagement, bottoms-up idea generation, top-down vision-setting and the establishment of clear roles and responsibilities for those involved in the process. As part of these responsibilities, Professor Pisano directly engaged the campus community, frequently holding OE informational meetings and "town hall" meetings in order to set expectations and manage both the expected enthusiasm and the expected resistance to this example of deep institutional change. In addition, Professor Pisano personally visited organizations that represent students (Associated Students of UC (ASUC) Senate, Gradate Assembly (GA) President, ASUC President) as well as staff groups (Berkeley Staff Assembly (BSA), Center for Organizational and Workforce Effectiveness (COWE), Campus Staff Organizations (CSO)). Professor Pisano served during the formative stages and through the completion of the Design stage of Operational Excellence. In subsequent years, the campus reported that these changes accounted for reductions in administrative costs of approximately $140 million annually.

Jan 2010 - Jun 2010: Acting Dean, College of Engineering, University of California at Berkeley. The College of Engineering at the University of California, Berkeley is composed of approximately 230 faculty, 100 staff and 4500 students that are distributed across seven academic departments. In addition, the College administers ERSO (Engineering Research Services Organization) which is composed of approximately 70 administrators who provide all research funding administration for an annual research flow of approximately $130 million per year. As the Acting Dean, Professor Pisano was the primary person responsible for all academic programs, faculty tenure and promotion, space allocation, student services, research administration, external fundraising and all negotiations with the central campus for budget and headcount. In the short sojourn of Professor Pisano in this post, he has been able to 1) complete a curriculum consolidation college-wide (to remove unnecessary overlap in the departmental academic curricula), 2) a consolidation of engineering support staff college-wide (to cope with recent budget cuts), 3) complete the development

of a college-wide information technology plan to consolidate IT for administration and research within the college, 4) complete the development of a new academic strategic plan to guide future faculty hiring, 5) formulate a new budget for the entire college as part of the annual budgeting process, 6) close successfully a major gift of $15 million to start a new institute for engineering leadership and 7) close successfully a $5 million for a major retrofit of the student center. Launched capital campaigns for $20 million for a new manufacturing institute building and $5 million for renovation of the old microfabrication laboratory into a new energy research center. Professor Pisano has championed a strategic research alliance between Siemens Corporation and the College of Engineering and created new strategic alliances with Renault/Nissan, Lockheed Martin and JATES (The Japanese Techno-Economic Society, a consortium of 150 Japanese companies founded in 1966). While Acting Dean, Professor Pisano streamlined the main governing structure of the College of Engineering, instituted a weekly cycle by which all senior staff report directly to the Dean, established a bi-weekly, one-on-one meeting of all department chairs with the Dean, and founded a new committee, the College Research Committee, by which all significant research results were reported directly to the Acting Dean.

Sep 2007 - Sep 2010: Adjunct Scientist at the Childrens Hospital Oakland Research Institute (CHORI). This position was awarded in recognition of several collaborative research projects shared between Professor Pisano and Bertram Lubin, the Director of CHORI. In this position, Professor Pisano is pursuing a number of research topics, all involving the biological assay of individual cells.

Jul 2004 - Dec 2009: Professor and Chair, Department of Mechanical Engineering, University of California at Berkeley. The Department of Mechanical Engineering is a community of nearly 1100 people that ranks as #2 (both graduate and undergraduate rankings) among all other departments of mechanical engineering (both public and private) in the United States. Composed of over 620 undergraduate students, 340 graduate students, 44 faculty and 20 staff, the Department of Mechanical Engineering is managed by the Chair, two Vice-Chairs and approximately 20 standing committees. As the Chair of the Department, Professor Pisano was the faculty member who served as the academic leader and administrative head of both the research and instructional missions of the Department. Professor Pisano was leading the Department through a period of explosive research growth and difficult curricular changes despite the tight constraints imposed by limited funding from the State of California. Professor Pisano established an External Advisory Board for the Department, composed primarily of senior executives of large corporations (both domestic and international). The External Advisory Board has helped the Department find $5 million in external funding, achieve ABET accreditation and advise student project teams such as the CalSol team, building a solar car. Professor Pisano lead the effort to reorganize the undergraduate curriculum to make possible an unconstrained first year curriculum for all students of the College of Engineering, and achieved subsequent changes as well in years two through four of the Mechanical Engineering curriculum. Professor Pisano installed a new 5-year degree program in Mechanical Engineering. A new student machine shop has been developed to provide greater experimental and hands-on experience to all students. The student machine shop expands each year, making possible a “renaissance of the practical arts” here at UC Berkeley. A studio of rapid prototyping machines has been installed. In 2012, these machines supported over 300 students in rapid prototyping and produced, in a 12-week period, over 530 prototypes. The Departmental staff members have been reorganized for better efficiency, including the separation of two staff and the new hiring of several new staff, with a net increase of staff available to assist in the teaching mission of the Department. The research mission of the Department has been clarified, with important new initiatives in MEMS, Energy, Nanoscience/Nanoengineering, Manufacturing and Biomechanical Engineering being launched. A new memorandum of agreement has been initiated between the Department and the Childrens Hospital Oakland Research Center, and several joint projects have been initiated. New financial measures have been put into place for the Department, and the academic budget was evaluated and re-evaluated on a monthly basis, so that expected income and spending allocations are reconciled on a 30-day cycle. A new Departmental committee structure has been implemented so that unused standing committees are eliminated and working committees are more focused with written charges. The highest-ranking Departmental committee, the Chair’s Advisory Committee, was constituted via open faculty election of over half the members. A new Departmental teaching workload formula has been instituted and sunshine laws implemented so that all faculty know the teaching assignments as well as the teaching workload of all other faculty. This same philosophy has been applied to laboratory space allocation, making possible the rationalization of space and a smoothing of faculty relations via transparency and uniformity. New research directions, such as Mechanical Engineering in the Interest of Society, Biomechanical Engineering, Green Manufacturing and Multi-Scale, Multi-Physics Computation have been identified. Of increased importance was the creation of major joint initiatives between the Department and other Universities. In particular, Professor Pisano orchestrated the participation of the Department in the design and founding of the new King Abdullah University of Science and Technology (KAUST) Academic Excellence Alliance (AEA). Under the auspices of this collaboration, the Department has assisted KAUST in i) identifying new

faculty members, ii) developing new graduate curriculum and iii) setting up collaborative research projects. This project is of great humanitarian value, since it is part of a program to inaugurate a true, Western-style academic institution, KAUST, into Saudi Arabia. KAUST has fulfilled its promise to engage a significant population of women and ethnic minorities and the hope is that collaboration in the development of science and technology will both help to stabilize the region as well as to facilitate a rapprochement between the West and the Middle East. A major part of this activity was Professor Pisano's role in negotiating a $27M arrangement with KAUST, to support the myriad services provided by UC Berkeley to KAUST during its formative years.

Apr 2002 - Jun 2006: Member, CITRIS Founding Board of Governors, Faculty Executive Committee. The Center for Information Technology Research in the Interest of Society (CITRIS) is a multi-campus initiative to bring together faculty from the School of Engineering and faculty from the social studies in order to formulate and solve societal-scale problems in communication and information technology. CITRIS brings together new-technology hardware, leading-edge computer science and current societal interests in order to generate new solutions to societal problems such as energy, health, transportation, disaster and communication systems. These new solutions must be sized at the societal scale, i.e., at a scale to encompass the State of California. In the past, as the Director of the ERL (now reorganized into ERSO), Professor Pisano was part of the CITRIS budget generation process.

Aug 2000 - Jun 2004: Director of the Electronics Research Laboratory, University of California at Berkeley. The Electronics Research Laboratory (ERL) was the largest organized research unit on the campus of the University of California at Berkeley. (It has since been re-organized into a new, larger organization, the Engineering Research Service Organization). The ERL played a central role in the formation of the Center for Information Technology in the Interest of Society (CITRIS). The ERL was truly an interdepartmental organized research unit and it administered research in novel, high-technology areas in 7 different departments on the UC campus. Composed of approximately 110 faculty researchers, the ERL had a total of 180 staff and over 600 graduate students. With a total annual budget of approximately $63 million, the ERL had a staff payroll of over $3.6 million. The ERL was composed of five main divisions: the Berkeley Sensor & Actuator Center (BSAC), the Berkeley Wireless Research Center (BWRC), the Giga Scale Research Center (GSRC), the Berkeley Northside Research Group (BNRG) and the Micro Systems Group (MSG), several smaller technical divisions and several support divisions for grant administration, payroll and purchasing. Research topics in the ERL spanned several established and emerging research areas, many of which are strongly aligned to the future of the nation's economy. These research areas included micro electromechanical systems (MEMS), bioengineering, bioelectronics, communications and signal processing, computer architecture and hardware, computer-aided design and optimization, operating systems, programming systems; programming theory and algorithms, data base management, electromagnetic radiation and propagation, high-temperature superconductors, plasmas, quantum and optical electronics, integrated circuits, microelectronics, solid-state devices, semiconductor materials and technology, networks and systems, and micro optics. The ERL carried federal audit responsibility for all its contracts and grants. Professor Pisano was in charge of day-to-day operations, long-range planning and campus-level fundraising. Most importantly, Professor Pisano brought to the attention of the administration the financial needs of ERL and was instrumental in the reorganization effort of ERL into ERSO.

Jul 1999 - 2014: FANUC Chair of Mechanical Systems and Professor of Mechanical Engineering, University of California at Berkeley. Active in design and fabrication of micro electromechanical systems (MEMS) constructed of silicon using VLSI chip manufacturing Processes. Appointments of a five-year term were made 1999-2004, 2004-2009 and 2009-2014.

Jul 1995 - 2015: Professor, University of California at Berkeley, Department of Electrical Engineering and Computer Sciences. Joint appointment made in recognition of the active role Professor Pisano made in the research, teaching and service mission of the Electrical Engineering and Computer Sciences Department.

Jul 1992 - 2015: Full Professor, University of California at Berkeley, Department of Mechanical Engineering.

Professor Pisano has served as the Chair of the Berkeley Micro Electromechanical Systems (MEMS) Laboratory Committee in the Department of Mechanical Engineering. This is a department-wide facility for the characterization and test of MEMS of all kinds, including micro inertial instruments, micro disk drive components, micro fluidic systems and micro resonators. This committee oversees the founding, operation, growth and application of MEMS research in the Department of Mechanical Engineering.

The BMAD Laboratory is a research facility for the exclusive use of the graduate students of Professor Pisano and is equipped for the design of MEMS (Micro Electromechanical Systems). Currently, the laboratory is configured for the testing of microfluidic systems, with a digital particle imaging velocimetry apparatus, microflow bench and data acquisition equipment.

Professor Pisano has frequently performed service on the national scale by providing input to the government and to engineering societies. In his efforts to assist the Department of Defense, Professor Pisano has organized five workshops to explore the applications of MEMS for power generation, harsh environments, remote sensing, nanotechnology and supersonic airfoil control. For example, Professor Pisano has assisted DARPA by organizing a workshop on "Bio Assay and Therapeutic Drug Delivery to the Single Cell". In his efforts to assist the National Academy of Engineering, Professor Pisano has helped organize the "Frontiers of Engineering" conference. In his efforts to assist the American Society of Mechanical Engineers, Professor Pisano has helped organize a workshop on "Nanotechnology - Role of Mechanical Engineering." To assist the growth and adoption of MEMS in the Midwest, Professor Pisano had served as a Technical Advisor to the Glennan Microsystems Initiative, which is a $21 million effort run from the NASA Lewis Research Center in Cleveland, to commercialize MEMS in the Ohio locale.

Professor Pisano has served as Major Field Advisor for over 200 students in Mechanical Design, as well as Faculty Advisor for the Management of Technology Program, a joint effort between the Haas School of Business and the College of Engineering. In the Department of Mechanical Engineering, Professor Pisano has served on the Committee on Policy, the Committee on Shop Development and Utilization and the Committee on Preliminary Exams. The Design, Materials and Manufacturing faculty met bi-weekly under the auspices of the DMM Committee meetings founded and maintained by Professor Pisano (These meetings have not been held in recent times, however). In the Department of Mechanical Engineering, Professor Pisano founded the Davis-Etcheverry Computer Facility (DECF) a satellite computer facility serving the interactive computing needs of 4 departments of College of Engineering. At the College level, Professor Pisano has served in the past on the Committee for Cooperative Work-Study and Employment Programs and the Committee for Strategic Planning. At the University level, Professor Pisano has served on the Committee on Computing and Communications, the Advisory Committee for the Center for Environmental Design Research and the Committee on Undergraduate Scholarships and Awards.

Jul 1987 - Jun 1992: Associate Professor, University of California at Berkeley, Department of Mechanical Engineering.

Jul 1983 - Jun 1987: Assistant Professor, University of California at Berkeley, Department of Mechanical Engineering.

Sep 1977 - May 1978: Teaching Assistant, Columbia University in the City of New York, Mechanical Engineering Department. Responsible for the instruction of the senior undergraduate Mechanical Engineering Laboratory including the preparation of laboratory Procedures and the design and fabrication of laboratory experiments.

Jul 1976 - Aug 1976: Research Assistant, Columbia University in the City of New York, Lubrication Research Lab. Responsible for the design and fabrication of a bearing test machine for water-lubricated, compliant surface, marine propeller shaft bearings.

Jun 1975 - Jun 1976: Research Assistant, Columbia University in the City of New York, Mechanical Engineering Department. Responsible for the design of a linear servo positioner, accurate to 0.0005 inch over a range of 4 inches. Responsible as well for the design and assembly of an electromechanical servo system that controls the surface height of a flexible disk, rotating at 2500 rpm, to an accuracy of 25 microinches.

US Federal Government Experience:

Jul 1997 - Sep 1999: On loan from the University of California to serve as Program Manager for Micro Electromechanical Systems (MEMS), Defense Advanced Projects Research Agency (DARPA) Electronics Technology Office (ETO). The ETO was subsequently reorganized into ESTO and then MTO, as it remains today. Responsible for building a portfolio that rose from 37 to over 85 active, simultaneous research contracts in MEMS in academia, industry and government all across the United States. These contracts reached an annual funding level in excess of

$56 million. Over three fiscal years, approximately $168 million was awarded to MEMS researchers nationwide. Responsible for long-term programmatic decisions, future program themes and direction, new procurement and contracts, as well as day-to-day management of the premier research program in MEMS in the United States. In this position, responsibilities include leadership and statesmanship for the field of MEMS when dealing with a large community of academic, industrial, engineering society and government representatives. Responsible for the semi-annual Department of Defense (DoD-Wide) MEMS meeting at which over 120 essential government participants in MEMS convene to discuss the state of the art of MEMS and its insertion into the military. Responsible for the annual MEMS Industrial Study Team (MIST) meeting, at which approximately 20 corporate vice-presidents convene to give industrial feedback to DARPA as well as to help suggest viable programmatic directions to improve the insertion rate of MEMS into United States industry. Responsible for the semi-annual DARPA / ETO MEMS Principal Investigators' Meeting (MEMS PI Meeting) at which all DARPA/ETO MEMS researchers convene to discuss their latest results and exchange information. Within DARPA, responsible for inserting MEMS technology into critical systems of DoD relevance as well as inserting MEMS technology into other DARPA research programs. Internal DARPA accomplishments included the recruiting of three program managers to the newly created MTO (Microsystems Technology Office) in areas of MEMS, microfluidics and CAD for microbiological systems. With DARPA contract support agents, responsible for formulation and implementation of allocation and expenditure tools to track the financial status of large research programs.

Industrial Experience:

Professor Pisano has served as a member of the Scientific Advisory Board, the Technology Advisory Board or the Board of Directors of several small start-up companies in MEMS. These companies have included MEMGen (reorganized as MicroFabrica), Xactix, Verimetra, Transparent Optics, Endobionics (reorganized as Mercator MedSystems), TheraFuse, Harmonic Devices NineSigma and ChillFlux. Of special note is that Harmonic Devices has won four business plan competitions, including a UC Berkeley Haas Business Plan Competition as well as the University of San Francisco's Annual International Business Plan Competition. This start-up, re-organized as Verreon, was sold to Qualcomm in 2009. The most recent start-up is ChillFlux, a manufacturer of cooling solutions for electronic chips, and founded in 2012.

April 2012 - May 2012: Consultant to ExxonMobil Corporation. Responsible for review of ExxonMobil Corporate Research Laboratories, including Engineering Physics, Advanced Sensors & Analytics and Data Systems.

Oct 2011 - Oct 2012: Consultant to WilmerHale, LLC. Responsible for MEMS device analysis and service as an expert witness in a MEMS patent litigation suit.

Jun 2011 - Aug 2012: Consultant to Brian Cave and Affiliates, LLC. Responsible for MEMS device analysis and service as an expert witness in a MEMS supply contract litigation suit.

Mar 2011: Consultant to GE Infrastructure Sensing Systems. Responsible for diagnosis and remedy of failed MEMS sensor for an automotive application.

Dec 2009: Consultant to Honeywell International, Inc. Responsible for review of manufacturing line for MEMS sensor and investigation of sources of loss of manufacturing yield.

Jan 2009 - Dec 2010: Member, DARPA Review Panel for MEMS Exchange. Responsible for review of major MEMS fabrication facility and recommendation of funding by US DoD.

Jan 2008 - Dec 2010: Member, Science Advisory Board of Oerlikon, AG. Responsible for advice to the CEO and CTO for worldwide trends in micro- and nano-technology.

Sep 2005 - Dec 2009: Consultant to VivoMedical, Inc. Responsible for the analysis of product design, product manufacturing and the incorporation of MEMS technology.

May 2003 - Nov 2003: Consultant to Chevron Texaco Energy Research and Technology Company. Responsible for analysis of the use of micro electro mechanical systems in the petroleum industry.

Apr 2003 - Dec 2009: Consultant to System Planning Corporation. Responsible for engineering analysis and project definition for MEMS applications and MEMS technology demonstrations in support of the DARPA effort in MEMS.

Oct 2002: Consultant to ICMG: Responsible for the analysis of MEMS technology and MEMS patents and their applicability to particular industries.

Sep 2001: Consultant to EndoBionics, Inc. Responsible for analysis and design of electroporation devices.

Aug 2001: Consultant to Quantic, Inc. Responsible for MEMS analysis and application of technology to fuse, safe and arming devices.

Mar 2001 - Jul 2002: Consultant to Ardesta LLC. Responsible for the analysis of business plans for new MEMS start-up companies.

May 2000 - Sep 2000: Consultant to Townsend and Townsend and Crew. Responsible for MEMS analysis and service as an expert regarding a patent litigation.

Mar 2000 - Sep 2000: Consultant and Expert Witness to Wilson, Sonsoni, Goodrich and Rosati. Responsible for MEMS analysis and service as expert witness regarding an "eventual disclosure" suit.

Jan 2000 - Jan 2003: Consultant to Hobe Corporation. Responsible for evaluation and prediction of adoption of MEMS technology into a wide range of domestic markets.

Nov 1999 - Nov 2000: Consultant to Titan Corporation. Responsible for design and programmatic review of MEMS programs.

Oct 1999 - Sep 2005: Consultant to DynCorp/DynMeridian. Responsible for engineering analysis and project definition for MEMS applications and MEMS technology demonstrations in support of the DARPA effort in MEMS.

Feb 1996 - Jun 1997: Consultant to Bechtel National, Inc. Responsible for design review, design revision and conceptual design of a seal-actuation system for the doors of the climatic test chamber at Elgin Air Force Base, Florida.

Feb 1996 - Jun 1997: Consultant to IC Sensors, Inc. Responsible for mechanical analysis and design of a new micro optics product using micro actuated scanning mirrors.

Mar 1995: Consultant to Infant Advantage, Inc. Responsible for drive mechanism development for an infant care bassinet that provides natural modes of translation and rotation similar to those the infant felt in the prenatal condition.

Sep 1994 - Feb 1996: Consultant to Neil Gieleghem, Attorney at Law. Responsible for accident forensics for mediation of a torte case involving rental equipment.

Aug 1993 - Apr 1994: Consultant to Crosby, Heafy, Roach & May. Responsible for patent review and patent infringement analysis as well as service as an expert witness regarding a patent litigation suit for isokinetic exercise equipment.

Aug 1993 - Sep 1993: Consultant to Mount & Stoelker. Responsible for patent review and patent analysis as well as service as an expert witness regarding a patent litigation suit for servo-actuated, physical rehabilitation equipment.

Jun 1993: Consultant to Bechtel National, Inc. Responsible for design review and alternative designs for actuated platforms on a Mobile Service Tower to support the Atlas-Centaur rocket launch program of the US Air Force.

Mar 1991 - Apr 1993: Consultant and Expert Witness to Mount & Stoelker. Responsible for patent review and patent analysis as well as service as an expert witness regarding a patent litigation suit for servo-actuated, physical rehabilitation equipment.

Jun 1991: Consultant to Brooktree Corporation. Responsible for mechanical design of flexure suspension system for novel micromechanical switching devices.

May 1991: Consultant to IC Sensors, Inc. Responsible for mechanical design of integrated, micro accelerometer flexure suspension system.

Mar 1989 - Dec 1992: Consultant to Sundstrand Data Control Corporation. Responsible for mechanical design of integrated, micro accelerometer.

Jan 1989 - Dec 1991: Consultant to AEI Corporation. Responsible for the device design and patent review of asbestos removal equipment.

Jul 1985 - Jun 1986: Consultant to Xerox Corporation. Responsible for analytic troubleshooting and design of subsystem components in a proprietary, silent, impact printer. Projects included design of flexure pivots, print mechanisms and printwheel changing devices.

Jul 1985 - Jun 1986: Consultant to Temescal Division of British Oxygen Corporation. Responsible for in-house seminars about the kinematics of silicon wafer handling equipment. Responsible for design and optimization of a high-vacuum, high-temperature, one-million-cycle gate valve for ion implantation tools.

Jul 1984 - Dec 1984: Consultant to Cheshire Company. Responsible for feasibility studies for a high-speed, programmable label-marking device for bulk mailing machinery.

Apr 1981 - Jul 1983: Member of Research Staff at Xerox Corporation. Responsible for research and development in mechanical design. Activities included the definition and implementation of research in kinematics, dynamics and computer-aided design of dynamic mechanical systems, including experimentation, analysis and computation. Research and development efforts were concerned with printing mechanisms, servo systems and transport systems using belts.

Nov 1978 - Nov 1979: Consultant to The Singer Sewing Machine Company, Corporate R&D Labs. Responsible for the kinematic and dynamic analysis of mechanical systems in existing and prototypical consumer products. Activities included patent review, feasibility studies of prototypical sewing systems, analysis and design of low-cost force, displacement and pressure sensors and the design and analysis of mechanical research test fixtures.

Jun 1978 - Aug 1978: College Graduate in Training at General Motors Research Laboratories. Responsible for the dynamic balancing of a high-speed mechanism. Activities included the formulation and implementation of an interactive computer program for determining the optimum balancing subject to arbitrary mechanism dimensions.

May 1977 - Aug 1977: Research Assistant for Xerox Corporation. Responsible for an investigation of the stability of wide Mylar tape in a vacuum-operated, tape tensioning a device. Activities included design and fabrication of a wide-range air flowmeter utilizing simultaneous hot film anemometry and venturi techniques.

Nov 1976 - Jan 1977: Consultant to Dueltronics Corporation. Responsible for the design and fabrication of a prototype of a visual image game that utilized the servo-manipulation of holographic plates. Activities included patent draft review.

Society Memberships:

Member, National of Engineering, Class of 2001. Election Citation: For contributions to the design, fabrication, commercialization, and educational aspects of microelectromechanical systems (MEMS).

Fellow, American Society of Mechanical Engineers, 2004.
Member, American Society of Mechanical Engineers since 1982.

Associate Member, Institute of Electronics and Electrical Engineers since 2008.

Member, American Society of Engineering Educators since 2007.

Charter Member, Pi Tau Sigma, National Mechanical Engineering Honor Society, Columbia Delta Omicron Chapter.

Member, Tau Beta Pi, National Engineering Honor Society, New York Alpha Chapter.

International Service:

Correspondent, National Academy of Engineering Committee on Human Rights, 2012 - 2013. Responsible for sending petitions in defense of scientists and engineers worldwide to foreign governments.

Principal Investigator, King Abdullah University for Science and Technology (KAUST) Academic Excellence Alliance (AEA) with the Department of Mechanical Engineering at UC Berkeley, 2008 - 2013.

Member, External Advisory Committee, Department of Mechanical Engineering at the Korean Advanced Institute of Science and Technology (KAIST) 2008.

Member, Editorial Board, IEEE Review on Advances in Micro, Nano and Molecular Systems (2002).

Member, International Steering Committee, PowerMEMS'05 Workshop (Kyoto, Japan)
General Chair, International Steering Committee, PowerMEMS'06 Workshop (Berkeley, USA)
Member, International Steering Committee, PowerMEMS'07 Workshop (Freiburg, Germany)
Member, International Steering Committee, PowerMEMS'08 Workshop (Sendai, Japan)
Member, International Steering Committee, PowerMEMS'09 Workshop (Washington DC, USA)
Member, International Steering Committee, PowerMEMS'10 Workshop (Leuven, Belgium)
Member, International Steering Committee, PowerMEMS'11 Workshop (Seoul, Korea)

Member, Editorial Board, Micro Systems Technology Journal, Germany, 1994 - 2004.

Member, NATO Advanced Vehicle Technology Team for MEMS, 2000.

Chief Delegate, 7th World Micromachine Summit Meeting (representing the USA), 2001.
Chief Delegate, 6th World Micromachine Summit Meeting (representing the USA), 2000.
Chief Delegate, 5th World Micromachine Summit Meeting (representing the USA), 1999.
Delegate, 4th World Micromachine Summit Meeting (representing the USA) 1998.

Member, Advisory Board for the International Micromachine Symposium, Japan, 1998 - 2001.

Member, International MEMS Workshop Steering Committee, 1990 - 1996.

Member, Advisory Committee of High Aspect Ratio Micro Structure Technology Conference, Forschungszentrum Karlsruhe, Projekt Mikrosystemtechnik, Germany, 1995.

Member, Steering Committee for the International Symposium on Micro Machine and Human Science of Japan, 1992 - 1996.

Advisory Co-Chair, Micro Electromechanical Systems (MEMS) Workshop (Oiso, Japan), 1994.
General Conference Co-Chair, Micro Electromechanical Systems (MEMS) Workshop (Fort Lauderdale, Florida) 1993.

Co-Chair, Technical Program Committee, Micro Electromechanical Systems (MEMS) Workshop (Travemunde, Germany), 1992.Member, Technical Program Committee, Micro Electromechanical Systems (MEMS) Workshop (Nara, Japan), 1991.

National Service:

Member, Visiting Committee, NASA JPL Microdevices Laboratory, 2017 – present.

Member, Board of Visitors, Columbia University School of Engineering and Applied Science, 2010 - 2013.

Member, President's Advisory Board, Carnegie Mellon Institute for Complex Engineered Systems, 2008 - 2009.

Member, National Research Council Study, Panel on Sensors and Electron Devices, ARL Review, 2007 - 2009.

Charter Member, External Advisor Board, Department of Mechanical Engineering, Columbia University in the City of New York, 2006 - 2010.

Member, National Academy of Engineering Keck Futures Initiative Steering Committee on Nanotechnology, 2003.

Member, National Research Council Study Committee on the "Implications of Emerging Micro- and Nano-Technologies," 2001.

Member, Organizing Committee for the Frontiers of Engineering Conference of the National Academy of Engineering, 2000, 2001.

Advisory Board Member, Glennan Microsystems Initiative, 2000, 2001.

Program Manager, MEMS Program, Defense Advanced Research Projects Agency, 1997 - 1999.

Member, West Coast LIGA Participating Research Team Advisory Board, 1998.

Member, Program Committee, Micro OptoElectro Mechanical Systems Conference, 1998.

Member, the DARPA Defense Sciences Research Council (provisional member), 1996 - 1997.

Society Service:

Member, Nanotechnology Institute Governing Board, American Society of Mechanical Engineers, 2002 - 2005.

Chair, Nanotechnology Committee, American Society of Mechanical Engineers, 2000 - 2001.

Member, Systems & Design Technical Group Operating Board, American Society of Mechanical Engineers, 1998 - 2003.

Founding Chair, Executive Committee for MEMS, ASME Sub-Division of MEMS, 1998 - 2003.
Chair Ex-Officio, Executive Committee for MEMS, ASME Sub-Division of MEMS, 2003 - 2004.

Member, Governing Committee for the ASME Nanotechnology Institute, 2001, 2002.

Chair, Coordinating Committee, ASME Committee on Nanotechnology, 2000, 2001.

Chair, Workshop Organization Committee, ASME Workshop on Nanotechnology - The Role of Mechanical Engineers, 2000.

Chair, Micro Mechanical Systems Committee, American Society of Mechanical Engineers, Dynamic Systems, Measurement and Control Division, 1991 - 1993; Vice-Chair, 1990 - 1991.

Editor, Biomedical Microdevices, Kluwer Academic Publishers, 1997 - 2002.

President, IEEE/ASME Coordinating Committee for the IEEE/ASME Journal of Micro Electromechanical Systems, 1998 - 2010.
Founding Editor, Joint IEEE/ASME Journal of Micro Electromechanical Systems, 1991.
Editor, Joint IEEE/ASME Journal of Micro Electromechanical Systems, 1991 - 1996.

Editor, Journal of Microsystem Technologies, Springer-Verlag, 1993 - 1996.

Session Organizer, Micro Mechanical Systems, American Society of Mechanical Engineers Winter Annual Meeting, 1990, 1991, 1993, 1994.

General Conference Co-Chair, Micro Electromechanical Systems (MEMS) Workshop, Fort Lauderdale, Florida, 1993.

Member, Mechanisms Committee, American Society of Mechanical Engineers, Design Division, 1987 - 1990.

Industrial Service

Member, Science Advisory Board, Oerlikon, AG, 2008 - 2010.

Member, Corporate Technology Alliance Board, Samsung Cell Phones, 2004 - 2006.

Member, Board of Directors, Harmonic Devices, Inc., 2004 - 2008.

Member, Science Advisory Board, MicroFabrica, Inc., 2003 - 2005.

Member, Board of Directors, Mercator MedSystems, Inc., 2003 - 2010.

Member, Technical Advisory Board, Microgen, Inc., 2002 - 2004.

Member, Board of Directors, Endobionics, Inc., 2001 - 2003.

Member, Board of Directors, Therafuse, Inc., 2001 - 2004.

Member, Technical Advisory Board, Verimetra, Inc., 2000 - 2005.
Member, Board of Directors, Verimetra, Inc., 2001 - 2007.

Member, Science Advisory Board, Transparent Optics, 2000 - 2001.

\Member, Science Advisory Board, MEMGen Corporation, 2000 - 2003.

Member, Science Advisory Board, NineSigma, Inc., 2000 - 2001.

Member, Technical Advisory Board, Xactix, Inc., 1999 - 2008.
Member, Board of Directors, Xactix, Inc., 1999 - 2004.

University Service (Campus Level):

Campus Representative, UCSD Representative on the JBEI Board of Directors, 2016 – present.

Founding Faculty Head, Operational Excellence Program Office, 2010.

Reviewer, The France-Berkeley Fund, Research Proposal Review, 2012.

Faculty Advisor, The Robert & Colleen Haas Scholars Program, 2005 - 2007.

Chair, Department of Mechanical Engineering, 2004 - 2010.

Member, Governing Board, CoE Center for Information Technology in the Interest of Society (CITRIS), 2004 - 2007.

Director, Electronics Research Laboratory, 2000 - 2004.

Member, Berkeley Division Committee on Computing and Communications, 1995.

Member, Berkeley Division Advisory Committee for the Center for Environmental Design Research, 1994 - 1996.

Member, Berkeley Division Committee on Undergraduate Scholarships and Awards, 1993 - 1996.

Interviewer, Regents and Chancellors Undergraduate Scholarship Program, 1993 - 1996.

University Service (College Level):

Faculty Director, Davis-Etcheverry Computer Facility. Responsible for the founding, funding, operation and expansion of the Davis-Etcheverry Computer Facility (DECF) which served the instructional computing needs of four Departments (ME, CE, NE, IEOR) in the College of Engineering, 1988 - 1997.

Member, College of Engineering Committee for Cooperative Work Study and Employment Programs, 1994 - 1997.

Member, College of Engineering Committee on College Strategic Planning, 1994.

University Service (Departmental Level):

Chair, Department of Mechanical Engineering, 2004 - 2010.

Member, Department of Mechanical Engineering Committee for ABET and Undergraduate Study, 2012 (S).

Member, Department of Mechanical Engineering Committee for Development, 2012 (S).

Member, Department of Mechanical Engineering Faculty Search Committee for Micro- and Nano-Technology, 2002-2003.

Chair, Department of Mechanical Engineering Committee on Computers and Computation, 1992 - 1997.

Chair, Department of Mechanical Engineering Committee on the Micro Electromechanical Systems (MEMS) Laboratory 1995 - 1997.

Chair, Department of Mechanical Engineering Committee on Preliminary Exams, 1996.
Member, 1993 - 1996.

Chair, Department of Mechanical Engineering Committee on Shop Development and Utilization, 1996.
Member, 1994 - 1995.

Chair, Department of Mechanical Engineering Committee on Awards, 1995.

Member, 1994.

Member, Department of Mechanical Engineering Committee on Graduate Admissions, 1995, 2012.

Member, Department of Mechanical Engineering Committee on Policy, 1994 - 1997.

Member, Department of Mechanical Engineering Committee on Seminars, 1992 - 1994.

Major Field Advisor in Design, Department of Mechanical Engineering, 1984 - 1993.

Major Field Advisor in MEMS, Department of Mechanical Engineering, 1999 - Present.

Founder and Organizer, Department of Mechanical Engineering Fire Victims Fund, fundraising for the relief of victims of the Berkeley/Oakland Hills Fire of Oct 1991.

Honors and Awards:

Member, National Academy of Engineering, Class of 2001.

Awardee, The Berkeley Citation, awarded to those whose contributions to UC Berkeley go beyond the call of duty and whose achievements exceed the standards of excellence in their fields, 2013.

Awardee, The Thomas Egleston Medal, awarded to the most distinguished alumnus of Columbia University School of Engineering and Applied Science, 2010.

Fellow, American Society of Mechanical Engineers, 2004.

Awardee, MD&DI's (Medical Devices and Diagnostic Industry Magazine) 100 Notable People, 2008.
http://www.devicelink.com/mddi/archive/08/06/002.html

Young Scientist Award (awarded to student, Gabriele Vigevani) for the paper, “Modeling of Thermoelastic Damping in Piezoelectric Aluminum Nitride Tuning Forks, Vigevani, G., Kuypers, J. H. and A. P. Pisano,” USE2008 Sendai, Japan, 11-13 Nov 2008.

Invited Seminar Speaker, “Trillion Sensor Technology,” Department of Mechanical Engineering Freudenstein Memorial Lecture, Columbia University in the City of New York, Apr 2017.

Invited Seminar Speaker, “Engineering as a Force for the Public Good,” School of Mechanical Engineering Distinguished Woodruff Lecture, Georgia Institute of Technology, Apr 2017.

Invited Seminar Speaker, “Harsh Environment Sensors,” Department of Mechanical Engineering Distinguished Seminar, Iowa State University, Feb 2013.

Invited Conference Speaker, “International Collaboration in Energy Research", presented at the International Conference on the Academe and Industry Partnership for Research and Innovation, sponsored by the Commission on Higher Education (CHED) of the Philippine Islands, 10 Nov 2012.

Invited Conference Plenary Speaker, “Harsh Environment MEMS Sensors for Energy and Power,” IEEE Frequency Control Symposium, Baltimore, Maryland, May 2012.

Invited Conference Plenary Speaker, “Harsh Environment MEMS Sensors for Energy and Power,” International Forum on Engineering Science and Technology Development Strategy, Series on MEMS Achievement, Application and Challenge, Chinese National Academy of Engineering, Jun 2012.

Invited Symposium Speaker, "The BSAC Commercialization Model," 2nd International Symposium for Integrated Microsystems, Tsukuba Innovation Arena, Tsukuba, Japan, Feb 2012.

Invited Speaker, "MEMS Technology for Implantable Drug Delivery," International Workshop for Implantable Drug Delivery, KAUST, Saudi Arabia, Feb 2012.

Invited Plenary Keynote Speaker, "Harsh Environment MEMS Sensors for Energy and Power," PowerMEMS International Workshop, Nov 2011.

Invited Speaker, "Zero-Power, High-throughput, Micro & Nanoparticle Printing via Gravity-Driven Formation of Picoliter-Scale Droplets," Micro Silicon Integrated Circuit Symposium, Tohoku University, Japan, Nov 2011.

Invited Speaker, "Harsh Environment Silicon Carbide MEMS Wireless Sensors for Energy and Power," Micro Systems Integration Symposium, Tohoku University, Sep 2011.

Invited Speaker, "Harsh Environment MEMS for Wireless Sensors," Micro Nano Global Network Workshop, Yokohama, Japan, Aug 2011.

Invited Speaker, "Silicon Carbide MEMS Sensors for Geothermal Energy," Micromachine Exhibition, Tokyo, Japan, Jul 2011.

Invited Speaker, "Silicon Carbide for Sensor and Circuit Technology," Sumitomo Process Technology Systems, San Jose, Jun 2011.

Invited Speaker, "Micro Nano Technology for Molecular Diagnostic Systems," Tsukuba Innovation Arena, Tsukuba University, Japan, May 2011.

Invited Lecturer, Mechanical Engineering Department Distinguished Lecture, "Harsh Environmental Wireless Sensors for Energy and Power," Carnegie Mellon University, Feb 2011.

Invited Speaker, "MEMS Sensors for Engine Control," DARPA Future Engines Workshop, Arlington, VA, Nov 2010.

Invited Conference Keynote Speaker, "Harsh Environment Wireless MEMS Sensors for Energy and Power," MEMS Engineer Forum, Tokyo, Japan, Mar 2009.

Alwin Distinguished Lectureship, "Micro and Nano Imprinted Advanced Materials for Sensors, Actuators and Circuits," University of Illinois at Urbana-Champaign, Mar 2008.

Invited Conference Keynote Speaker, "Micro and Nano Imprinted Advanced Materials for Sensors, Actuators and Circuits," ASME Micro & Nano Technology Conference, Brooklyn, NY, Aug 2008.

Invited Speaker, "MEMS for the Automotive Market," Micro Nano Global Network Workshop, Tokyo, Japan, 2007.

Invited Plenary Keynote Speaker, "MEMS for the Automotive and Handheld Portable Markets," Transducers'07 - 2007 International Conference on Solid-State Sensors and Actuators, Lyon, France, Jun 2007.

Invited Lecturer, "Micro- and Nano-Technologies for Automotive Research," Air Products Inc. Distinguished Lecture Series at the University of Pennsylvania, Oct 2005.

Invited Keynote Speaker, "MEMS Rotary Engine Power Systems," IEE Japan Workshop on PowerMEMS 2003, Makuhari, Japan, Dec 2003.

Invited Participant, 6th Annual German - American Frontiers of Engineering Conference, Ludwigsburg, Germany, May 2003.

Invited Keynote Speaker, “MEMS Rotary Engine Power Systems,” American Society of Mechanical Engineering IMECE session on Microfluids, Nov 2002.

Inaugural Seminar Series Speaker, “MEMS-enabled Internal Combustion Engines,” University of California, Irvine Department of Mechanical and Aerospace Engineering departmental seminar series, Nov 2002.

Invited Keynote Speaker, “Application of MEMS to the Guidance and Control of High-Performance Guided Projectiles and Missiles,” Electro Magnetic Launch Technology Conference, San Francisco, Apr 2000.
Holder, Endowed Chair, FANUC Chair for Mechanical Systems in the Department of Mechanical Engineering, Jul 1999 - Jun 2004
Re-appointed Jul 2004 - Jun 2009.
Re-appointed Jul 2009 - Jun 2014.

Awardee, Certificate of Appreciation, Defense Advanced Projects Research Agency, for service as a program manager, Sep 1999.

Edwin G. Baetjer Invited Lecturer, “MEMS 2003 and Beyond,” and “MEMS Technology for Mass Storage Devices,” Princeton University, Mar 1999.

The Paul M. Chung Distinguished Lecturer, “MEMS 2003 and Beyond,” University of Illinois at Chicago Circle, Oct 1998.

Invited Keynote Speaker, “Micro Electromechanical Systems,” Government Microcircuit Technology & Critical Applications Conference (GOMACTech), Washington, DC, Mar 1998.

Invited Speaker, "Making It and Breaking It on the Microscale," ASME International Congress and Exposition, Materials Division Banquet, Nov 1996.

Joint Faculty Appointment, Department of Electrical Engineering and Computer Science, University of California at Berkeley, Jul 1996.

Invited Paper, "Polysilicon Integrated Microsystems: Technologies and Applications," Sensors and Actuators A, v. 56, pp. 167-177, Elsevier Sequoia, (With R. T. Howe and B. E. Boser), 1996.

Invited Speaker, "MEMS for Fun and Profit," ASME International Congress and Exposition, Heat Transfer Division Banquet, 16 Nov 1995.

Invited Speaker, "Biomedical Applications of MEMS," ASME International Congress and Exposition, Session Opening Presentation, 15 Nov 1995.

Awardee, The Pi Tau Sigma Excellence in Teaching Award, 1995, 1984.

Invited Speaker, "MEMS in Materials Research - Toward the Micro Tensile Test Machine," Materials Research Society Meeting, Apr 1994.

Invited Speaker, "Biomedical Applications of Micro Electromechanical Systems," University of California at Berkeley Foundation Board Meeting, Sep 1993.

Awardee, Certificate of Appreciation, American Society of Mechanical Engineers, for service and dedication to the promotion and development of Mechanical Engineering, May 1993.

Invited Keynote Speaker, "MEMS - Where It Came From, Where It Is, Where It Is Going and Where It Will NOT Go," 1993 ASME Bay Area Technical Conference, University of California at Berkeley, May 1993.

Invited Speaker, "Integrated Micro Flow Systems," Prospector-V Workshop (Army Research Office) on Micro Electromechanical Systems - Applicability to the Soldier System, Park City, Utah, Mar 1993.

Invited Lecturer, "Electrostatic Micromotors," International Symposium on the Application of Electromagnetic Forces, Sendai, Japan, Jan 1991.

Invited Lecturer, "Electrostatic Microgrippers," IEEE Forum on Control in Micro Electromechanical Systems, Nagoya, Japan, Jan 1991.

Invited Lecturer, "Electrostatic Design of Micromotors," Transducers'91 - 1991 International Conference on Solid-State Sensors and Actuators, San Francisco, Jun 1991.

Awardee, NSF Presidential Young Investigator Award, 1985 - 1989.

Awardee, College of Engineering Special Grant Award for the development of software for instructional computing, 1984, 1986, 1987.

Fellowship, Columbia Fellow in Mechanical Engineering, Columbia University, 1976.

Patents Issued:

1. A P. Pisano, D Horsley and K Yamamoto, “Pyroelectric aluminum nitride MEMS infrared sensor with selective wavelength infrared absorber”, May 10, 2016, U.S. Patent US9,335,217.
2. G. Piazza, P. J. Stephanou, and A. P. Pisano, “Contour-mode piezoelectric micromechanical resonators,” Apr, 2014, U. S. Patent 8,704,616.
3. B. Jamshidi and A. P. Pisano, “Capacitive strain sensor,” Jan 2013, U. S. Patent 8,342,031.
4. Y.-M. Chen, M. S. Sheppy, M. A. Opcroft, A. P. Pisano, R. V. Mehta, M. A. Marcus, and G. A. Hawkins, “Piezoelectric actuators,” Dec 2012, U. S. Patent 8,324,785.
5. G. Piazza, P. J. Stephanou, and A. P. Pisano, “Contour-mode piezoelectric micromechanical resonators,” Nov 2012, U. S. Patent 8,319,584.
6. F. A. Kuypers, W. C. Lee, and A. P. Pisano, “Microfluidic flow lysometer device, system and method,” Nov 2012, U. S. Patent 8,304,245.
7. M. T. Mueller, A. P. Pisano, R. Azevedo, D. C. Walther, D. R. Myers, and M. Wasilik, “Chitin-based cantilever bimorphs and readout devices,” Sep 2011, U. S. Patent 8,026,485.
8. G. Piazza, P. J. Stephanou, and A. P. Pisano, “Contour-mode piezoelectric micromechanical resonators,” Mar 2011, U. S. Patent 7,915,974.
9. G. Piazza, P. J. Stephanou, and A. P. Pisano, “Contour-mode piezoelectric micromechanical resonators,” Sep 2010, U. S. Patent 7,791,432.
10. Seward, K. P. and A. P. Pisano, “Microfabricated surgical device for interventional procedures,” Feb 2010, U. S. Patent 7,666,163.
11. Seward, K. P. and A. P. Pisano, “Method of interventional surgery,” Jul 2009, U. S. Patent 7,559,923.
12. Seward, K. P. and A. P. Pisano, “Microfabricated surgical device for interventional procedures,” Jun 2009, U. S. Patent 7,547,294
13. Mueller, M., J. Cheng, A. P. Pisano and T. H. Cauley, III, “Infrared sensor systems and devices,” Jun 2009, U. S. Patent 7,547,886.
14. Piazza, G., P. J. Stephanou and A. P. Pisano, “Contour-mode piezoelectric micromechanical resonators,” Feb 2009, U. S. Patent 7,492,241.
15. Sosnowchik, B. D., L. Lin, and A. P. Pisano, “Bonding a non-metal body to a metal surface using inductive heating,” Nov 2008, U. S. Patent 7,452,800.
16. Zimmermann, S., B. Stoeber, D. Liepmann, and A. P. Pisano, “Monitoring method and/or apparatus,” Aug 2008, U. S. Patent 7,415,299.
17. Bircumshaw, B. L., O. M. O’Reilly and A. P. Pisano, Radial Bulk Annular Resonator Using MEMS Technology, 2005, European Union Patent 04752898.9-2222.

18. Bircumshaw, B. L., O. M. O'Reilly and A. P. Pisano, MEMS Resonator and Method of Making Same, 2005, U. S. Patent 6,940,370.
19. Bircumshaw, B. L., O. M. O'Reilly and A. P. Pisano, Radial Bulk Annular Resonator Using MEMS Technology, 2005, U. S. Patent 6,894,586.
20. Seward, K. P. and A. P. Pisano, Method of Interventional Surgery, 2005, U. S. Patent 6,860,867.
21. Lebouitz, K. S. and A. P. Pisano, Method of Fabricating Epidermal Abrasion Device, 2003, U. S. Patent 6,610,235.
22. Seward, K. P. and A. P. Pisano, Microfabricated Surgical Device for Interventional Procedures, 2003, U. S. Patent 6,547,803.
23. Lebouitz, K. S., R. T. Howe and A. P. Pisano, Microfabricated Filter and Shell Constructed with a Permeable Membrane, 2002, U. S. Patent 6,478,974.
24. Talbot, N. H., C. G. Keller and A. P. Pisano, Apparatus for Fabricating Needles via Conformal Deposition in Two-Piece Molds, 2002, U. S. Patent 6,375,148.
25. Lebouitz, K. S. and A. P. Pisano, Epidermal Abrasion Device with Isotropically Etched Tips, and Method of Fabricating Such a Device, 2001, U. S. Patent 6,187,210.
26. Talbot, N. H., C. G. Keller and A. P. Pisano, Method for Fabricating Needles via Conformal Deposition in Two-Piece Molds, 2000, U. S. Patent 6,106,751.
27. Evans, J., D. Liepmann and A. P. Pisano, Apparatus and Method for Planar Laminar Mixing, 2000, U. S. Patent 6,065,864.
28. Roessig, T., R. T. Howe and A. P. Pisano, Resonant Accelerometer with Flexural Level Leverage System, 1999, U. S. Patent 5,969,249.
29. Lebouitz, K. S. and A. P. Pisano, Microneedle with Isotropically Etched Tip and Method of Fabricating such a Device, 1999, U. S. Patent 5,928,207.
30. Howe, R. T., K. S. Lebouitz and A. P. Pisano, Microfabricated Filter and Shell Constructed with a Permeable Membrane, 1999, U. S. Patent 5,919,364.
31. Lin, L. and A. P. Pisano, IC-Processed Microneedles, 1999, U. S. Patent 5,855,801.
32. Lee, S. S.-L., R. M. White and A. P. Pisano, Cantilever Pressure Transducer, 1997, U. S. Patent 5,633,552.
33. Lin, L. and A. P. Pisano, IC-Processed Microneedles, Patent 5,591,139, 1997.
34. Howe, R. T., L. Lin, C. T.-C. Nguyen and A. P. Pisano, Micro Electromechanical Signal Processor Fabrication, 1997, U. S. Patent 5,589,082.
35. Howe, R. T., L. Lin, C. T.-C. Nguyen and A. P. Pisano, Micro Electromechanical Signal Processors, 1996, U. S. Patent 5,455,547.
36. Pisano, A. P., Constant Velocity Optical Scanning System, 1990, U. S. Patent 4,901,105.

Courses Offered:

EECS290-O	Microsensors and Microactuators	(Graduate)
	(Offered with R. T. Howe, R. S. Muller and R. M. White)	
ME298-4	Computer-Aided Design Seminar	(Graduate)
ME231	Advanced Kinematics	(Graduate)
ME228	Computer-Aided Optimal Design	(Graduate)
ME219	Parametric and Optimal Design of MEMS	(Graduate)
ME130	Design of Planar Machinery	(Senior elective)
ME128	Computer-Aided Mechanical Design	(Senior elective)
ME107b	Mechanical Engineering Laboratory	(Senior)
ME107a	Instrumentation and Measurement	(Senior)
ME102b	Introduction to Mechanical Systems for Mechatronics	(Junior/Senior)
E28	Graphic Communication in Engineering	(Freshman)
BOX-10	Microsensors and Microactuators	(University Extension)

	(3-day short course offered at Oxford, England, with R. T. Howe, R. S. Muller and R. M. White in 1989 and 1990)	
EDP-306803	Monolithic, Surface-Micromachined Inertial Sensors (2-day short course offered at South San Francisco, with R. T. Howe and B. E. Boser in 1995)	(University Extension)
EDP-318535	Monolithic, Surface-Micromachined Inertial Sensors (2-1/2 day, short course offered at South San Francisco, with R. T. Howe and B. E. Boser in 1996)	(University Extension)
EDP-326918	Monolithic, Surface-Micromachined Inertial Sensors: Design of Closed-Loop Integrated Accelerometers and Rate Gyroscopes (2-1/2 day, short course offered at Millbrae, with R. T. Howe and B. E. Boser in 1997)	(University Extension)

Research Grants from Government:

DOE, "Harsh Environment Silicon Carbide Sensor Technology for Geothermal Instrumentation," $1,777,617, Jan 2010 - Feb 2013.

NSF, "Droplet Based Quantitative Analysis of Single-Cell Cytosol in Large Cell Populations," $305,800, Sep 2010 - Aug 2013.

DARPA, "The Microcoluminated Loop Heat Pipe (mLHP): The Future of Electronic Substrates (Phase II - III)," $1,500,000, Jul 2010 - Jul 2013.

NSF, "Direct Nanoimprinting-Based Nanopatterning of Functional Nanomaterials for Electronics and Sensing Applications," $420,000, Jul 2008 - Jun 2011.

Korean Institute of Machinery and Materials (KIMM), "Direct Nanoimprinting of Functional Bio and Nano-Materials for High Resolution, Low-Cost Fabrication of Biosensors and Electronic Devices," $287,551, Apr 2008 - Mar 2012.

DARPA, "The Microcolumnated Loop Heat Pipe (mLHP): The Future of Electronic Substrates," $750,000, Mar 2008 - Sep 2010.

DARPA Seedling Grant, “The Microcolumnated Loop Heat Pipe (mLHP): The Future of Electronic Substrates,” $750,000, Jan 2008 - Jun 2009.

LBNL, "Nanowire Sensor System for SR-RTIR Spectromicroscopy Measurements of Cellulose Transformation in Vivo," $195,000, Jan 2008 - Jun 2011.

DARPA Seedling Grant, “An Integrated Polymeric Surface Microfluidic System (IPSMS) for the Preparation, Separation and Detection of Macromolecules,” $220,000, Sep 2007 - Mar 2009.

DARPA MEMS/NEMS Science and Technology Fundamentals Program, “DARPA Center for Micro and Nano Scaling Induced Physics,” $3,755,191, Jan 2007 - Jan 2010. (With C. Nguyen, L. Lin, UC Berkeley and G. Piazza, University of Pennsylvania)

DARPA, "The Center for MEMS/NEMS Interfacial Physics,” $2,355,191, Sep 2006 - Feb 2010. (With Roger T. Howe, Stanford University)

U. S. Army Research Laboratory, Award Number W911NF-05-2-0056, “Electro-Magnetic Actuated Valve for MEMS Fuel Metering System,” $482,882, Oct 2005 - Sep 2007.

Air Force Office of Scientific Research / DARPA, Award Number FA9550-05-1-0422, "Development of an Uncooled Photomechanical Infrared Sensor Based on the IR Organ of the Pyrophilous Jewel Beetle Melanophila Acuminate", $1,401,134, Jul 2005 - Jun 2008 (With L. P. Lee; UC Berkeley and H. Schmitz, University of Bonn, Germany).

ETRI, "A Non-Specific Protein Concentrator Using Insulative Dielectrophoretic (iDEP) Transport Fabricated with Nano-Imprinting," $239,760, Apr 2005-Mar 2008.

Korean Institute of Machinery and Materials (KIMM), Award Number 019997, "A Non-Specific Protein Concentrator Using Insulative Dielectrophoretic (iDEP) Transport Fabricated with Nano-Imprinting", $239,760, Apr 2005 - Mar 2008.

DARPA HERMiT, Award Number NBCH1050002, "SiC TAPS (Temperature, Acceleration, Pressure and Strain) Sensors for Extreme Harsh Environments," $7,611,831, Jan 2005 - Sep 2011 (With M. Wijesundara, R. T. Howe, R. Maboudian; UC Berkeley and M. Mehregany, Case Western Reserve University).

Army Research Office, Award Number DAAD-19-02-1-0198, "MEMS for Rolling Element Bearings," $1,916,000, Jun 2004 - May 2005. (With O. M. O'Reilly, L. Lin and B. E. Boser, UC Berkeley; W. Denny and G. McDearmon, The Timken Company; D. Young and W. H. Ko, Case Western Reserve University; L. S. Stephens, University of Kentucky Research Foundation; K. Kelly, Louisiana State University).

DARPA, Award Number HR0011-04-1-0009, "Projectile-Placed Sensors," $175,000, Feb 2004 - Aug 2004 (With W. Snowden and A. Lancaster, DynCorp).

Army Research Office, Award Number DAAD-19-02-1-0198, "MEMS for Rolling Element Bearings," $2,350,000, Jun 2003 - May 2004. (With O. M. O'Reilly, L. Lin and B. E. Boser; W. Denny and G. McDearmon, The Timken Company; D. Young and W. H. Ko, Case Western Reserve University; L. S. Stephens, University of Kentucky Research Foundation; K. Kelly, Louisiana State University).

Korean Institute of Machinery and Materials (KIMM), Award Number 016289, "High Frequency Probing of Cell via Micro Sources of RF Energy," $498,307, Oct 2002 - Mar 2005.

DARPA BAA 01-32, Award Number NBCH1020005, "Integrated Nano Mechanically-Regulated Atomic Clock," $4,646,291, Jul 2002 - Apr 2005 (With A. Lal, S. Hagness, Cornell University and T. McClelland, Frequency Electronics Inc.).

Army Research Office, Award Number DAAD-19-02-1-0198, "MEMS for Rolling Element Bearings," $1,932,000, Jun 2002 - May 2003. (With O. M. O'Reilly, L. Lin and B. E. Boser, UC Berkeley; W. Denny and G. McDearmon, The Timken Company; D. Young and W. H. Ko, Case Western Reserve University; L. S. Stephens, University of Kentucky Research Foundation; K. Kelly, Louisiana State University).

DARPA BAA 01-09, Award Number NBCHC010060, "MEMS Rotary Engine Power System," $4,097,592, Sep 2001 - Sep 2004. (With C. Fernandez-Pello, R. Maboudian and S. Sanders, UC Berkeley; B. Seelig, Textron Systems Corporation; M. Pleskach, P. Koeneman, C. Gamlen, S. Snyder, Harris Corporation).

DARPA BAA 01-10, Award Number N66001-01-1-8967, "Integrated Microwatt Transceivers," $4,596,000, Sep 2001 - Dec 2005 (With R. T. Howe, J. Rabaey, R. Maboudian, T.-J. King, J. Bokor and J. S. Smith)

DARPA BAA 00-11, Award Number F30602-00-2-0566, "Water-Powered Bioassay System," $2,604,647, Sep 2000 - Aug 2003. (With L. Lin and D. Liepmann).

DARPA BAA 00-11, Award Number F30602-00-2-0568, "Single-Molecule Detection via Teflon-Based Micro-Polymer Opto Electro Mechanical Systems (μ-POEMS)," $2,254,797, Sep 2000 - Sep 2003. (With L. Lee and L. Pruitt).

DOD Space and Naval Warfare Systems Command, Award Number N66001-00-1-8955, “Modular SiGe MEMS/CMOS Technology for Monolithic Communication Systems,” $1,199,066, Jun 2000 - Dec 2003. (With R. T. Howe, T.-J. King and B. E. Boser).

DARPA BAA 96-19, Award Number F30602-97-2-0266, “Modular Monolithic MEMS System,” $5,634,684, May 1997 - Dec 2001. (With B. E. Boser, R. T. Howe).

DARPA BAA 96-19, Award Number F33615-97-1-2730/P00001, "Integrated µFLUME Reconstitution System for Biological and Medical Supplies," $1,222,000, Apr 1997 - Apr 2000. (With D. Liepmann).

DARPA BAA-94-40, Award Number DABT63-95-C-0028, "High-Bandwidth, High-Accuracy MEMS Micropositioners for Disk Drives," $4,981,250, Jul 1995 - Dec 1998. (With R. Horowitz, R. T. Howe and B. E. Boser).

California Department of Transportation, Partners for Advanced Transit and Highways (PATH) MOU-161, "Integrated Microsensors for Vehicle Controls," $250,000, Sep 1994 - Jun 1996. (With B. E. Boser and R. T. Howe).

DARPA BAA 93-06, "Development of a Monolithic, Multi-MEMS Microsystem Demonstrating iMEMS VLSI Technology," $1,270,000, Jul 1993 - Jun 1996. (With R. T. Howe, R. S. Muller, B. E. Boser, P. Gray, A. Neureuther).

California Department of Transportation, Partners for Advanced Transit and Highways (PATH) 65H998, "Silicon Micro Sensors for Automobile Position Localization and Ultrasonic Communication," $804,158, Apr 1991 - Mar 1994. (With R. T. Howe, R. S. Muller and R. M. White).

NSF Management of Technology and Engineering Research Thrust, DDM-9006769, "Integrating Design Systems with Market Databases and Strategic Decision-Making," $447,165, Jul 1990 - Jun 1993. (With D. Mowerey).

NSF Emerging Technology Initiative, EET-8815334, "Self-Assembling Microstructures with Application to Precision Resonant- Structure Micromotors," $447,000, Jul 1988 - Jun 1991. (With R. T. Howe).

NSF Presidential Young Investigator Award, ENG-8451199, "Computer-Aided Conceptual Design," $500,000, Jul 1985 - Jul 1990. (This award was fully matched by industrial funds).

NSF Research Initiation Grant, MEA-8404822, "Experimental and Analytic Optimization of High-Speed Cam Systems," $48,000, Jul 1984 - Jun 1986.

Research Grants from Academia:

King Abdullah University for Science and Technology (KAUST), "Smart Combustion," $170,000, Aug 2008 - Dec 2009.

King Abdullah University for Science and Technology (KAUST) Academic Excellence Alliance, $28,235,000, Mar 2008 - Feb 2013.

University of California Discovery Grant, Award Number ele04-10205, “MEMS RF-Interrogated Biosensor,” $103,435, May 2005 - May 2007.

University of California Discovery Grant, Award Number ele02-10124, “Liquid-Fueled Miniature Internal Combustion Engine,” $147,687, Jan 2003 - Jan 2005.

Research Grants from Industry:

Siemens, AG, "Smart Wireless GT Components: GT Systems Integration of SiC Energy Scavenging and IC Components for Autonomous Wireless Sensing," $600,000, Aug 2011 - Sep 2013.

Siemens, AG, “Micro-Cooling of High Power Devices/Modules Based on Micro Loop Heat Pipe (uLHP),” $120,000, Sep 2010 - Aug 2011.

Northrop Grumman Corporation, "Acoustic Resonator Temperature Compensation," $196,911, Apr 2010 - May 2011.

Oerlikon, AG, "High-K, High Breakdown, Polymer Nanocomposite Ultracapacitor for Next Generation Hybrid and Electric Vehicles," $49,078, Dec 2009 - Aug 2010.

Siemens, AG, "Silicon Carbide RF Transmitter Circuit And Energy Scavenging Device for Condition-Based Monitoring of Industrial Gas Turbines," $900,000, Jul 2009 - Jun 2013.

The Charles Stark Draper Laboratory, "Linear MEMS Polymer IR Array," $190,000, Jun 2009 - Jul 2011.

Textron, Inc., "Uncooled, Bio-inspired Cantilever for Highly Sensitive Infrared Detection," $50,000, Dec 2008 - Sep 2009.

Eastman Kodak Co., "A MEMS Piezoelectric Supercritical CO_2 Valve (SCV)," $344,568, Jul 2008 - Dec 2010.

Starkey Company, "The Center for Micro/Nano Scaling Induced Physics (MiNaSIP)," $50,000, Sep 2008 - Feb 2010.

National Semiconductor Corporation, "The Center for Micro/Nano Scaling Induced Physics (MiNaSIP)," $50,000, Sep 2008 - Feb 2010.

Analog Devices, Inc., “Aluminum Nitride Sensors on CMOS,” $90,000, 2008.

Raytheon Company, "Scaling-Limit Study of Capillary-Pumped Loops for Chip Cooling," $60,000, Sep 2007 - Aug 2008.

Textron, Inc., "Uncooled, Bio-Inspired Cantilever for Highly Sensitive Infrared Detection," $210,000, May 2007 - Apr 2010.

Analog Devices, Inc., “Aluminum Nitride Sensors on CMOS,” $50,000, 2007.

Textron, Inc., “Polymer IR Sensors,” $170,000, 2007 - 2008.

Honeywell International, Inc., “Chitosan IR Sensors,” $60,000, 2007 - 2008.

The Samsung Group, "The Center for MEMS/NEMS Interfacial Physics,” $150,000, Sep 2006 - Aug 2009.

Nortel Networks Corporation, "The Center for MEMS/NEMS Interfacial Physics," $300,000, Sep 2006 - Aug 2008.

Honeywell International, Inc., "Radio Frequency Analog Spectral Processors," $420,000, Sep 2006 - Jan 2008.

Siemens, AG, "The Center for MEMS/NEMS Interfacial Physics," $150,000, Sep 2006 - Feb 2010.

Motorola, Inc., "The Center for MEMS/NEMS Interfacial Physics," $450,000, Sep 2006 - Feb 2010.

Novo Nordisk A/S, “Plastic Microfluidic Flow Sensor,” $10,000, 2005 - 2006.

FANUC Corporation, “MEMS Plastic Microneedles,” $65,931, 2005 - 2006.

Eastman Kodak Company, Strategic Technology Initiative, “Nano Gap Sensor,” $42,000, 2005.

France Telecom SA, Award Number 019936, “MEMS RF-Interrogated Biosensor,” $142,990, 2005 - 2007.

Robert Bosch, GmbH, Research and Technology Center, “Aluminum Nitride MEMS,” $25,000, 2004.

France Telecom SA, Research & Development, “MEMS Biometric Sensors,” $50,000, 2004.

FANUC Corporation, “MEMS Plastic Microneedles,” $140,673, 2004 - 2005.

FANUC Corporation, “MEMS Plastic Microneedles,” $93,465, 2003 - 2004.

TheraFuse Inc., “MEMS for Biological Applications,” $24,000, 2003.

Chevron Corporation, Award Number 015225, “Liquid Fueled Mini Rotary Engine,” $190,000, 2002 - 2005.

FANUC Corporation, “MEMS Plastic Microneedles,” $120,000, 2002 - 2003.

Becton, Dickinson and Company, Corporate Research, “MEMS for Drug Delivery,” $100,000, 1998 - 1999.

Becton, Dickinson and Company, Corporate Research, "HexSil Micro Hypodermic Injection Needles," $158,157, 1995 - 1997.

Honeywell International, Inc., Sensors Department, "Micro Rate Gyroscope Development Grant," $10,000, 1994.

Honeywell International, Inc., Sensors Department, "Micro Rate Gyroscope Development Grant," $10,000, 1993.

Honeywell International, Inc., Sensors Department, "Micro Rate Gyroscope Development Grant," $10,000, 1992.

Ford Motor Company, Engine Research Department, "Finger-Follower Dynamic Optimization," $10,000, 1990.

Eaton Corporation, Valve Train Component Division, "Finger-Follower Dynamic Optimization," $10,000, 1989.

Ford Motor Company, Engine Research Department, "Finger-Follower Dynamic Optimization," $10,000, 1988.

Ford Motor Company, Engine Research Department, "Dynamic Modeling of Finger-Follower Cam Systems," $10,000, 1987.

General Motors Foundation, Instructional Software Development, "Interactive Graphical Optimization," $7,000, 1987.

General Motors Foundation, Instructional Software Development, "Interactive Graphical Optimization," $5,000, 1986.

General Motors Corporation, CPC Group, 2.5 Liter Staff, "Dynamic Modeling of Helical Springs," $37,000, 1986.

General Motors Foundation, Instructional Software Development, "Interactive Optimization of Mechanical Systems," $15,000, 1985.

Tektronix, Inc, University Programs, "Automated Conceptual Design," $5,000, 1985.

Industrial Gifts-in-Kind (Market Value in Dollars):

Applied Materials, Centura Etch Machine, $1,200,000, 2004.

FANUC Ltd., RoboShot 30i Plastic Injection Molding Machine, $65,000, 2000.

Digital Equipment Corporation, $150,000, 1991.

Digital Equipment Corporation, $250,000, 1989.

MARC Research, MARC Finite Element Code, $50,000, 1987.

ComputerVision Corp, University Consortium, $52,000, 1986.

General Electric Co, University Relations, $30,000, 1986.

General Motors Corp, Educational Donations, $17,000, 1986.

Tektronix Inc, Display Products Division, $80,000, 1986.

Tektronix Inc, Display Products Division, $17,000, 1985.

Tektronix Inc, Display Products Division, $6,000, 1984.

Publications:

Refereed Journal Publications

1. Pisano, A. P. and F. Freudenstein, "An Experimental and Analytical Investigation of the Dynamic Response of a High-Speed Cam-Follower System-Part 1: Experimental Investigation," Trans. ASME, J. Mech., Trans, Auto Des, v. 105, n. 4, pp. 692-698, 1983.
2. Pisano, A. P. and F. Freudenstein, "An Experimental and Analytical Investigation of the Dynamic Response of a High-Speed Cam-Follower System-Part 2: A Combined, Lumped/- Distributed Parameter Dynamic Model," Trans. ASME, J. Mech., Trans, Auto Des, v. 105, n. 4, pp. 699-704, 1983.
3. Pisano, A. P., "Coulomb Friction in High-Speed Cam Systems," Trans. ASME, J. Mech., Trans, Auto Des, v. 106, n. 4, pp. 470-474, 1984.
4. Pisano, A. P. and H.-T. Chen, "Coulomb Friction and Optimal Rocker Arm Ratio for High-Speed Cam Systems," Trans. ASME, J. Mech., Trans., Auto. Des., v. 108, n. 3, pp. 340-344, 1986.
5. Chan, C.-Y. and A. P. Pisano, "Dynamic Model of a Fluctuating Rocker-Arm Ratio Cam System," Trans. ASME, J. Mech., Trans, Auto Des, v. 109, n. 3, pp. 356-365, Sep 1987.
6. Lin, Y. and A. P. Pisano, "General Dynamic Equations of Helical Springs with Static Solution and Experimental Verification," Trans. ASME, J. of Appl. Mech., v. 54, n. 4, pp. 910-917, 1987.
7. Lin, Y. and A. P. Pisano, "The Differential Geometry of the General Helix as Applied to Mechanical Compression Springs," Trans. ASME, J. of Appl. Mech., v. 55, n. 4, pp. 831-836, 1988.
8. Pisano, A. P., "Resonant-Structure Micromotors: Historical Perspective and Analysis," Sensors and Actuators, v. 20, n. 1/2, pp. 83-89, Elsevier, 1989. (Special Edition for Micro Electromechanical Systems).
9. Wu, L. and A. P. Pisano, "Development and Application of Iconic and Inactive-Joint Concepts to Automated Mechanical System Sketching," Trans. ASME, J. Mech., Trans, Auto Des, v. 110, pp. 73-80, 1988.
10. Chan, C.-Y. and A. P. Pisano, "On the Synthesis of Cams with Irregular Followers," Trans. ASME, J. Mech. Des, v. 112, n. 2, pp. 36-41, 1990.
11. Lin, Y. and A. P. Pisano, "Three-Dimensional Dynamic Simulation of Helical Compression Springs," Trans. ASME, J. Mech. Des, v. 112, n. 4, pp. 529-537, 1990.
12. Pisano, A. P. and Y.-H. Cho, "Mechanical Design Issues in Laterally-Driven Microstructures," Sensors and Actuators, v. A, n. 23, pp. 1060-1064, 1990.
13. Udell, K. S., A. P. Pisano, R. T. Howe, R. M. White and R. S. Muller, "Microsensors for Heat Transfer and Fluid Flow Measurements," Experimental Thermal and Fluid Science, n. 3, pp. 52-59, 1990.
14. Hatch, C. T. and A. P. Pisano, "Modeling, Simulation and Modal Analysis of a Hydraulic Valve Lifter with Oil Compressibility Effects," Trans. ASME, J. Mech. Des, v. 113, n. 1, pp. 46-54, 1991.
15. Hodges, P. H. and A. P. Pisano, “On the synthesis of straight line, constant velocity scanning mechanisms,” Journal of Mechanical Design, v. 113, n. 4, pp. 464-472, Dec 1991.

16. Lin, Y. and A. P. Pisano, “New formulas for curvature, torsion and forces for helical springs,” Springs, v 30, n. 2, pp. 59, Oct 1991.
17. Kim, C.-J., A. P. Pisano, R. S. Muller and M. G. Lim, "Polysilicon Microgripper," Sensors and Actuators A, v. 33, pp. 221-227, Elsevier, 1992.
18. Kim, C-J, A. P. Pisano and R. S. Muller, "Silicon-Processed Overhanging Microgripper," Trans. ASME, J. of Micro Electromechanical Systems, v. 1, n. 1, pp. 31-36, Mar 1992.
19. Lee, A. P. and A. P. Pisano, "Polysilicon Angular Micro Vibromotors," Trans. ASME, J. of Micro Electromechanical Systems, v. 1, n. 2, pp. 70-76, Jun 1992.
20. Lee, A. P. and A. P. Pisano, "Repetitive Impact Testing of Micromechanical Structures," Sensors and Actuators A, v. 39, pp. 73-82, Elsevier Sequoia, 1993.
21. Lin, Y., P. H. Hodges and A. P. Pisano, "Optimal Design of Resonance Suppression Helical Springs," Trans. ASME, J. Mech. Des, v. 115, n. 4, pp. 380-384, Sep 1993.
22. Sefler, J. F and A. P. Pisano, "The Design, Experimentation and Simulation of a Novel Coulomb Friction Device for Automotive Valve Spring Damping," Trans. ASME, J. Mech. Des, v. 115, n. 4, pp. 871-876, 1993.
23. Cho, Y.-H., B. M. Kwak, A. P. Pisano and R. T. Howe, "Slide Film Damping in Laterally Driven Microstructures," Sensors and Actuators A, v. 40, pp. 31-39, Elsevier Sequoia, 1994.
24. Cho, Y-H, A. P. Pisano and R. T. Howe, "Viscous Damping Model for Laterally Oscillating Microstructures," Trans. ASME, J. Micro Electromechanical Systems, pp. 81-87, v. 3, n. 2, Jun 1994.
25. Kim, C-J, R. S. Muller and A. P. Pisano, "Residual Strain Measurement of Thin Films using Microfabricated Vernier Gauges," Sensors and Materials, v. 4, n. 6, pp. 291-304, MYU Tokyo, 1994.
26. Lin, L. and A. P. Pisano, "Thermal Bubble Powered Microactuators," Microsystem Technologies, v. 1, n. 1, pp. 51-58, 1994.
27. Lin, L., K. S. Udell and A. P. Pisano, "Liquid-Vapor Phase Transition and Bubble Formation in Micro Structures," Thermal Science & Engineering, v. 2, n. 1, pp. 52-59, 1994.
28. Daneman, M. J., N. C. Tien, O. Solgaard, A. P. Pisano, K. Y. Lau and R. S. Muller, “Linear Microvibromotor for Positioning Optical Components,” Journal of Micro Electromechanical Systems, pp. 159-165, v. 5, n. 3, Sep 1996.
29. Howe, R. T, B. E. Boser and A. P. Pisano, "Polysilicon Integrated Microsystems: Technologies and Applications," Sensors and Actuators A, v. 56, pp. 167-177, Elsevier Sequoia, Aug 1996. (Invited Paper).
30. Hsu, W. and Pisano, A. P., “Modeling of a finger-follower cam system with verification in contact forces”, Journal of Mechanical Design, Transactions of the ASME, v. 118, n. 1, pp. 132-137, Mar 1996.
31. DeVoe, D. L. and A. P. Pisano, "Modeling and Optimal Design of Piezoelectric Cantilever Microactuators," Trans. ASME, J. of Micro Electromechanical Systems, pp. 266-270, v. 6, n. 3, Sep 1997.
32. Lin, L., A. P. Pisano and R. T. Howe, "A Micro Strain Gauge with Mechanical Amplifier," Trans. ASME, J. of Micro Electromechanical Systems, pp. 313-321, v. 6, n. 4, Dec 1997.
33. Roessig, T. A., R. T. Howe and A. P. Pisano, "Surface-Micromachined Resonant Accelerometer," 9th International Conference on Solid State Sensors and Actuators-Transducers'97, pp. 859-862, Chicago, 1997.
34. Allen, J. J., R. D. Kinney, J. Sarsfield, M. R. Daily, J. R. Ellis, J. H. Smith, S, Montague, R. T. Howe, B. E. Boser, R. Horowitz, A P. Pisano, M. A. Lemkin, W. A. Clark and T. Juneau, “Integrated Micro-Electro-Mechanical Sensor Development for Inertial Applications,” IEEE Aerospace and Electronic Systems Magazine, v. 13, n. 11, pp. 36-40, Nov 1998 (Cat. No. 98CH36153).
35. Horsley, D. A., M. B. Cohn, A. Singh, R. Horowitz and A. P. Pisano, “Design and Fabrication of An Angular Microactuator for Magnetic Disk Drives,” Journal of Micro Electromechanical Systems, v. 7, n. 2, pp. 141-148, Jun 1998.
36. Horsley, D. A., R. Horowitz and A. P. Pisano, “Microfabricated Electrostatic Actuators for Hard Disk Drives,” IEEE ASME Transactions on Mechatronics, v. 3, n. 3, pp. 175-183, Sep. 1998.
37. Lin, L. and A. P. Pisano, “Micro Electromechanical Filters for Signal Processing,” Journal of Micro Electromechanical Systems, v. 7, n. 3, pp. 286-294, Sep 1998.
38. Lin, L. and A. P. Pisano, “Thermal Bubble Formation on Polysilicon Micro Resistors,” Transactions of the ASME, Journal of the Heat Transfer, v. 120, n. 3, pp. 735-742, Aug 1998.
39. Liepmann, D., A. P. Pisano and B. Sage “Micro Electromechanical Systems Technology to Deliver Insulin,” Diabetes Technology & Therapeutics, 1:4, pp. 469-476, 1999.
40. Lin, L. and A. P. Pisano, “Silicon-Processed Microneedles,” Journal of Micro Electromechanical Systems, v 8, n. 1, pp. 78-84, Mar 1999.

41. Singh, A., D. A. Horsley, M. B. Cohn, A. P. Pisano and R. T. Howe, "Batch Transfer of Microstructures Using Flip-Chip Solder Bump Bonding," Journal of Micro Electromechanical Systems, IEEE, v. 8, n. 1, pp. 27-33, Mar 1999.
42. Zahn J. D., N. H. Talbot, D. Liepmann and A. P. Pisano, "Microfabricated Polysilicon Microneedles for Minimally Invasive Biomedical Devices," Biomedical Microdevices, 2:4 295-303, 2000.
43. DeVoe, D. L. and Pisano, A. P., "Surface micromachined piezoelectric accelerometers (PiXLs)," Journal of Micro Electromechanical Systems, IEEE, v. 10, n. 2, pp. 180-186, 2001.
44. Dougherty, G. M., A. P. Pisano and T. D. Sands, "The Materials Science of 'Permeable Polysilicon' Thin Films" in Materials for MEMS IV, Materials Research Society Fall Meeting, Boston, 2001.
45. Muller, L., A. P. Pisano and R. T. Howe, "Microgimbal Torsion Beam Design Using Open, Thin-Walled Cross Sections," Journal of Microelectromechanical Systems, v. 10, n. 4, pp. 550-560, Dec 2001.
46. Muller, L., R. T. Howe and A. P. Pisano, "High Aspect-Ratio, Molded Microstructures with Electrical Isolation and Embedded Interconnects," Microsystem Technologies, v. 7, pp. 47-54, Nov 2001.
47. Dougherty, G. M., A. P. Pisano and T. D. Sands, "Processing and Morphology of Permeable Polycrystalline Silicon Thin Films," J. Materials Res., pp. 2235-2242, v. 17, n. 9, Sep 2002.
48. Su, Y.-C., Lin, L., Pisano, A. P., "A Water-Powered Osmotic Microactuator," Journal of Microelectromechanical Systems, v. 11 n. 6, pp. 736-742, Dec. 2002.
49. Dougherty, G. M., T. D. Sands and A. P. Pisano, "Microfabrication Using One-Step LPCVD Porous Polysilicon Films," Journal of Microelectromechanical Systems, v. 12, n. 4, pp. 418-425, Aug 2003.
50. Vestel, M., Grummon, D., Gronsky, R., Pisano, A. P., "Effect of temperature on the devitrification kinetics of NiTi films," Acta Materialia, Elsevier Ltd, v. 51, n. 18, pp. 5309-5318, Oct 2003.
51. Davis, W., O'Reilly, O. and Pisano, A. P., "On the nonlinear dynamics of tether suspensions for MEMS," Journal of Vibration and Acoustics, Transactions of the ASME, v. 126, n. 3, pp. 326-331, 2004.
52. Kanso, E., Szeri, A. and Pisano, A. P., "Cross-coupling errors of micromachined gyroscopes," Journal of Microelectromechanical Systems, IEEE, v. 13, n. 2, pp. 323-331, 2004.
53. Wijesundara, M., Valente, G., Ashurst, W., Howe, R. T., Pisano, A. P., Carraro, C., Maboudian, R., "Single-Source Chemical Vapor Deposition of 3C-SiC Films in a LPCVD Reactor I. Growth, Structure and Chemical Characterization," Journal of the Electrochemical Society, v. 151, n. 3, pp. C210-C214, 2004.
54. Zahn, J. D., A. Deshmukh, A. P. Pisano and D. Liepmann, "Continuous on-Chip Micropumping for Microneedle Enhanced Drug Delivery," Biomedical Microdevices, v. 6, n. 3, pp. 183-90, 2004.
55. Sosnowchik, B. D., Azevedo, R. G., Cao, A., Lin, L., Pisano, A. P., "Silicon to Steel Bonding Using Rapid Thermal Annealing", 2006.
56. Piazza, G., K. Castelino, A. P. Pisano and C. J. Chang-Hasnain, "Design of a monolithic piezoelectrically actuated microelectromechanical tunable vertical-cavity surface-emitting laser," *Optics Letters*, Vol. 30, No. 8, p. 896-898, Apr 2005.
57. Sosnowchik, B. D., R. G. Azevedo, A. Cao, L. Lin and A. P. Pisano, "Silicon-to-steel bonding using rapid thermal annealing," *IEEE Transactions on Advanced Packaging*, Vol. 28, No. 4, p. 626-634, Nov 2005.
58. Wijesundara, M. B. J., G. Valente, W. R. Ashurst, R. T. Howe, A. P. Pisano, C. Carraro and R. Maboudian, "Single-Source Chemical Vapor Deposition of 3C-SiC Films in a LPCVD Reactor," *Journal of The Electrochemical Society*, Vol. 151, No. 3, p. C210, Mar 2004.
59. Kanso, E., A. Szeri and A. P. Pisano, "Cross-Coupling Errors of Micromachined Gyroscopes," *Journal of Microelectromechanical Systems*, Vol. 13, No. 2, p. 323-331, Apr 2004.
60. Davis, W. O., O. M. O'Reilly and A. P. Pisano, "On the Nonlinear Dynamics of Tether Suspensions for MEMS," *Journal of Vibration and Acoustics*, Vol. 126, No. 3, p. 326, Jul 2004.
61. Stephanou, P. J., G. Piazza, C. D. White, M. B. J. Wijesundara and A. P. Pisano, "Design of novel mechanical coupling for contour mode piezoelectric RF MEMS filters," *Journal of Physics: Conference Series*, Vol. 34, p. 342-349, Apr 2006.
62. Huang, M. C. Y., K. B. Cheng, Y. Zhou, B. Pesala, C. J. Chang-Hasnain and A. P. Pisano, "Erratum: Demonstration of piezoelectric actuated GaAs-based MEMS tunable VCSEL," *IEEE Photonics Technology Letters*, Vol. 18, No. 13, p. 1475, Jul 2006.
63. Mair, D. A., E. Geiger, A. P. Pisano, J. M. J. Frechet and F. Svec, "Injection molded microfluidic chips featuring integrated interconnects," *Lab on a Chip*, Vol. 6, No. 10, p. 1346-1354, Jul 2006.
64. Park, I., Z. Li, X. Li, A. P. Pisano and R. S. Williams, "Towards the silicon nanowire-based sensor for intracellular biochemical detection," *Biosensors and Bioelectronics*, Vol. 22, No. 9-10, p. 2065-2070, Sep 2006.

65. Piazza, G., P. J. Stephanou and A. P. Pisano, "Piezoelectric aluminum nitride vibrating contour-mode MEMS resonators," *Journal of Microelectromechanical Systems*, Vol. 15, No. 6, p. 1406-1418, Dec 2006.
66. Azevedo, R. G., D. G. Jones, A. V. Jog, B. Jamshidi, D. R. Myers, L. Chen, X. Fu, M. Mehregany, M. B. J. Wijesundara and A. P. Pisano, "A SiC MEMS Resonant Strain Sensor for Harsh Environment Applications," *IEEE Sensors Journal*, Vol. 7, No. 4, p. 568-576, 2007.
67. Sprague, S. B., S. W. Park, D. C. Walther and A. P. Pisano, "Development and characterization of small-scale rotary engines," *International Journal of Alternative Propulsion*, Vol. 1, No. 2, p. 275-293, Jan 2007.
68. Heppner, J. D., D. C. Walther and A. P. Pisano, "The design of ARCTIC: A rotary compressor thermally insulated cooler," *Sensors and Actuators, A: Physical*, Vol. 134, No. 1, p. 47-56, Feb 2007.
69. Lee, K. B., A. P. Pisano and L. Lin, "Nonlinear behaviors of a comb drive actuator under electrically induced tensile and compressive stresses," *Journal of Micromechanics and Microengineering*, Vol. 17, No. 3, p. 557-566, Feb 2007.
70. Lippmann, J. M., E. J. Geiger and A. P. Pisano, "Polymer investment molding: Method for fabricating hollow, microscale parts," *Sensors and Actuators, A: Physical*, Vol. 134, No. 1, p. 2-10, Feb 2007.
71. Park, I., J. Cheng, A. P. Pisano, E. Lee and J. Jeong, "Low temperature, low pressure nanoimprinting of chitosan as a biomaterial for bionanotechnology applications," *Applied Physics Letters*, Vol. 90, No. 9, Feb 2007.
72. Stephanou, P. J., G. Piazza, C. D. White, M. B. Wijesundara and A. P. Pisano, "Piezoelectric aluminum nitride MEMS annular dual contour mode filter," *Sensors and Actuators, A: Physical*, Vol. 134, No. 1, p. 152-160, Feb 2007.
73. White, C., G. Piazza, P. Stephanou and A. P. Pisano, "Design of nano-gap piezoelectric resonators for mechanical RF magnetic field modulation," *Sensors and Actuators, A: Physical*, Vol. 134, No. 1, p. 239-244, Feb 2007.
74. Huang, M. C. Y., K. B. Cheng, Y. Zhou, A. P. Pisano and C. J. Chang-Hasnain, "Monolithic integrated piezoelectric MEMS-tunable VCSEL," *IEEE Journal on Selected Topics in Quantum Electronics*, Vol. 13, No. 2, p. 374-379, Mar 2007.
75. Piazza, G., P. J. Stephanou and A. P. Pisano, "Single-chip multiple-frequency ALN MEMS filters based on contour-mode piezoelectric resonators," *Journal of Microelectromechanical Systems*, Vol. 16, No. 2, p. 319-328, Apr 2007.
76. Piazza, G. and A. P. Pisano, "Two-port stacked piezoelectric aluminum nitride contour-mode resonant MEMS," *Sensors and Actuators, A: Physical*, Vol. 136, No. 2, p. 638-645, May 2007.
77. Ko, S. H., I. Park, H. Pan, C. P. Grigoropoulos, A. P. Pisano, C. K. Luscombe and J. M. Frechet, "Direct nanoimprinting of metal nanoparticles for nanoscale electronics fabrication," *Nano Letters*, Vol. 7, No. 7, p. 1869-1877, Jun 2007.
78. Lee, W. C., Y. Cho and A. P. Pisano, "Nanomechanical protein concentration detector using a nanogap squeezing actuator with compensated displacement monitoring electrodes," *Journal of Microelectromechanical Systems*, Vol. 16, No. 4, p. 802-808, Aug 2007.
79. Park, I., Z. Li, A. P. Pisano and R. S. Williams, "Selective surface functionalization of silicon nanowires via nanoscale Joule heating," *Nano Letters*, Vol. 7, No. 10, p. 3106-3111, Sep 2007.
80. Piazza, G., P. J. Stephanou and A. P. Pisano, "One and two port piezoelectric higher order contour-mode MEMS resonators for mechanical signal processing," *Solid-State Electronics*, Vol. 51, No. 11-12, p. 1596-1608, Nov 2007.
81. Winterton, J. D., D. R. Myers, J. M. Lippmann, A. P. Pisano and F. M. Doyle, "A novel continuous microfluidic reactor design for the controlled production of high-quality semiconductor nanocrystals," *Journal of Nanoparticle Research*, Vol. 10, No. 6, p. 893-905, 2008.
82. Park, I., S. H. Ko, H. Pan, C. P. Grigoropoulos, A. P. Pisano, J. M. J. Frechet, E. Lee and J. Jeong, "Nanoscale patterning and electronics on flexible substrate by direct nanoimprinting of metallic nanoparticles," *Advanced Materials*, Vol. 20, No. 3, p. 489-496, Jan 2008.
83. Cheng, J. C. and A. P. Pisano, "Photolithographic process for integration of the biopolymer chitosan into micro/nanostructures," *Journal of Microelectromechanical Systems*, Vol. 17, No. 2, p. 402-409, Apr 2008.
84. Ko, S. H., I. Park, H. Pan, N. Misra, M. S. Rogers, C. P. Grigoropoulos and A. P. Pisano, "ZnO nanowire network transistor fabrication on a polymer substrate by low-temperature, all-inorganic nanoparticle solution process," *Applied Physics Letters*, Vol. 92, No. 15, Apr 2008.

85. Azevedo, R. G., W. Huang, O. M. O'Reilly and A. P. Pisano, "Dual-mode temperature compensation for a comb-driven MEMS resonant strain gauge," *Sensors and Actuators, A: Physical*, Vol. 144, No. 2, p. 374-380, Jun 2008.
86. Chen, Y., M. Sheppy, T. Yen, G. Vigevani, G. Lin, J. Kuypers, M. Hopcroft and A. P. Pisano, "Bi-chevron aluminum nitride actuators for high pressure microvalves," *Procedia Chemistry*, Vol. 1, No. 1, p. 706-709, 2009.
87. Myers, D. R., K. B. Cheng, B. Jamshidi, R. G. Azevedo, D. G. Senesky, L. Chen, M. Mehregany, M. B. J. Wijesundara and A. P. Pisano, "Silicon carbide resonant tuning fork for microsensing applications in high-temperature and high G-shock environments," *Journal of Micro/Nanolithography, MEMS and MOEMS*, Vol. 8, No. 2, p. 021116, Apr 2009.
88. Kuypers, J. H. and A. P. Pisano, "Interpolation technique for fast analysis of surface acoustic wave and Lamb wave devices," *Japanese Journal of Applied Physics*, Vol. 48, No. 7, Jul 2009.
89. Lien, W., N. Ferralis, A. P. Pisano, C. Carraro and R. Maboudian, "Tunable in situ growth of porous cubic silicon carbide thin films via methyltrichlorosilane-based chemical vapor deposition," *Applied Physics Letters*, Vol. 95, No. 10, Sep 2009.
90. Park, I., Z. Li, A. P. Pisano and R. S. Williams, "Top-down fabricated silicon nanowire sensors for real-time chemical detection," *Nanotechnology*, Vol. 21, No. 1, p. 015501, Oct 2009.
91. Choi, S., I. Park, Z. Hao, H. N. Holman, A. P. Pisano and T. I. Zohdi, "Ultrafast self-assembly of microscale particles by open-channel flow," *Langmuir*, Vol. 26, No. 7, p. 4661-4667, Nov 2009.
92. Senesky, D., B. Jamshidi, Kan Bun Cheng and A. P. Pisano, "Harsh Environment Silicon Carbide Sensors for Health and Performance Monitoring of Aerospace Systems: A Review," *IEEE Sensors Journal*, Vol. 9, No. 11, p. 1472-1478, Nov 2009.
93. Liu, F., C. Carraro, A. P. Pisano and R. Maboudian, "Growth and characterization of nitrogen-doped polycrystalline 3C-SiC thin films for harsh environment MEMS applications," *Journal of Micromechanics and Microengineering*, Vol. 20, No. 3, Feb 2010.
94. Lin, C., T. Yen, Y. Lai, V. Felmetsger, M. Hopcroft, J. Kuypers and A. P. Pisano, "Temperature-compensated aluminum nitride lamb wave resonators," *IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control*, Vol. 57, No. 3, p. 524-532, Mar 2010.
95. Liu, F., C. Carraro, A. P. Pisano and R. Maboudian, "Growth and characterization of nitrogen-doped polycrystalline 3C-SiC thin films for harsh environment MEMS applications," *Journal of Micromechanics and Microengineering*, Vol. 20, No. 3, Mar 2010.
96. Choi, S., I. Park, Z. Hao, H.-Ying N. Holman, A. P. Pisano and T. I. Zohdi, "Ultrafast Self-Assembly of Microscale Particles by Open-Channel Flow," *Langmuir*, Vol. 26, No. 7, p. 4661-4667, Apr 2010.
97. Lien, W. C., K. B. Cheng, D. G. Senesky, C. Carraro, A. P. Pisano and R. Maboudian, "Growth of 3C-SiC Thin Film on AlN/Si (100) with Atomically Abrupt Interface via Tailored Precursor Feeding Procedure," *Electrochemical and Solid-State Letters*, Vol. 13, p. D53-D56, Apr 2010.
98. Geiger, E. J., A. P. Pisano and F. Svec, "A Polymer-Based Microfluidic Platform Featuring On-Chip Actuated Hydrogel Valves for Disposable Applications," *Microelectromechanical Systems, Journal of,* Vol. 19, No. 4, p. 944-950, May 2010.
99. Choi, S., S. Stassi, A. P. Pisano and T. I. Zohdi, "Coffee-Ring Effect-Based Three Dimensional Patterning of Micro/Nanoparticle Assembly with a Single Droplet," *Langmuir*, Vol. 26, No. 14, p. 11690-11698, Jun 2010.
100. Lee, W. C., S. Rigante, A. P. Pisano and F. A. Kuypers, "Large-scale arrays of picolitre chambers for single-cell analysis of large cell populations," *Lab Chip*, Vol. 10, No. 21, p. 2952-2958, Aug 2010.
101. Lin, C.-M., T.-T. Yen, V. V. Felmetsger, M. A. Hopcroft, J. H. Kuypers and A. P. Pisano, "Thermally compensated aluminum nitride Lamb wave resonators for high temperature applications," *Applied Physics Letters*, Vol. 97, No. 8, Aug 2010.
102. Liu, F., C. H. Li, A. P. Pisano, C. Carraro and R. Maboudian, "Low-energy ion bombardment to tailor the interfacial and mechanical properties of polycrystalline 3C-silicon carbide," *Journal of Vacuum Science & Technology A: Vacuum, Surfaces and Films*, Vol. 28, No. 5, p. 1259, Sep 2010.
103. Demko, M. T., J. C. Cheng and A. P. Pisano, "High-Resolution Direct Patterning of Gold Nanoparticles by the Microfluidic Molding Process," *Langmuir*, Vol. 26, No. 22, p. 16710-16714, Oct 2010.
104. Lin, C. M., W. C. Lien, V. V. Felmetsger, M. A. Hopcroft, D. G. Senesky and A. P. Pisano, "AlN thin films grown on epitaxial 3C-SiC (100) for piezoelectric resonant devices," *Applied Physics Letters*, Vol. 97, No. 14, p. 141907-141907, Oct 2010.

105. Hsia, B., N. Ferralis, D. G. Senesky, A. P. Pisano, C. Carraro and R. Maboudian, "Epitaxial Graphene Growth on 3C-SiC (111)/AlN (0001)/Si (100)," *Electrochemical and Solid-State Letters*, Vol. 14, No. 2, p. K13-K15, Nov 2010.
106. Lin, C. M., Y. Y. Chen and A. P. Pisano, "Theoretical investigation of Lamb wave characteristics in AlN/3C-SiC composite membranes," *Applied Physics Letters*, Vol. 97, No. 19, p. 193506-193506, Nov 2010.
107. Park, I., Z. Li, A. P. Pisano and R. S. Williams, "Top-down fabricated silicon nanowire sensors for real-time chemical detection," *Nanotechnology*, Vol. 21, p. 015501, Nov 2010.
108. Liu, F., B. Hsia, C. Carraro, A. Pisano and R. Maboudian, "Enhanced Ohmic contact via graphitization of polycrystalline silicon carbide," *Applied Physics Letters*, Vol. 97, p. 262107, Dec 2010.
109. Rheaume, J. M. and A. P. Pisano, "Surface micromachining of unfired ceramic sheets," *Microsystem Technologies*, p. 1-10, 2011.
110. Rheaume, J. M. and A. P. Pisano, "A review of recent progress in sensing of gas concentration by impedance change," *Ionics*, Vol. 17, No. 2, p. 99-108, Mar 2011.
111. T. T. Yen, T. Hirasawa, P. K Wright, A. P. Pisano and L. Lin, "Corrugated aluminum nitride energy harvesters for high energy conversion effectiveness," *J. Micromechanics Microengineering*, vol. 21, no. 8, p. 85037, 2011.
112. E. Geiger, D. A. Mair, F. Svec, and A. P. Pisano, "Development of an injection molding tool for complex microfluidic geometries," *Microsyst. Technol.*, vol. 17, no. 9, pp. 1537–1540, 2011.
113. B. Hsia, N. Ferralis, D. G. Senesky, A. P. Pisano, C. Carraro, and R. Maboudian, "Epitaxial Graphene Growth on 3C–SiC(111)/AlN(0001)/Si(100)," *Electrochemical and Solid-State Letters*, vol. 14, no. 2. pp. K13–K15, 2011.
114. N. S. Dhillon, J. C. Cheng, and A. P. Pisano, "Heat Transfer due to Microscale Thin Film Evaporation From the Steady State Meniscus in a Coherent Porous Silicon Based Micro-Columnated Wicking Structure," in *Volume 10: Heat and Mass Transport Processes, Parts A and B*, 2011, pp. 667–677.
115. C.-M. Lin, Y.-J. Lai, J.-C. Hsu, Y.-Y. Chen, D. G. Senesky, and A. P. Pisano, "High-Q aluminum nitride Lamb wave resonators with biconvex edges," *Appl. Phys. Lett.*, vol. 99, no. 14, p. -, 2011.
116. N. S. Dhillon, C. Hogue, M. W. Chan, J. C. Cheng, and A. P. Pisano, "Integrating Coherent Porous Silicon as a Wicking Structure in the MEMS Based Fabrication of a Vertically Wicking Micro-Columnated Loop Heat Pipe," in *Volume 11: Nano and Micro Materials, Devices and Systems; Microsystems Integration*, 2011, pp. 297–306.
117. W.-C. Lien, D.-S. Tsai, S.-H. Chiu, D. G. Senesky, R. Maboudian, A. P. Pisano, and H. He, "Low-Temperature, Ion Beam-Assisted SiC Thin Films With Antireflective ZnO Nanorod Arrays for High-Temperature Photodetection," *Electron Device Lett. IEEE*, vol. 32, no. 11, pp. 1564–1566, 2011.
118. N. S. Dhillon, J. C. Cheng, and A. P. Pisano, "Minimizing the Wick Thickness in a Planar Microscale Loop Heat Pipe Using Efficient Thermodynamic Design," in *Volume 6: Fluids and Thermal Systems; Advances for Process Industries, Parts A and B*, 2011, pp. 1121–1129.
119. J. Rheaume and A. Pisano, "Surface micromachining of unfired ceramic sheets," *Microsyst. Technol.*, vol. 17, no. 1, pp. 133–142, 2011.
120. W.-C. Lien, D.-S. Tsai, D.-H. Lien, D. G. Senesky, H. He, and A. P. Pisano, "4H–SiC Metal–Semiconductor–Metal Ultraviolet Photodetectors in Operation of 450 °C" *Electron Device Lett. IEEE*, vol. 33, no. 11, pp. 1586–1588, 2012.
121. C.-M. Lin, Y.-Y. Chen, V. V Felmetsger, D. G. Senesky, and A. P. Pisano, "AlN/3C-SiC composite plate enabling high-frequency and high-Q micromechanical resonators," *Adv. Mater.*, vol. 24, no. 20, pp. 2722–2727, May 2012.
122. J. M. Lippmann and A. P. Pisano, "Bubble time-of-flight: A simple method for measuring microliter per minute flows without calibration," *Sensors Actuators A Phys.*, vol. 177, pp. 60–66, Apr. 2012.
123. I. Doh, W. C. Lee, Y.-H. Cho, A. P. Pisano, and F. A. Kuypers, "Deformation measurement of individual cells in large populations using a single-cell microchamber array chip," *Appl. Phys. Lett.*, vol. 100, no. 17, p. -, 2012.
124. S. Choi, A. Jamshidi, T. J. Seok, M. C. Wu, T. I. Zohdi, and A. P. Pisano, "Fast, High-Throughput Creation of Size-Tunable Micro/Nanoparticle Clusters via Evaporative Self-Assembly in Picoliter-Scale Droplets of Particle Suspension," *Langmuir*, vol. 28, no. 6, pp. 3102–3111, Feb. 2012. [1] J. Rheaume and A. Pisano, "Investigation of an impedancemetric NO x sensor with gold wire working electrodes," *J. Solid State Electrochem.*, vol. 16, no. 11, pp. 3603–3610, 2012.

125. C. N. Janakos, F. T. Goericke, and A. P. Pisano, "Micro-Electro-Mechanical Systems (MEMS) Micro-Heater," in *Volume 9: Micro- and Nano-Systems Engineering and Packaging, Parts A and B*, 2012, p. 881.
126. D. R. Myers, R. G. Azevedo, L. Chen, M. Mehregany, and A. P. Pisano, "Passive Substrate Temperature Compensation of Doubly Anchored Double-Ended Tuning Forks," *Microelectromechanical Syst. J.*, vol. 21, no. 6, pp. 1321–1328, 2012.
127. S. Choi, I. Park, Z. Hao, H.-Y. Holman, and A. Pisano, "Quantitative studies of long-term stable, top-down fabricated silicon nanowire pH sensors," *Appl. Phys. A*, vol. 107, no. 2, pp. 421–428, 2012.
128. B. D. Sosnowchik, R. G. Azevedo, D. R. Myers, M. W. Chan, A. P. Pisano, and L. Lin, "Rapid Silicon-to-Steel Bonding by Induction Heating for MEMS Strain Sensors," *Microelectromechanical Syst. J.*, vol. 21, no. 2, pp. 497–506, 2012.
129. M. T. Demko, J. C. Cheng, and A. P. Pisano, "Rigid, Vapor-Permeable Poly(4-methyl-2-pentyne) Templates for High Resolution Patterning of Nanoparticles and Polymers," *ACS Nano*, vol. 6, no. 8, pp. 6890–6896, 2012.
130. M. T. Demko, T. P. Brackbill, and A. P. Pisano, "Simultaneous Patterning of Nanoparticles and Polymers Using an Evaporation Driven Flow in a Vapor Permeable Template," *Langmuir*, vol. 28, no. 25, pp. 9857–9863, Jun. 2012.
131. I. Doh, E. Y. Erdem, and A. P. Pisano, "Trapping and collection of uniform size droplets for nanoparticle synthesis," *Appl. Phys. Lett.*, vol. 100, no. 7, p. -, 2012.
132. S. Choi, A. P. Pisano, and T. I. Zohdi, "An analysis of evaporative self-assembly of micro particles in printed picoliter suspension droplets," *Thin Solid Films*, vol. 537, pp. 180–189, Jun. 2013.
133. F. T. Goericke, G. Vigevani, and A. P. Pisano, "Bent-beam sensing with triple-beam tuning forks," *Appl. Phys. Lett.*, vol. 102, no. 25, p. -, 2013.
134. N. Besse, A. P. Pisano, and N. F. de Rooij, "Design considerations to enhance the performances of thin circular piezoelectric energy harvester diaphragms in harsh liquid environments," *J. Phys. Conf. Ser.*, vol. 476, no. 1, p. 12056, 2013.
135. L. M. S. Smith, W. J. Connacher, J. C. Cheng, and A. P. Pisano, "Enhanced Heat Rejection of Microscale Geometries in Convective Flow Boiling Evaporators," *J. Phys. Conf. Ser.*, vol. 476, no. 1, p. 12029, 2013.
136. F. A. Kuypers, "Flow-lysometry for cytoplasmic analysis of single cells in large populations," *Micro Nano Lett.*, vol. 8, no. 4, pp. 169–172(3), 2013.
137. H. So, J. C. Cheng, and A. P. Pisano, "Nanowire-integrated microporous silicon membrane for continuous fluid transport in micro cooling device," *Appl. Phys. Lett.*, vol. 103, no. 16, p. -, 2013.
138. D. A. Rolfe, S. Wodin-Schwartz, R. Alonso, and A. P. Pisano, "Planar SiC MEMS flame ionization sensor for in-engine monitoring," *J. Phys. Conf. Ser.*, vol. 476, no. 1, p. 12072, 2013.
139. D.-S. Tsai, W.-C. Lien, D.-H. Lien, K.-M. Chen, M.-L. Tsai, D. G. Senesky, Y.-C. Yu, A. P. Pisano, and J.-H. He, "Solar-Blind Photodetectors for Harsh Electronics," *Sci. Rep.*, vol. 4, Sep. 2013.
140. C.-M. Lin, Y.-Y. Chen, V. V Felmetsger, W.-C. Lien, T. Riekkinen, D. G. Senesky, and A. P. Pisano, "Surface acoustic wave devices on AlN/3C–SiC/Si multilayer structures," *J. Micromechanics Microengineering*, vol. 23, no. 2, p. 25019, 2013.
141. D. R. Myers, M. W. Chan, G. Vigevani, B. D. Sosnowchik, R. G. Azevedo, A. V. Jog, L. Lin, and A. P. Pisano, "Torque measurements of an automotive halfshaft using micro double-ended tuning fork strain gauges," *Sensors Actuators A Phys.*, vol. 204, pp. 79–87, Dec. 2013.
142. A. Maralani, M. S. Mazzola, and A. P. Pisano, "Vertical Channel Silicon Carbide JFETs Based Operational Amplifiers," in *Materials Science Forum*, 2013, vol. 740–742, pp. 1069–1072.
143. H. So, K. Lee, N. Murthy, and A. P. Pisano, "All-in-One Nanowire-Decorated Multifunctional Membrane for Rapid Cell Lysis and Direct DNA Isolation," *ACS Appl. Mater. Interfaces*, vol. 6, no. 23, pp. 20693–20699, Dec. 2014.
144. H. So, A. P. Pisano, and Y. H. Seo, "Caterpillar locomotion-inspired valveless pneumatic micropump using a single teardrop-shaped elastomeric membrane," *Lab Chip*, vol. 14, no. 13, pp. 2240–2248, 2014.
145. N. Zhang, Y. Rao, N. Xu, A. Maralani, and A. P. Pisano, "Characterization of 4H-SiC Bipolar Junction Transistor at High Temperatures," in *Materials Science Forum*, 2014, vol. 778–780, pp. 1013–1016.
146. G. D. Hoople, D. A. Rolfe, K. C. McKinstry, J. R. Noble, D. A. Dornfeld, and A. P. Pisano, "Comparison of Microscale Rapid Prototyping Techniques," *J. Micro Nano-Manufacturing*, vol. 2, no. 3, p. 034502, 2014.
147. N. S. Dhillon and A. P. Pisano, "Enabling two-phase microfluidic thermal transport systems using a novel thermal-flux degassing and fluid charging approach," *J. Micromechanics Microengineering*, vol. 24, no. 3, p. 35021, 2014.

148. H. So, K. Lee, Y. H. Seo, N. Murthy, and A. P. Pisano, "Hierarchical Silicon Nanospikes Membrane for Rapid and High-Throughput Mechanical Cell Lysis," *ACS Appl. Mater. Interfaces*, vol. 6, no. 10, pp. 6993–6997, May 2014.
149. C.-M. Lin, V. Yantchev, J. Zou, Y.-Y. Chen, and A. P. Pisano, "Micromachined One-Port Aluminum Nitride Lamb Wave Resonators Utilizing the Lowest-Order Symmetric Mode," *Microelectromechanical Syst. J.*, vol. 23, no. 1, pp. 78–91, 2014.
150. E. Y. Erdem, J. C. Cheng, F. M. Doyle, and A. P. Pisano, "Multi-Temperature Zone, Droplet-based Microreactor for Increased Temperature Control in Nanoparticle Synthesis," *Small*, vol. 10, no. 6, pp. 1076–1080, 2014.
151. X. Zhang, Z. Yu, C. Wang, D. Zarrouk, J.-W. T. Seo, J. C. Cheng, A. D. Buchan, K. Takei, Y. Zhao, J. W. Ager, J. Zhang, M. Hettick, M. C. Hersam, A. P. Pisano, R. S. Fearing, and A. Javey, "Photoactuators and motors based on carbon nanotubes with selective chirality distributions," *Nat Commun*, vol. 5, Jan. 2014.
152. K. Yamamoto, F. Goericke, A. Guedes, G. Jaramillo, T. Hada, A. P. Pisano, and D. Horsley, "Pyroelectric aluminum nitride micro electromechanical systems infrared sensor with wavelength-selective infrared absorber," *Appl. Phys. Lett.*, vol. 104, no. 11, p. -, 2014.
153. H. So, Y. H. Seo, and A. P. Pisano, "Refillable and magnetically actuated drug delivery system using pear-shaped viscoelastic membrane," *Biomicrofluidics*, vol. 8, no. 4, p. -, 2014.
154. A. Maralani, W. C. Lien, N. Zhang, and A. P. Pisano, "Silicon Carbide Transistors for IC Design Applications up to 600 °C," *Mater. Sci. Forum*, vol. 778–780, pp. 1126–1129, 2014.
155. N. Zhang, C.-M. Lin, D. G. Senesky, and A. P. Pisano, "Temperature sensor based on 4H-silicon carbide pn diode operational from 20 °C to 600 °C," *Appl. Phys. Lett.*, vol. 104, no. 7, p. -, 2014.
156. J. Zou, C.-M. Lin, Y.-Y. Chen, and A. P. Pisano, "Theoretical study of thermally stable SiO2/AlN/SiO2 Lamb wave resonators at high temperatures," *J. Appl. Phys.*, vol. 115, no. 9, p. 94510, 2014.
157. K. Lee, N. Lingampalli, A. P. Pisano, N. Murthy, and H. So, "Physical Delivery of Macromolecules using High-Aspect Ratio Nanostructured Materials," ACS Appl. Mater. Interfaces, vol. 7, no. 42, pp. 23387–23397, 2015.
158. S. Q. Shao, W. C. Lien, A. Maralani, J. C. Cheng, K. L. Dorsey, and A. P. Pisano, "4H-Silicon Carbide p-n Diode for High Temperature (600 °C) Environment Applications," in Materials Science Forum, vol. 821–823, pp. 636–639, 2015.
159. L. S. Smith, G.D. Hoople, J.C. Cheng and A.P. Pisano, "A Resealable, Gas-Tight Packaging Technique for Silicon Microfluidic Devices," J. Microelectron. Electron. Packag., vol. 12, no. 1, pp. 49–54, 2015.
160. H. So and A. P. Pisano, "Self-Transport of Condensed Liquid in Micro Cooling Device Using Distributed Meniscus Pumping," Langmuir, vol. 31, no. 23, pp. 6588–6594, 2015.
161. H. So and A. P. Pisano, "Micromachined passive phase-change cooler for thermal management of chip-level electronics," Int. J. Heat Mass Transf., vol. 89, pp. 1164–1171, 2015.
162. H. So and A. Pisano, "Electrothermal modeling, fabrication and analysis of low-power consumption thermal actuator with buckling arm," Microsyst. Technol., vol. 21, no. 1, pp. 195–202, 2015.
163. D. Yang, D. Kim, S. H. Ko, A. P. Pisano, Z. Li, and I. Park, "Focused energy field method for the localized synthesis and direct integration of 1D nanomaterials on microelectronic devices," Adv. Mater., vol. 27, no. 7, pp. 1207–1215, 2015.
164. D. Yang, D. Kim, S. H. Ko, A. P. Pisano, Z. Li, and I. Park, "Focused Energy Field Method for the Localized Synthesis and Direct Integration of 1D Nanomaterials on Microelectronic Devices.," Adv. Mater., vol. 27, no. 7, pp. 1207–15, 2015.
165. K. L. Dorsey and A. P. Pisano, "Stability and Control of a Metal Oxide Gas Sensor in Simulated Wind," IEEE Sens. J., vol. 16, no. 3, pp. 699–705, 2016.
166. D. A. Rolfe, K. L. Dorsey, J. C. Cheng, and A. P. Pisano, "A surface acoustic resonator with template-patterned interdigitated fingers," Sensors Actuators A Phys., vol. 248, pp. 73–77, 2016.

Refereed Publications / Conference and Symposium Proceedings

1. Chan, C. and A. P. Pisano, "On the synthesis of cams with irregular followers," Trends and Developments in Mechanisms, Machines and Robotics - 1988, ASME Design Engineering Division, v. 15, n. 1, pp. 287-292, Sep 1988.
2. Hodges, P. H. and A. P. Pisano, "On optimal mechanism synthesis via synthesis and analysis operators," Advances in Design Automation - 1988, ASME Design Engineering Division, v. 14, pp. 403-408, Sep 1988.

3. Hatch, C. T. and A. P. Pisano, "Modeling, Simulation and Modal Analysis of a Hydraulic Valve Lifter with Oil Compressibility Effects," Proc. ASME, DE-Vol. 19-3, Advances in Design Automation-1989, pp. 271-280, Montreal, 1989. (ASME Order Number H0509C).
4. Lin, Y. and A. P. Pisano, "Three-Dimensional Dynamic Simulation of Helical Compression Springs," Proc. ASME, DE v. 19, n. 3, Advances in Design Automation-1989, pp. 101-108, Montreal, 1989. (ASME Order Number H0509C).
5. Lin, Y. and A. P. Pisano, "Differential geometry of the general helix as applied to mechanical springs," Joint ASCE/ASME Applied Mechanics, Biomechanics and Fluids Engineering Conference, pp. 17-26, Jul 1989.
6. Pisano, A. P. and Y.-H. Cho, "Mechanical Design Issues in Laterally-Driven Microstructures," Proc. Transducers'89, Montreux, Switzerland, 1989.
7. Pisano, A. P., "Resonant-Structure Micromotors," IEEE Proc., Micro Electro Mechanical Systems Work
8. Brennen, R. A., A. P. Pisano and W. C. Tang, "Multiple Mode Micromechanical Resonators," IEEE Proc., Microelectromechanical Systems Workshop, pp. 9-14, Napa Valley, 1990. (IEEE Catalog Number 90CH2832-4).
9. Brennen, R. A., M. G. Lim, A. P. Pisano and A. T. Chou, "Large Displacement Linear Actuator," IEEE Solid State Sensor and Actuator Workshop, Hilton Head, pp. 135-139, 1990.
10. Cho, Y.-H. and A. P. Pisano, "Optimum Structural Design of Micromechanical Crab-Leg Flexures with Microfabrication Constraints," Proc. ASME, DSC v. 19, Microstructures, Sensors and Actuators, pp. 31-50, ASME Winter Annual Meeting, Nov 1990.
11. Kim, C.-J. and A. P. Pisano, "Design, Testing and Fabrication of a Polysilicon Microgripper," Proc. ASME, DSC v. 19, Microstructures, Sensors and Actuators, pp. 99-110, ASME Winter Annual Meeting, Nov 1990.
12. Kim, C.-J., A. P. Pisano, R. S. Muller and M. G. Lim, "Polysilicon Microgripper," IEEE Solid State Sensor and Actuator Workshop, Hilton Head, pp. 48-51, 1990.
13. Lee, A. P. and A. P. Pisano, "Repetitive Impact Testing of Micro Mechanical Structures," Proc. ASME, DSC v. 19, Microstructures, Sensors and Actuators, pp. 51-68, ASME Winter Annual Meeting, Nov 1990.
14. Lee, A. P. and A. P. Pisano, "Repetitive Micro Impact Test Structure," IEEE Solid State Sensor and Actuator Workshop, Hilton Head, 1990.
15. Cohn, M. B., C.-J. Kim and A. P. Pisano, "Self-Assembling Electrical Networks: An Application of Micromachining Technology," Proc. Transducers'91, San Francisco, Jun 1991.
16. Field, L., R. M. White and A. P. Pisano, "Fluid actuation of microgears," Proceedings of Winter Annual Meeting ASME, Dynamic Systems and Control Division, v. 32, pp. 191-196, Dec 1991.
17. Field, L. A., R. M. White and A. P. Pisano, "Fluid-Powered Rotary Gears and Micro-Flow Channels," Proc. Transducers'91, San Francisco, Jun 1991.
18. Judy, M. W., Y.-H. Cho, R. T. Howe and A. P. Pisano, "Self-Adjusting Microstructures (SAMS)," IEEE Proc., Microelectromechanical Systems Workshop, pp. 51-56, Nara, JAPAN , 1991. (IEEE Catalog Number 91CH2957-9).
19. Kim, C.-J., A. P. Pisano and R. S. Muller, "Overhung Polysilicon Microgripper," Proc. Transducers'91, San Francisco, Jun 1991.
20. Lee, A. P. and A. P. Pisano, "Impact-actuated micro angular oscillator. Design, testing and dynamic analysis," Proceedings of Winter Annual Meeting of the American Society of Mechanical Engineers, Dynamic Systems and Control Division, v. 32, pp. 241-254, Dec 1991.
21. Lee, A. P., A. P. Pisano and L. Lin, "Normal and Tangential Impact in Micro Electromechanical Structures," IEEE Proc., Microelectromechanical Systems Workshop, pp. 21-26, Nara, JAPAN, 1991. (IEEE Catalog Number 91CH2957-9).
22. Lin, L. and A. P. Pisano, "Bubble forming on a micro line heater," Proc. ASME Winter Annual Meeting, Dynamic Systems and Control Division, v. 32, pp. 147-163, Dec 1991.
23. Lin, L., A. P. Pisano and A. P. Lee, "Microbubble Powered Actuator," Proc. Transducers'91, pp. 1041-1044, San Francisco, Jun 1991.
24. Lin, Y., P. H. Hodges and A. P. Pisano, "Optimal design of resonance suppression helical springs," 17th Design Automation Conference, 1991 ASME Design Technical Conferences, v. 32, n. 1, p 79-84, Sep 1991.
25. Lee, A. P., A. P. Pisano and M. G. Lim, "Impact, Friction and Wear Testing of Microsamples of Polycrystalline Silicon," Mat Res. Soc. Symp. Proc., v. 276, pp. 67-78, 1992.

26. Lee, A. P., P. B. Ljung and A. P. Pisano, "Polysilicon Micro Vibromotors," IEEE Proc., Micro Electro Mechanical Systems Workshop, pp. 177-182, Travemunde, Germany, 1992. (IEEE Catalog Number 92CH3093-2).
27. Lin, L., C. T.-C. Nguyen, R. T. Howe and A. P. Pisano, "Microelectromechanical Filters for Signal Processing," IEEE Proc., Micro Electro Mechanical Systems Workshop, pp. 226-231, Travemunde, Germany, 1992. (IEEE Catalog Number 92CH3093-2).
28. Cho, Y.-H., B.-M. Kwak, A. P. Pisano and R. T. Howe, "Viscous Energy Dissipation in Laterally Oscillating Planar Microstructures: A Theoretical and Experimental Study," IEEE Proc., Microelectromechanical Systems Workshop, pp. 93-98, Fort Lauderdale, Florida, 1993. (IEEE Catalog Number 93CH3265-6).
29. Hsu, W. and A. P. Pisano, "Modeling of a finger-follower cam system with verification of contact forces," Proceedings of the 14th Biannual ASME Design Technical Conference on Mechanical Vibration and Noise, v. 57, pp. 29-38, Sep 1993.
30. Lee, A. P., D. J. Nikkel, Jr. and A. P. Pisano, "Polysilicon Linear Micro Vibromotors," Proc. Transducers'93, pp. 46-49, Yokohama, Japan, Jun 1993.
31. Lin, L., K. S. Udell and A. P. Pisano, "Vapor bubble formation on a micro heater in confined and unconfined micro channels," Proc. 29th ASME National Heat Transfer Conference, v. 253, p 85-93, 1993.
32. Lin, L., A. P. Pisano and R. S. Muller, "Silicon Processed Microneedles," Proc. Transducers '93, pp. 237-240, Yokohama, Japan, Jun 1993.
33. Lin, L., K. M. McNair, R. T. Howe and A. P. Pisano, "Vacuum-Encapsulated Lateral Microresonators," Proc. Transducers'93, pp. 270-273, Yokohama, Japan, Jun 1993.
34. Lin, L., R. T. Howe and A. P. Pisano, "A Passive, In-Situ Micro Strain Gauge," IEEE Proc., Microelectromechanical Systems Workshop, pp. 201-206, Fort Lauderdale, Florida, 1993. (IEEE Catalog Number 93CH3265-6).
35. Mirfendereski, D., L. Lin, A. Der Kiureghian and A. P. Pisano, "Probabilistic Response of Micro-Fabricated Polysilicon Beam Structures: Comparison of Analysis and Experiments," Proc. ASME, DSC v. 46, pp. 77-80, ASME Winter Annual Meeting, Nov 1993.
36. Hsu, W. and A. P. Pisano, "Modeling of a hydraulic lash adjuster with experimental identification of oil refill mechanism," Proc. 1994 ASME Design Technical Conferences, v. 69, n. 1, pp. 475-485, 1994.
37. Brosnihan, T. J., A. P. Pisano and R. T. Howe, "Surface Micromachined Angular Accelerometer with Force Feedback," Proc. ASME, DSC v. 57, n. 2, pp. 941-947, ASME International Congress and Exposition, Nov 1995, San Francisco. (Library of Congress 95-81252).
38. Cohn, M. B., R. T. Howe and A. P. Pisano, "Self-Assembly of Microsystems Using Non-Contact Electrostatic Traps," Proc. ASME, DSC v. 51, n. 2, pp. 893-900, ASME International Congress and Exposition, Nov 1995, San Francisco. (Library of Congress 95-81252).
39. Daneman, M. J., N. C. Tien, O. Solgaard, A. P. Pisano, K. Y. Lau and R. S. Muller, "Linear Micro Vibromotor for Positioning Optical Components," IEEE Proc., Micro Electro Mechanical Systems Workshop, pp. 55-60, Amsterdam, The Netherlands, 1995. (IEEE Catalog Number 95CH35754).
40. Lebouitz, K. S., R. T. Howe and A. P. Pisano, "Permeable Polysilicon Etch-Access Windows for Microshell Fabrication," Proc. Transducers'95, pp. 224-227, Stockholm, Sweden, Jun 1995. (ISBN-91-630-3473-5).
41. Ljung, P. B., T. N. Juneau and A. P. Pisano, "Micromachined Two Input Axis Angular Rate Sensor," Proc. ASME, DSC-Vol. 57-2, pp. 957-962, ASME International Congress and Exposition, Nov 1995, San Francisco. (Library of Congress 95-81252).
42. Pisano, A. P., "Biomedical applications of MEMS: A look at grippers, cochlear implants, micro needles and microchemical assay devices," Proceedings of the 1995 ASME International Mechanical Engineering Congress and Exposition, v. 57, n. 2, pp. 949-, 1995.
43. Roessig, T. A., A. P. Pisano and R. T. Howe, "Surface-Micromachined Resonant Force Sensor," Proc. ASME, DSC v. 57, n. 2, pp. 871-876, ASME IMECE, Nov 1995, San Francisco. (Library of Congress 95-81252).
44. Cohn, M. B., Y. Liang, R. T. Howe and A. P. Pisano, "Wafer-to-Wafer Transfer of Microstructures for Vacuum Packaging," Technical Digest, Solid-State Sensor and Actuator Workshop, pp. 32-35, 3-6 Jun 1996, Hilton Head Island, SC.
45. Juneau, T. and A. P. Pisano, "Micromachined Dual Input Axis Angular Rate Sensor," Technical Digest, Solid State Sensor and Actuator Workshop, pp. 299-302, 3-6 Jun 1996, Hilton Head Island, SC.
46. Ljung, P. B. and A. P. Pisano, "Nonlinear Dynamics of Micromachined Rate Gyros," Proc. ASME, DSC v. 59, pp. 393-400, ASME IMECE, Nov 1996, Atlanta. (Library of Congress 96-78683).

47. Wang, S.-H. and A. P. Pisano, "Stepper Motor Driven Four-Bar: Dynamic Modeling and Synthesis," Proc. ASME Design Engineering Technical Conference, pp. 1-15, Aug 1996, Irvine, California.
48. Aggarwal, S. K., D. A. Horsley, R. Horowitz and A. P. Pisano, "Micro-actuators for High Density Disk Drives," Proc. of the 1997 American Control Conference, v. 6, pp. 3979-3084, 1997.
49. Brosnihan, T. J., J. M. Bustillo, A. P. Pisano and R. T. Howe, "Embedded Interconnect and Electrical Isolation for High-Aspect-Ratio, SOI Inertial Instruments," Transducers 97, 1997 International Conference on Solid-State Sensors and Actuators, Digest of Technical Papers, pp. 637-670, v. 1, 16-19 Jun 1997.
50. DeVoe, D. L. and A. P. Pisano, "A Fully Surface-Micromachined Piezoelectric Accelerometers," The 9th International Conference on Solid State Sensors and Actuators-Transducers'97), v. 2, pp. 1205-1208, 16-19 Jun 1997, New York, NY.
51. Evans, J., D. Liepmann and A. P. Pisano, "Planar Laminar Mixer," IEEE Proc., Micro Electro Mechanical Systems Workshop, pp. 96-101, Nagoya, Japan, 1997. (IEEE Catalog Number 97CH36021).
52. Hipwell, R. L., A. P. Pisano and R. S. Muller, "Characterization of Thin-Film Impact Microactuators," ASME 1997 International Mechanical Engineering Congress and Exposition, Dallas, TX, Nov 16-21, pp. 87-91, 1997.
53. Horsley, D. A., A. Singh, A. P. Pisano and R. Horowitz, "Angular Micropositioner for Disk Drives," IEEE Proc., Micro Electro Mechanical Systems Workshop, pp. 454-459, Nagoya, Japan, 1997. (IEEE Catalog Number 97CH36021).
54. Juneau, T., A. P. Pisano and J. H. Smith, "Dual Axis Operation of a Micromachined Rate Gyroscope," Transducers 97, 1997 Int. Conf. Solid-State Sensors and Actuators, Digest of Technical Papers, pp. 883-886, v. 2, 16-19 Jun 1997, New York, NY.
55. Roessig, T. A., R. T. Howe and A. P. Pisano, "Nonlinear Mixing In Surface-Micromachined Tuning Fork Oscillators," Proceedings of the 1997 IEEE International Frequency Control Symposium, pp. 779-782, 28-30 May 1997, New York, NY.
56. Roessig, T. A., R. T. Howe, A. P. Pisano and J. H. Smith, "Surface-Micromachined Resonant Accelerometer," Transducers 97, 1997 International Conference on Solid-State Sensors and Actuators, Digest of Technical, v. 2, pp. 859-862, 1997.
57. Singh, A, D. A. Horsley, M. B. Cohn, A. P. Pisano and R. T. Howe, "Batch Transfer of Microstructures Using Flip-Chip Solder Bump Bonding," Transducers 97, 1997 International Conference on Solid-State Sensors and Actuators, pp. 265-268, v. 1. 16-19 Jun 1997, New York, NY.
58. Allen, J. J., R. D. Kinney, J. Sarsfield, M. R. Daily, J. R. Ellis, J. H. Smith, S. Montague, R. T. Howe, B. E. Boser, R. Horowitz, A P. Pisano, M. A. Lemkin, W. A. Clark and T. Juneau, "Integrated Micro-Electro-Mechanical Sensor Development for Inertial Applications," Proceedings of the 1998 IEEE Position Location and Navigation Symposium, p 9-16, 1998.
59. Bohringer, K.-F., Goldberg, K., Cohn, M., Howe, R., Pisano, A. P., "Parallel microassembly with electrostatic force fields," Proceedings of the 1998 IEEE International Conference on Robotics and Automation, v. 2, pp. 1204-1211, 1998.
60. Davis, W. O. and A. P. Pisano, "On the Vibrations of a MEMS Gyroscope," Modeling and Simulation of MEMS, 1998, Santa Clara, CA, Apr 1998.
61. Horsley, D. A., D. Hernandez, R. Horowitz, A. K. Packard and A. P. Pisano, "Closed-Loop Control of a Microfabricated Actuator for Dual-Stage Hard Disk Drive Servo Systems," Proceedings of the 1998 American Control Conference, pp. 3028 - 3032, v. 5 n. 6, Evanston, IL, Jun 1998.
62. Horsley, D. A., N. Wongkomet, R. Horowitz and A. P. Pisano, "Precision Positioning Using a Microfabricated Electrostatic Actuator," IEEE Transactions on Magnetics, v. 35, n. 2, pp. 993-999, Singapore, 29-31 Jul 1998.
63. Lebouitz, K. S. and A. P. Pisano, "Microneedles and Microlancets Fabricated Using SOI Wafers and Isotropic Etching," Proceedings of the Symposium on Microstructures and Microfabricated Systems, IV, pp. 235-244, Boston, MA, 1-6 Nov 1998.
64. Lebouitz, K. S. and A. P. Pisano, "Silicon Nitride Tubes for Fluid Flow and Bubble Growth Visualization," Proceedings of the Symposium on Microstructures and Microfabricated Systems, IV, pp. 77-86, Boston, MA, 1-6 Nov 1998.
65. Roessig, T. A., R. T. Howe, A. P. Pisano and J. H. Smith, "Surface-Micromachined 1 MHz Oscillator With Low-Noise Pierce Configuration," Technical Digest, Solid-State Sensor and Actuator Workshop, pp. 328-332, 8-11 Jun 1998, Cleveland, OH.

66. Talbot, N. H. and A. P. Pisano, "Polymolding: Two Wafer Polysilicon Micromolding of Closed-Flow Passages for Microneedles and Microfluidic Devices," Technical Digest, Solid-State Sensor and Actuator Workshop, pp. 265-268, Hilton Head Island, SC, 8-11 Jun 1998.
67. Lebouitz, K. S., A. Mazaheri, R. T. Howe and A. P. Pisano, "Vacuum Encapsulation of Resonant Devices Using Permeable Polysilicon," Technical Digest, IEEE International MEMS 99 Conference. Twelfth IEEE Int. Conf. Micro Electro Mechanical Systems, pp. 470-475, Orlando, FL, 17-21 Jan 1999. (Cat. No. 99CH36291)
68. Maharbiz, M. M., M. B. Cohn, R. T. Howe, R. Horowitz and A. P. Pisano, "Batch Micropackaging by Compression-Bonded Wafer-Wafer Transfer," Technical Digest IEEE International MEMS 99 Conference. Twelfth IEEE International Conference on Micro Electro Mechanical Systems, pp. 482-489, Orlando, FL, 17-21 Jan 1999.
69. Papavasiliou, A. P., D. Liepmann and A. P. Pisano, "Fabrication of a Free Floating Silicon Gate Valve," Proceedings of IMECE, Nashville, TN, 14-19 Nov 1999.
70. Desmukh, A. A., D. Liepmann, A. P. Pisano, "Continuous Micromixer With Pulsatile Micropumps", Technical Digest, Solid State Sensor and Actuator Workshop, pp. 73-76, Hilton Head Island, SC, 4-8 Jun 2000. (TRF Cat. No. 00TRF-0001)
71. Muller, L., J. M. Heck, R. T. Howe and A. P. Pisano, "Electrical Isolation Process for Molded, High-Aspect-Ratio Polysilicon Microstructures," Proceedings IEEE Thirteenth Annual International Conference on Micro Electro Mechanical Systems, pp. 590-595, Miyazaki, Japan, 23-27 Jan 2000. (Cat. No. 00CH36308)
72. Pannu, S., C. Chang, R. S. Muller and A. P. Pisano, "Closed-loop Feedback-Control System for Improved Tracking In Magnetically Actuated Micromirrors," 2000 IEEE/LEOS International Conference on Optical MEMS, pp. 107-108, Kauai, HI, 21-24 Aug 2000. (Cat. No, 00EX399)
73. Papavasiliou, A. P., D. Liepmann and A. P. Pisano, "Electrolysis-Bubble Actuated Gate Valve (for insulin injection application)," Technical Digest, Solid State Sensor and Actuator Workshop, pp. 48-51, Hilton Head Island, SC, 4-8 Jun 2000. (TRF Cat. No. 00TRF-0001)
74. Zahn, J. D., N. H. Talbot, D. Liepmann and A. P. Pisano, "Microfabricated Polysilicon Microneedles for Minimally Invasive Biomedical Devices," Berkeley Sensor and Actuator Center, pp. 295-303, The Netherlands, 2000.
75. Davis, W. O. and A. P. Pisano, "Nonlinear mechanics of suspension beams for a micromachined gyroscope," 2001 International Conference on Modeling and Simulations of Microsystems, Hilton Head Island, SC, Mar 19-21, 2001.
76. Fu, K., A. J. Knobloch, F. C. Martinez, D. C. Walther, A. C. Fernandez-Pello, A. P. Pisano, D. Liepmann, K. Miyasaka and K Maruta, "Design and Experimental Results of Small-Scale Rotary Engines," Proc. ASME International Mechanical Engineering Congress & Exposition, v. 3, pp. 867-873, 2001.
77. Fu, K., A. J. Knobloch, F. C. Martinez, D. C. Walther, A. C. Fernandez-Pello, A. P. Pisano and D. Liepmann, "Design and Fabrication of a Silicon-Based MEMS Rotary Engine," Proc. ASME International Mechanical Engineering Congress & Exposition, v. 3, pp. 875-880, 2001.
78. Su, Y.-C., L. Lin and A. P. Pisano, "Water-Powered, Osmotic Microactuator," Technical Digest, MEMS 2001, 14th IEEE International Conference on Micro Electro Mechanical Systems, pp. 393-396, Interlaken, Switzerland, 21-25 Jan 2001. (Cat. No. 01CH37090)
79. Wasilik, M. and A. P. Pisano, "Low Frequency Process for Silicon On Insulator Deep Reactive Ion Etching," Proc. SPIE, v. 4592, pp. 462-472, 2001.
80. Zahn, J., A. A. Deshmukh, A. P. Papavasiliou, A. P. Pisano and D. Liepmann, "An Integrated Microfluidic Device for the Continuous Sampling and Analysis of Biological Fluids," Proceedings of 2001 ASME IMECE, v. 3, pp. 787-792, Nov 2001.
81. Zahn, J. D., A. A. Desmukh, A. P. Pisano and D. Liepmann, "Continuous On-Chip Micropumping through A Microneedle," Technical Digest MEMS 2001. 14th IEEE International Conference on Micro Electro Mechanical Systems, pp. 503-506, Interlaken, Switzerland, 21-25 Jan 2001. (Cat. No. 01CH37090)
82. Bhave, S. A., B. L. Bircumshaw, Low W. Z., Y-S. Kim, A. P. Pisano, T-J. King and R. T. Howe, "Poly-SiGe: A High-Q Structural Material for Integrated RF MEMS," in Proc. Hilton Head, 2002.
83. Dougherty, G., T. Sands and A. P. Pisano, "The materials science of "permeable polysilicon" thin films," Proceedings of Materials Research Society Symposium, Materials Science of Microelectromechanical Systems (MEMS) Devices IV, v. 687, pp. 249-254, 2002.
84. Bircumshaw, B. L., G. Liu, H. Takeuchi, T.-J. King, R. Howe, O. O'Reilly and A. P. Pisano, "The Radial Bulk Annular Resonator: Towards a 50Ã RF MEMS Filter," in Proc. Transducers, 2003.

85. Dougherty, G., and A. P. Pisano, “Ultrasonic Particle Manipulation in Microchannels using Phased Co-Planar Transducers,” 12th Int’l. Conf. on Solid State Sensors, Actuators and Microsystems, IEEE Transducers’03 Boston, June 2003, pp. 670-673.
86. Fernandez-Pello, A. C., A. P. Pisano, K. Fu, D. C. Walther, A. K. Knobloch, F. C. Martinez, M. Senesky, C. Stoldt, R. M. Maboudian, S. Sanders, D. Liepmann and , "MEMS Rotary Engine Power System," in Proc. IEEE Transactions on Sensors and Micromachines, v. 123, n. 9, pp. 326-330, Sep 2003.
87. Frank, J. A. and A. P. Pisano, "Low-Leakage Micro Gate Valves," Proc. Transducers, pp. 2003.
88. Haendler, B. E., K. I. Pettigrew, C.-L. Sun, D. C. Walther and A. P. Pisano, "Evaporation of Methanol/Water Mixtures in Microchannels," Proc. 2003 ASME International Mechanical Engineering Congress and Exposition, v. 5, pp. 507-514, 2003.
89. Heppner, J. D., D. C. Walther and A. P. Pisano, "Leakage Flow Analysis for a MEMS Rotary Engine," Proc. ASME IMECE, v. 5, pp. 327-334, 2003.
90. Knobloch, A. J., M. Wasilik, A. C. Fernandez-Pello and A. P. Pisano, "Micro, Internal-Combustion Engine Fabrication with 900 Micron Features via DRIE," Proc. 2003 ASME IMECE, v. 5, pp. 115-123, 2003.
91. Martinez, F. C., A. J. Knobloch and A. P. Pisano, "Apex Seal Design for the MEMS Rotary Engine Power System," Proc. ASME IMECE 2003, v. 5, pp. 157-162, 2003.
92. Pleskach, M., P. Koeneman, C. Gamlen, D. C. Walther and A. P. Pisano, "Thermofluidic Packaging Approach for the MEMS Rotary Engine Power System," Proc. IMAPS 5th Topical Technology Workshop on MEMS, Related Microsystems and Nanopackaging, 2003.
93. Sun, C.-L. and A. P. Pisano, "Dynamic Modeling of A Thermally-Driven Micro Diffuser Pump," in Proc. 2003 ASME IMECE, v. 5, pp. 25-31, 2003.
94. Vestel, M. J., D. S. Grummon and A. P. Pisano, “Crystallization of sputtered NiTi films,” 2003 ASME IMECE, v. 5, pp. 7-13, 2003.
95. Walther, D. C. and A. P. Pisano, "MEMS Rotary Engine Power Systems: Project Overview and Recent Research Results," Proc. 4th International Symposium on MEMS and Nanotechnology, pp. 227-234, 2003.
96. Wijesundara, M. B. J., D. C. Walther, C. R. Stoldt, K. Fu, D. Gao, C. Carraro, A. P. Pisano and R. Maboudian, "Low Temperature CVD SiC Coated Si Microcomponents for Reduced Scale Engines," Proc. ASME IMECE, v. 5, pp. 173-180, 2003.
97. Cao, A., L. Lin, B. Sosnowchik and A. P. Pisano, “Rapid low temperature bonding of silicon to steel for MEMS sensors,” Proceedings of 2004 ASME International Mechanical Engineering Congress and Exposition, IMECE, pp. 5-11, 2004.
98. Frank, J. A. and A. P. Pisano, “A Low-Power, Low-Leakage, Bi-Stable Planar Electrolysis Micro Gate Valve”, Proceedings of Hilton Head 2004: A Solid State Sensor, Actuator and Microsystems Workshop, Jun 2004.
99. Haendler, B. E., J. Rheaume, D. C. Walther and A. P. Pisano, “The Technical Arguments for Micro Engines,” Proc. 2004 PowerMEMS Conference, Kyoto, Japan, pp. 116- 119, Nov 2004.
100. Haendler, B. E., A. P. Pisano and D. Liepmann, “Characterization of the Dynamic Pressure Response of Fuels in Microchannels,” American Physical Society- Fluid Dynamics Annual Meeting, Seattle, WA, Nov 2004.
101. Lee, K. B., A. P. Pisano, L. Lin, “A frequency-tunable comb resonator using spring tension and compression effects,” Proc. 2004 ASME IMECE, pp. 417-420, Nov 2004.
102. Sprague, S. B., Y. Tsuji, D. C. Walther, A. P. Pisano and C. Fernandez-Pello, "Observations of Flame Speed and Shape in Small Combustion Chambers," in Proc. Western States Section/ The Combustion Institute Spring 2004 Meeting, Mar 2004.
103. Sprague, S. B., Pisano, A. P., “Effect of Initial Pressure, Temperature and Chamber Size on Pressure Rise in Reduced Scale IC Engine Combustion Chamber,” Proceedings of Power MEMS 2004, Kyoto, Japan, Dec 2004.
104. Tsuji, Y., S. B. Sprague, D. C. Walther, A. P. Pisano and A. C. Fernandez-Pello, "Effect of Chamber Width on Flame Characteristics in Small Combustion Chambers," Proc. 42nd AIAA Aerospace Sciences Meeting and Exhibit, Reno, NV, Jan 2004.
105. Wojciechowski, K. E., B. E. Boser and A. P. Pisano, "A MEMS Resonant Strain Sensor Operated in Air," in Proceedings of the IEEE International Conference on Micro Electro Mechanical Systems (MEMS) 2004, pp. 841-845, Jan 2004.

106. Azevedo, R. G., Chen, I., O'Reilly, O. M., Pisano, A. P., "Influence of Sensor Substrate Geometry on the Sensitivity of MEMS Micro-Extensometers," Proceedings of ASME IMECE 2005, Nov 2005.
107. Cardes, A. C., K. McCoy, D. C. Inaoka, D. C. Walther, A. P. Pisano and A. C. Fernandez-Pello, "Characterization of Fuel Flexibility in a 4. 97cm3 Rotary Engine" Proc. 4th Mediterranean Combustion Symposium, Combustion Institute, Lisbon, Portugal, Oct 2005.
108. Geiger, E. J., J. M. Lippmann, J. A. Frank and A. P. Pisano, "Single-Step Integrated Assembly and Encapsulation of Microfluidic Bubble Generator," Proc. ASME International Mechanical Engineering Congress and Exposition ASME, pp. 4, 2005.
109. Haendler, B. E., D. C. Walther and A. P. Pisano. "Fuel Cracking using Microscale Phase Change for Power MEMS Applications," Proc. 2005 PowerMEMS Conference, Tokyo, Japan, Nov 2005.
110. Haendler, B. E., A. P. Pisano and D. Liepmann, "Fourier Transform Analysis of Pressure Fluctuations Due to Microscale Phase Change," American Physical Society- Fluid Dynamics Annual Meeting. Chicago, IL., Nov 2005
111. Haendler, B. E., D. C. Walther and A. P. Pisano, "Microscale Boiling Heat Transfer Near the Meniscus," Proc. ASME Heat Transfer, Jul 2005.
112. Heppner, J. D., D . C. Walther and A. P. Pisano," ARCTIC: A Rotary Compressor Thermally Insulated μCooler," Proc. ASME IMECE, pp. 8, Nov 2005.
113. Hobbs, E. D. and A. P. Pisano, "Micro Capillary-Force Driven Fluidic Accumulator/Pressure Source," Proc. Transducers, pp. 155-158, 2003.
114. Lippmann, J. M., E. J. Geiger and A. P. Pisano, "Micro Investment Molding: Method for Creating Injection Molded Hollow Parts," Proc. ASME IMECE, Nov 2005.
115. Piazza, G., P. J. Stephanou, J. P. Black, R. M. White and A. P. Pisano, "Single-chip Multiple-Frequency RF Microresonators Based on Aluminum Nitride Contour-Mode and FBAR Technologies," Proc. IEEE 2005 International Ultrasonics Symposium, Rotterdam, Netherlands, pp. 4, Sep 2005.
116. Piazza, G. and A. P. Pisano, "Two-Port Stacked Contour-Mode Aluminum Nitride Piezoelectric Micromechanical Resonators," Proc. Eurosensors XIX Conference, Barcelona, Spain, pp. 4, Sep 2005.
117. Piazza, G., P. J. Stephanou, M. B. J. Wijesundara and A. P. Pisano, "Single-Chip Multiple-Frequency Filters Based on Contour-Mode Aluminum Nitride Piezoelectric Micromechanical Resonators," Proc. Transducers 2005, pp. 4, Jun 2005.
118. Stephanou, P. J., G. Piazza, C. D. White, M. B . J. Wijesundara and A. P. Pisano, "Piezoelectric Thin Film AlN Annular Dual Contour Mode Bandpass Filter," in Proc. ASME IMECE Conference, Nov 2005.
119. Wade, J. S., F. Kuypers, D. Liepmann and A. P. Pisano, "Investigation of Sickle Cell Rheology Using Microfabricated Channels and Particle Image Velocimetry," Proc. 28th Annual Meeting of the National Sickle Cell Disease Program, pp. 49, Apr 2005.
120. White, C. D., G. Piazza, P. J. Stephanou and A. P. Pisano, "Nano-gap Piezoelectric Resonators for Mechanical RF Magnetic Field Modulation," in Proc. ASME IMECE, pp. 4, Nov 2005.
121. Lippmann, J. M. and A. P. Pisano, "In-Plane, Hollow Microneedles via Polymer Investment Molding," Proc. IEEE MEMS 2006 Conference, Istanbul, Jan 2006.
122. Stephanou, P. J., G. Piazza, C. D. White, M. B. J. Wijesundara and A. P. Pisano, "Design of Novel Mechanical Coupling for Contour Mode Piezoelectric RF MEMS Filters," Proceedings of International MEMS 2006 Conference, Singapore, May 2006.
123. Stephanou, P. J., G. Piazza, C. D. White, M. B. J. Wijesundara and A. P. Pisano, "Mechanically Coupled Contour Mode Piezoelectric Aluminum Nitride MEMS Filters," Proceedings of IEEE MEMS 2006 Conference, Istanbul, Jan 2006.
124. Bircumshaw, B. L., M. L. Wasilik, E. B. Kim, Y. R. Su, H. Takeuchi, C. W. Low, G. Liu, A. P. Pisano, T. J. King and R. T. Howe, "Hydrogen peroxide etching and stability of P-type poly-SiGe films," *17th IEEE International Conference on Micro Electro Mechanical Systems*, Maastricht, Netherlands, p. 514-519, Jan 2004.
125. Zimmermann, S., J. A. Frank, D. Liepmann and A. P. Pisano, "A planar micropump utilizing thermopneumatic actuation and in-plane flap valves," *17th IEEE International Conference on Micro Electro Mechanical Systems*, Maastricht, Netherlands, p. 462-465, Jan 2004.
126. Piazza, G. and A. P. Pisano, "Dry-released post-CMOS compatible contour-mode aluminum nitride micromechanical resonators for VHF applications," *Hilton Head 2004*, Hilton Head, SC, United States, p. 37-40, Mar 2004.

127. Swanger, M., D. C. Walther, A. C. Fernandez-Pello, A. P. Pisano, I. Y. Chan and K. D. Carabell, "Small-scale rotary engine power system development status," *Western States Section of the Combustion Institute Spring Meeting*, Davis, CA, Mar 2004.
128. Haendler, B. E., D. Liepmann and A. P. Pisano, "The dynamic pressure response of phase eruption in micro channels," *ASME Heat Transfer/Fluids Engineering Summer Conference 2004, HT/FED 2004*, Charlotte, NC, United states, p. 521-527, Jul 2004.
129. Martinez, F. C., N. Chen, M. Wasilik and A. P. Pisano, "Optimized ultra-DRIE for the MEMS rotary engine power system," *European micro and nano systems. Conference*, Paris, France, p. 13-17, Oct 2004.
130. Cauley III, T. H., J. D. Rosario-Rosario and A. P. Pisano, "Feasibility Study of a MEMS Viscous Rotary Engine Power System (VREPS)," *2004 ASME International Mechanical Engineering Congress and Exposition, IMECE*, Anaheim, CA, United States, Nov 2004.
131. Jones, D. G. and A. P. Pisano, "Fabrication of ultra thick ferromagnetic structures in silicon," *2004 ASME International Mechanical Engineering Congress and Exposition, IMECE*, Anaheim, CA, United States, p. 25-28, Nov 2004.
132. Lee, K. B., A. P. Pisano and L. Lin, "A frequency-tunable comb resonator using spring tension and compression effects," *2004 ASME International Mechanical Engineering Congress and Exposition, IMECE*, Anaheim, CA, United States, p. 417-420, Nov 2004.
133. Davis, W., A. P. Pisano and O. O'Reilly, "Nonlinear elastic coupling in tether-suspended MEMS," *18th IEEE International Conference on Micro Electro Mechanical Systems, MEMS 2005*, Miami Beach, FL, United States, p. 129-132, Jan 2005.
134. Lippmann, J. M., E. J. Geiger and A. P. Pisano, "Micro Investment Molding: Method for Creating Injection Molded Hollow Parts," *ASME 2005 International Mechanical Engineering Congress and Exposition (IMECE2005)*, Orlando, FL, USA, p. 161-167, Jan 2005.
135. Piazza, G., P. Stephanou, J. Porter, M. Wijesundara and A. P. Pisano, "Low motional resistance ring-shaped contour-mode aluminum nitride piezoelectric micromechanical resonators for UHF applications," *18th IEEE International Conference on Micro Electro Mechanical Systems, MEMS 2005*, Miami Beach, FL, United States, p. 20-23, Jan 2005.
136. Tsuji, Y., B. Sprague, D. C. Walther, A. P. Pisano and C. Fernandez-Pello, "Effect of chamber width on flame characteristics in small combustion chambers," *43rd AIAA Aerospace Sciences Meeting and Exhibit*, Reno, NV, United states, p. 9305-9313, Jan 2005.
137. Huang, M. C., Y. Zhou, B. Pesala, C. J. Chang-Hasnain, K. B. Cheng and A. P. Pisano, "Novel Piezoelectrically Actuated MEMS Tunable VCSEL," *Conference on Lasers and Electro-Optics/Quantum Electronics and Laser Science and Photonic Applications Systems Technologies*, Washington, DC, United States, May 2005.
138. Park, I., D. J. Hwang, A. P. Pisano and C. P. Grigoropoulos, "Planar off-chip microelectrode for the electrophysiological measurement of small biological cells," *2005 3rd IEEE/EMBS Special Topic Conference on Microtechnology in Medicine and Biology*, Oahu, HI, United states, p. 207-210, May 2005.
139. Payen, S., D. C. Walther and A. P. Pisano, "A MEMS RF-interrogated biosensor," *2005 3rd IEEE/EMBS Special Topic Conference on Microtechnology in Medicine and Biology*, Oahu, HI, United states, p. 76-79, May 2005.
140. Piazza, G., P. Stephanou, M. Wijesundara and A. P. Pisano, "Single-chip multiple-frequency filters based on contour-mode aluminum nitride piezoelectric micromechanical resonators," *13th International Conference on Solid-State Sensors and Actuators and Microsystems, TRANSDUCERS '05*, Seoul, Korea, Republic of, p. 2065-2068, Jun 2005.
141. Haendler, B. E., D. C. Walther, D. Liepmann and A. P. Pisano, "Microscale boiling heat transfer near the meniscus," *2005 ASME Summer Heat Transfer Conference, HT 2005*, San Francisco, CA, United States, p. 91-98, Jul 2005.
142. Piazza, G., P. Stephanou, J. Black, R. White and A. P. Pisano, "Single-chip multiple-frequency RF microresonators based on aluminum nitride contour-mode and FBAR technologies," *2005 IEEE Ultrasonics Symposium*, Rotterdam, Netherlands, p. 1187-1190, Sep 2005.
143. Cardes, A., C. McCoy, K. Inaoka, D. C. Walther, A. P. Pisano and A. C. Fernandez-Pello, "Characterization of fuel flexibility in a 4. 97 cm 3 rotary engine," *4th Mediterranean Combustion Symposium*, Lisbon, Portugal, Oct 2005.
144. Wojciechowski, K., B. Boser and A. P. Pisano, "A MEMS resonant strain sensor with 33 nano-strain resolution in a 10 kHz bandwidth," *Fourth IEEE Conference on Sensors 2005*, Irvine, CA, United states, p. 947-950, Oct 2005.

145. Azevedo, R., I. Chen, O. O'Reilly and A. P. Pisano, "Influence of substrate geometry on the sensitivity of MEMS micro-extensometers," *2005 ASME International Mechanical Engineering Congress and Exposition, IMECE 2005*, Orlando, FL, United States, p. 307-312, Nov 2005.
146. Geiger, E. J., J. M. Lippmann, J. A. Frank and A. P. Pisano, "Single-step, integrated assembly and encapsulation of microfluidic bubble generator," *2005 ASME International Mechanical Engineering Congress and Exposition, IMECE 2005*, Orlando, FL, United States, p. 127-130, Nov 2005.
147. Heppner, J. D., D. C. Walther and A. P. Pisano, "Arctic: A rotary compressor thermally insulated cooler," *2005 ASME International Mechanical Engineering Congress and Exposition, IMECE 2005*, Orlando, FL, United States, p. 287-294, Nov 2005.
148. Stephanou, P. J., G. Piazza, C. D. White, M. B. J. Wijesundara and A. P. Pisano, "Piezoelectric thin film AlN annular dual contour mode bandpass filter," *2005 ASME International Mechanical Engineering Congress and Exposition, IMECE 2005*, Orlando, FL, United States, p. 517-523, Nov 2005.
149. White, C., G. Piazza, P. Stephanou and A. P. Pisano, "Nano-gap piezoelectric resonators for mechanical RF magnetic field modulation," *2005 ASME International Mechanical Engineering Congress and Exposition, IMECE 2005*, Orlando, FL, United States, p. 411-414, Nov 2005.
150. Lippmann, J. and A. P. Pisano, "In-plane, hollow microneedles via polymer investment molding," *19th IEEE International Conference on Micro Electro Mechanical Systems*, Istanbul, Turkey, p. 262-265, Jan 2006.
151. Park, S., D. C. Walther, A. P. Pisano and A. C. Fernandez-Pello, "Development of liquid fuel injection system for small scale rotary engines," *44th AIAA Aerospace Sciences Meeting 2006*, Reno, NV, United states, p. 16254-16262, Jan 2006.
152. Stephanou, P., G. Piazza, C. White, M. Wijesundara and A. P. Pisano, "Mechanically coupled contour mode piezoelectric aluminum nitride MEMS filters," *19th IEEE International Conference on Micro Electro Mechanical Systems*, Istanbul, Turkey, p. 906-909, Jan 2006.
153. Stephanou, P. J. and A. P. Pisano, "800 MHz Low Motional Resistance Contour-Extensional Aluminum Nitride Micromechanical Resonators," *Hilton Head 2006*, Hilton Head, SC, United States, Mar 2006.
154. Piazza, G., P. J. Stephanou and A. P. Pisano, "Aluminum nitride contour-mode vibrating RF MEMS," *2006 IEEE MTT-S International Microwave Symposium Digest*, San Francisco, CA, United States, p. 664-667, Jun 2006.
155. Cheng, K. B., M. C. Y. Huang, Y. Zhou, S. P. Alvaro, C. J. Chang-Hasnain and A. P. Pisano, "Monolithic integration of piezoelectric cantilever in tunable VCSEL," *IEEE/LEOS International Conference on Optical MEMS and Their Applications Conference, 2006*, Big Sky, MT, United states, p. 11-12, Aug 2006.
156. Stephanou, P. J. and A. P. Pisano, "GHZ Contour Extensional Mode Aluminum Nitride MEMS Resonators," *IEEE Ultrasonics Symposium, 2006*, Vancouver, BC, p. 2401-2404, Oct 2006.
157. Park, S. W., D. C. Walther, E. Takahashi and A. P. Pisano, "On the Development of a Micro-Scale Magneto-Static Actuator for a Planar Fuel Valve," *PowerMEMS 2006*, Berkeley, CA, United States, p. 141-144, Nov 2006.
158. Sosnowchik, B. D., L. Lin and A. P. Pisano, "Rapid silicon-to-steel bonding using inductive heating," *2006 ASME International Mechanical Engineering Congress and Exposition, IMECE2006*, Chicago, IL, United States, Nov 2006.
159. Azevedo, R. G., J. Zhang, D. G. Jones, D. R. Myers, A. V. Jog, B. Jamshidi, M. B. J. Wijesundara, R. Maboudian and A. P. Pisano, "Silicon carbide coated MEMS strain sensor for harsh environment applications," *20th IEEE International Conference on Micro Electro Mechanical Systems, MEMS 2007*, Kobe, Japan, p. 643-646, Jan 2007.
160. Jones, D. G., R. G. Azevedo, M. W. Chan, A. P. Pisano and M. B. J. Wijesundara, "Low temperature ion beam sputter deposition of amorphous silicon carbide for wafer-level vacuum sealing," *20th IEEE International Conference on Micro Electro Mechanical Systems, MEMS 2007*, Kobe, Japan, p. 275-278, Jan 2007.
161. Park, I., Z. Li and A. P. Pisano, "Selective functionalization of silicon micro/nanowire sensors via localized Joule heating," *2007 2nd IEEE International Conference on Nano/Micro Engineered and Molecular Systems, IEEE NEMS 2007*, Bangkok, Thailand, p. 899-904, Jan 2007.
162. Park, I., Z. Li, A. P. Pisano and R. S. Williams, "Nanoscale Joule Heating Along Silicon Nanowire and Its Nanoscale Heater Application," *ASME 2007 International Mechanical Engineering Congress and Exposition (IMECE2007)*, Seattle, WA, United states, p. 1101-1107, Jan 2007.

163. Pisano, A. P., "Plenary Speech: Micro-and Nano-Technologies for Automotive Research," *2nd IEEE International Conference on Nano/Micro Engineered and Molecular Systems, 2007. NEMS'07*, Bangkok, Thailand, Jan 2007.
164. Sprague, S. B., D. C. Walther, S. Park, A. P. Pisano and A. C. Fernandez-Pello, "Effect of leakage on optimal compression ratio for small-scale rotary engines," *45th AIAA Aerospace Sciences Meeting 2007*, Reno, NV, United states, p. 7010-7018, Jan 2007.
165. Stephanou, P. and A. P. Pisano, "GHz higher order contour mode AlN annular resonators," *20th IEEE International Conference on Micro Electro Mechanical Systems, MEMS 2007*, Kobe, Japan, p. 787-790, Jan 2007.
166. Larsen, B. A., M. A. Haag, M. H. B. Stowell, D. C. Walther, A. P. Pisano and C. R. Stoldt, "Controlling nanoparticle aggregation in colloidal microwave absorbers via interface chemistry," *Active and Passive Smart Structures and Integrated Systems 2007*, San Diego, CA, United states, p. SPIE; American Society of Mechanical Engineers, ASME, USA, Mar 2007.
167. Larsen, B. A., M. A. Haag, M. H. B. Stowell, D. C. Walther, A. P. Pisano and C. R. Stoldt, "Controlling nanoparticle aggregation in colloidal microwave absorbers via interface chemistry," *Active and Passive Smart Structures and Integrated Systems 2007*, San Diego, California, USA, p. 652519-652519-8, Mar 2007.
168. Walther, D. C., L. Lin and A. P. Pisano, "Micro- and Nano- Technologies for Automotive Sensor Research," *SAE World Congress & Exhibition*, Detroit, MI, p. 23, Apr 2007.
169. Pisano, A. P., "MEMS and nano technology for the handheld, portable electronic and the automotive markets," *4th International Conference on Solid-State Sensors, Actuators and Microsystems, TRANSDUCERS and EUROSENSORS '07*, Lyon, France, p. 1-3, Jun 2007.
170. Ko, S. H., I. Park, H. Pan, A. P. Pisano and C. P. Grigoropoulos, "Low temperature OFET (organic field effect transistor) fabrication by metal nanoparticle imprinting," *ASME Electronic and Photonics Packaging Division*, Vancouver, BC, United states, p. 947-953, Jul 2007.
171. Cheng, J. C., T. H. Cauley III and A. P. Pisano, "Lithographic patterning of immobilized enzymes in chitosan thin films for multi-layer, chemical/biological sensors," *2007 7th IEEE International Conference on Nanotechnology-IEEE-NANO 2007*, Hong Kong, China, p. 334-337, Aug 2007.
172. Piazza, G., P. J. Stephanou and A. P. Pisano, "AlN contour-mode vibrating RF MEMS for next generation wireless communications," *ESSCIRC 2006-32nd European Solid-State Circuits Conference*, Montreux, Switzerland, p. 62-65, Sep 2007.
173. Piazza, G., P. J. Stephanou and A. P. Pisano, "One and two port piezoelectric contour-mode MEMS resonators for frequency synthesis," *ESSDERC 2006-36th European Solid-State Device Research Conference*, Montreux, Switzerland, p. 182-185, Sep 2007.
174. Jamshidi, B., R. G. Azevedo, M. B. J. Wijesundara and A. P. Pisano, "Corrosion enhanced capacitive strain gauge at 370C," *6th IEEE Conference on SENSORS, IEEE SENSORS 2007*, Atlanta, GA, United states, p. 804-807, Oct 2007.
175. Kuypers, J. H., C. Lin, G. Vigevani and A. P. Pisano, "Intrinsic temperature compensation of aluminum nitride Lamb wave resonators for multiple-frequency references," *2008 IEEE International Frequency Control Symposium, FCS*, Honolulu, HI, United States, p. 240-249, May 2008.
176. Kuypers, J. H. and A. P. Pisano, "Green's function analysis of lamb wave resonators," *2008 IEEE International Ultrasonics Symposium, IUS 2008*, Beijing, China, p. 1548-1551, Sep 2008.
177. Vigevani, G., J. Kuypers and A. P. Pisano, "Piezo thermoelastic model for design optimization of resonant beams," *2008 IEEE International Ultrasonics Symposium, IUS 2008*, Beijing, China, p. 1536-1539, Sep 2008.
178. Dhillon, N. S., A. P. Pisano, C. Hogue and M. A. Hopcroft, "MLHP-A high heat flux localized cooling technology for electronic substrates," *2008 ASME International Mechanical Engineering Congress and Exposition, IMECE 2008*, Boston, MA, United States, p. 621-630, Oct 2008.
179. Jamshidi, B., R. G. Azevedo, A. V. Jog and A. P. Pisano, "Enhanced cross-axis rejection capacitive strain gauge," *ASME International Mechanical Engineering Congress and Exposition, IMECE 2007*, Seattle, WA, United states, p. 535-540, Nov 2008.
180. Park, I., H. Pan, S. H. Ko, A. P. Pisano and C. P. Grigoropoulos, "Micro/nanoscale structure fabrication by direct nanoimprinting of metallic and semiconducting nanoparticles," *ASME International Mechanical Engineering Congress and Exposition, IMECE 2007*, Seattle, WA, United states, p. 307-314, Nov 2008.

181. Wodin-Schwartz, S., D. R. Myers, R. K. Kramer, S. Choi, A. Jordan, M. B. Wijesundara, M. A. Hopcroft and A. P. Pisano, "Silicon and Silicon Carbide Survivability in an In-Cylinder Combustion Environment," *PowerMEMS 2008*, Sendai, Japan, p. 477-80, Nov 2008.
182. Lee, W., F. Kuypers, Y. Cho and A. P. Pisano, "Flow-Lysometry and its biomedical application: Cytosolic analysis of single cells in large populations," *22nd IEEE International Conference on Micro Electro Mechanical Systems, MEMS 2009*, Sorrento, Italy, p. 64-67, Jan 2009.
183. Park, S., D. G. Senesky and A. P. Pisano, "Electrodeposition of permalloy in deep silicon trenches without edge-overgrowth utilizing dry film photoresist," *22nd IEEE International Conference on Micro Electro Mechanical Systems, MEMS 2009*, Sorrento, Italy, p. 689-690, Jan 2009.
184. Choi, S., I. Park and A. P. Pisano, "Self-assembled ultra-thin silica layers for on-chip chromatography," *2009 MRS Spring Meeting*, San Francisco, CA, United states, p. 59-64, Apr 2009.
185. Lin, C., T. Yen, Y. Lai, V. V. Felmetsger, M. A. Hopcroft, J. H. Kuypers and A. P. Pisano, "Experimental study of temperature-compensated aluminum nitride lamb wave resonators," *2009 IEEE International Frequency Control Symposium Joint with the 22nd European Frequency and Time Forum*, Besancon, France, p. 5-9, Apr 2009.
186. Azevedo, R., D. Myers and A. P. Pisano, "Temperature-insensitive silicon carbide resonant micro-extensometers," *TRANSDUCERS 2009-15th International Conference on Solid-State Sensors, Actuators and Microsystems*, Denver, CO, United states, p. 268-271, Jun 2009.
187. Myers, D. and A. P. Pisano, "Torque measurements of an automotive half shaft utilizing a MEMS resonant strain gauge," *TRANSDUCERS 2009-15th International Conference on Solid-State Sensors, Actuators and Microsystems*, Denver, CO, United states, p. 1437-1440, Jun 2009.
188. Park, I., S. Ko, Z. Li, A. P. Pisano and C. Grigoropoulos, "Multifunctional nanowire array for chemical sensing and manipulation," *TRANSDUCERS 2009-15th International Conference on Solid-State Sensors, Actuators and Microsystems*, Denver, CO, United states, p. 473-476, Jun 2009.
189. Orani, N., A. P. Pisano and E. Usai, "Exact reconstruction of actuator faults by reduced-order sliding mode observer," *2009 IEEE International Conference on Control Applications, CCA '09*, Saint Petersburg, Russia, p. 1344-1349, Jul 2009.
190. Jones, D. G. and A. Pisano, "Aluminum nitride as a masking material for the plasma etching of silicon carbide structures," *IEEE 23rd International Conference on Micro Electro Mechanical Systems,* Hong Kong, Hong Kong, China, p. 24-28, Jan 2010.
191. Yen, T. T., C. M. Lin, X. Zhao, V. V. Felmetsger, D. G. Senesky, M. A. Hopcroft and A. P. Pisano, "Characterization of aluminum nitride Lamb wave resonators operating at 600 C for harsh environment RF applications," *Micro Electro Mechanical Systems (MEMS), 2010 IEEE 23rd International Conference on*, Hong Kong, China, p. 731-734, Jan 2010.
192. Chan, M. W., D. R. Myers, B. D. Sosnowchik, L. Lin and A. P. Pisano, "Localized strain sensing using high spatial resolution, highly-sensitive MEMS resonant strain gauges for failure prevention," *2011 16th International Solid-State Sensors, Actuators and Microsystems Conference,* TRANSDUCERS'11, Jun 5, 2011-Jun 9, 2011, Beijing, China, p. 2859-2862, Jun 2011.
193. Lien, W.-C., D.-S. Tsai, S.-H. Chiu, D. G. Senesky, R. Maboudian, A. P. Pisano and J.-H. He, "Nanocrystalline SiC metal-semiconductor-metal photodetector with ZnO nanorod arrays for high-temperature applications," *2011 16th International Solid-State Sensors, Actuators and Microsystems Conference, TRANSDUCERS'11, Jun 5, 2011-Jun 9, 2011*, Beijing, China, p. 1875-1878, Jun 2011.
194. Lin, C.-M., Y.-J. Lai, T. T. Yen, J.-C. Hsu, Y.-Y. Chen, D. G. Senesky and A. P. Pisano, "Quality factor enhancement in lamb wave resonators utilizing AlN plates with convex edges," *2011 16th International Solid-State Sensors, Actuators and Microsystems Conference, TRANSDUCERS'11,* Jun 5, 2011-Jun 9, 2011, Beijing, China, p. 1512-1515, Jun 2011.
195. C.-M. Lin, V. Yantchev, Y.-Y. Chen, V. V. Felmetsger, and A. P. Pisano, "Characteristics of AlN Lamb wave resonators with various bottom electrode configurations," in *Frequency Control and the European Frequency and Time Forum (FCS), 2011 Joint Conference of the IEEE International*, 2011, pp. 1–5.
196. F. T. Goericke, M. W. Chan, G. Vigevani, I. Izyumin, B. E. Boser, and A. P. Pisano, "High temperature compatible aluminum nitride resonating strain sensor," in *Solid-State Sensors, Actuators and Microsystems Conference (TRANSDUCERS), 2011 16th International*, 2011, pp. 1994–1997.
197. N. S. Dhillon, J. C. Cheng, and A. P. Pisano, "Device packaging techniques for implementing a novel thermal flux method for fluid degassing and charging of a planar microscale loop heat pipe," in *ASME 2011 International Mechanical Engineering Congress and Exposition, IMECE 2011*, 2011, vol. 11, pp. 963–971.

198. C.-M. Lin, T.-T. Yen, V. V Felmetsger, J. H. Kuypers, and A. P. Pisano, "Intrinsic characteristics of thermally stable AlN Lamb wave resonators at high temperatures," in *Ultrasonics Symposium (IUS), 2011 IEEE International*, 2011, pp. 2078–2081.
199. W.-C. Lien, D.-S. Tsai, S.-H. Chiu, D. G. Senesky, R. Maboudian, A. P. Pisano, and H. He, "Nanocrystalline SiC metal-semiconductor-metal photodetector with ZnO nanorod arrays for high-temperature applications," in *Solid-State Sensors, Actuators and Microsystems Conference (TRANSDUCERS), 2011 16th International*, 2011, pp. 1875–1878.
200. G. Vigevani, F. T. Goericke, I. I. Izyumin, B. E. Boser, and A. P. Pisano, "Electrode design and coupling optimization of Aluminum Nitride DETF," in *Ultrasonics Symposium (IUS), 2011 IEEE International*, 2011, pp. 1731–1734.
201. N. S. Dhillon, M. W. Chan, J. C. Cheng, and A. P. Pisano, "Noninvasice hermetic sealing of degassed liquid inside a microfluidic device based on induction heating," in *The 11th International Workshop on Micro and Nanotechnology for Power Generation and Energy Conversion Applications*, 2011, p. Seoul, Korea.
202. N. S. Dhillon, C. Hogue, J. C. Cheng, and A. P. Pisano, "Experimental investigation of thin-film evaporation in an open-loop columnated micro-evaporator," in *PowerMEMS*, 2011.
203. J. M. Lippmann and A. P. Pisano, "Simple, high-precision, microliter per minute, fluid-flow sensor," in *Micro Electro Mechanical Systems (MEMS), 2011 IEEE 24th International Conference on*, 2011, pp. 1197–1200.
204. N. Zhang, J. C. Cheng, C. G. Warren, and A. P. Pisano, "Bioinspired, uncooled chitin photomechanical sensor for thermal infrared sensing," in *Sensors, 2011 IEEE*, 2011, pp. 833–836.
205. S. Wodin-Schwartz, M. W. Chan, K. R. Mansukhani, A. P. Pisano, and D. G. Senesky, "MEMS Sensors for Down-Hole Monitoring of Geothermal Energy Systems," in *ASME 2011 5th International Conference on Energy Sustainability, Parts A, B, and C*, 2011, pp. 965–972.
206. S. Choi, A. P. Pisano, and T. I. Zohdi, "Three-Dimensional Patterning of Micro/Nanoparticle Assembly with a Single Droplet of Suspension," in *MRS Proceedings*, 2011, vol. 1303.
207. G. Vigevani, F. T. Goericke, A. P. Pisano, I. I. Izyumin, and B. E. Boser, "Microleverage DETF Aluminum Nitride resonating accelerometer," in *Frequency Control Symposium (FCS), 2012 IEEE International*, 2012, pp. 1–4.
208. F. T. Goericke, G. Vigevani, I. I. Izyumin, B. E. Boser, and A. P. Pisano, "Novel thin-film piezoelectric aluminum nitride rate gyroscope," in *Ultrasonics Symposium (IUS), 2012 IEEE International*, 2012, pp. 1067–1070.
209. I. Doh, Y.-H. Cho, W. C. Lee, F. A. Kuypers, and A. P. Pisano, "Sub-population analysis of deformability distribution in heterogeneous cell populations," in *Sensors, 2012 IEEE*, 2012, pp. 1–4.
210. C.-M. Lin, Y.-Y. Chen, V. V Felmetsger, G. Vigevani, D. G. Senesky, and A. P. Pisano, "Micromachined aluminum nitride acoustic resonators with an epitaxial silicon carbide layer utilizing high-order Lamb wave modes," in *Micro Electro Mechanical Systems (MEMS), 2012 IEEE 25th International Conference on*, 2012, pp. 733–736.
211. W.-C. Lien, A. P. Pisano, D.-S. Tsai, J.-H. He, and D. G. Senesky, "Extreme temperature 4H-SiC metal-semiconductor-metal ultraviolet photodetectors," in *Solid-State Device Research Conference (ESSDERC), 2012 Proceedings of the European*, 2012, pp. 234–237.
212. I. Doh, E. Y. Erdem, and A. P. Pisano, "Trapping and collection of uniform size droplets using a well array inside a microchannel," in *Micro Electro Mechanical Systems (MEMS), 2012 IEEE 25th International Conference on*, 2012, pp. 1113–1116.
213. S. Wodin-Schwartz, J. C. Cheng, D. G. Senesky, J. E. Hammer, and A. P. Pisano, "Geothermal environmental exposure testing of encapsulant and device materials for harsh environment MEMS sensors," in *Micro Electro Mechanical Systems (MEMS), 2012 IEEE 25th International Conference on*, 2012, pp. 432–435.
214. C.-M. Lin, Y.-Y. Chen, V. V Felmetsger, D. G. Senesky, and A. P. Pisano, "Dispersion characteristics of high-order lamb wave modes in an AlN/3C-SiC layered plate," in *Ultrasonics Symposium (IUS), 2012 IEEE International*, 2012, pp. 531–534.
215. T.-T. Yen, A. P. Pisano, and C. T.-C. Nguyen, "High-Q capacitive-piezoelectric AlN Lamb wave resonators," in *Micro Electro Mechanical Systems (MEMS), 2013 IEEE 26th International Conference on*, 2013, pp. 114–117.
216. C.-M. Lin, Y.-Y. Chen, V. V Felmetsge, D. G. Senesky, and A. P. Pisano, "Two-port filters and resonators on AlN/3C-SiC plates utilizing high-order Lamb wave modes," in *Micro Electro Mechanical Systems (MEMS), 2013 IEEE 26th International Conference on*, 2013, pp. 789–792.

217. H. So, J. C. Cheng, and A. P. Pisano, "Multi-scale pore membrane for continuous, passive fluid transport in a micro cooling device," in *Solid-State Sensors, Actuators and Microsystems (TRANSDUCERS EUROSENSORS XXVII), 2013 Transducers Eurosensors XXVII: The 17th International Conference on*, 2013, pp. 2197–2200.
218. Y.-J. Lai, W.-C. Li, C.-M. Lin, V. V Felmetsger, and A. P. Pisano, "High-temperature stable piezoelectric aluminum nitride energy harvesters utilizing elastically supported diaphragms," in *Solid-State Sensors, Actuators and Microsystems (TRANSDUCERS EUROSENSORS XXVII), 2013 Transducers Eurosensors XXVII: The 17th International Conference on*, 2013, pp. 2268–2271.
219. K. Iwai, E. Y. Erdem, R. D. Sochol, J. C. Cheng, F. M. Doyle, A. P. Pisano, and L. Lin, "Microdroplet-based synthesis and centrifuge-free retrieval of nanoparticles via a continuous flow micropost array railing system," in *Solid-State Sensors, Actuators and Microsystems (TRANSDUCERS EUROSENSORS XXVII), 2013 Transducers Eurosensors XXVII: The 17th International Conference on*, 2013, pp. 2656–2659.
220. C.-M. Lin, Y.-Y. Chen, V. V Felmetsger, D. G. Senesky, and A. P. Pisano, "Acoustic characteristics of the third-order quasi-symmetric Lamb wave mode in an AlN/3C-SiC plate," in *Ultrasonics Symposium (IUS), 2013 IEEE International*, 2013, pp. 1093–1096.
221. D.-S. Tsai, W.-C. Lien, D.-H. Lien, K.-M. Chen, M.-L. Tsai, D. G. Senesky, Y.-C. Yu, A. P. Pisano, and J.-H. He, "High-endurance solar-blind photodetectors using AlN on Si substrates for extreme harsh environment applications," in *Device Research Conference (DRC), 2013 71st Annual*, 2013, pp. 65–66.
222. J. Zou, C.-M. Lin, D. G. Senesky, and A. P. Pisano, "Thermally stable SiO2/AlN/SiO2 Lamb wave resonators utilizing the lowest-order symmetric mode at high temperatures," in *Ultrasonics Symposium (IUS), 2013 IEEE International*, 2013, pp. 1077–1080.
223. N. Zhang and A. P. Pisano, "Harsh environment temperature sensor based on 4H-Silicon carbide PN diode," in Solid-State Sensors, Actuators and Microsystems (TRANSDUCERS EUROSENSORS XXVII), 2013 Transducers Eurosensors XXVII: The 17th International Conference on, 2013, pp. 1016–1019.
224. G. Hoople, D. Rolfe, K. Mckinstry, J. Noble, A. P. Pisano, and D. Dornfeld, "Comparison of Rapid Prototyping Techniques for Microfluidic Applications," ASME 2014 Int. Manuf. Sci. Eng. Conf. collocated with JSME 2014 Int. Conf. Mater. Process. 42nd North Am. Manuf. Res. Conf., vol. 1, 2014.
225. S. Shao, W.-C. Lien, A. Maralani, and A. P. Pisano, "Integrated 4H-silicon carbide diode bridge rectifier for high temperature (773 K) environment," in *Solid State Device Research Conference (ESSDERC), 2014 44th European*, 2014, pp. 138–141.
226. C.-M. Lin, J.-C. Hsu, D. G. Senesky, and A. P. Pisano, "Anchor loss reduction in ALN Lamb wave resonators using phononic crystal strip tethers," in *Frequency Control Symposium (FCS), 2014 IEEE International*, 2014, pp. 1–5.
227. N. Zhang, C.-M. Lin, Y. Rao, D. G. Senesky, and A. P. Pisano, "4H-SiC PN diode for extreme environment temperature sensing applications," *Proc. SPIE*, vol. 9113. p. 911306, 2014.
228. K. L. Dorsey, J. R. Herr, and A. P. Pisano, "Sensor selection for outdoor air quality monitoring," *Proc. SPIE*, vol. 9116. p. 91160D–11, 2014.
229. A. Toor, J. C. Cheng, and A. P. Pisano, "Synthesis and characterization of gold nanoparticle/SU-8 polymer based nanocomposite," in *Nano/Micro Engineered and Molecular Systems (NEMS), 2014 9th IEEE International Conference on*, 2014, pp. 664–668.
230. Y.-J. Lai, W.-C. Li, V. V Felmetsger, D. G. Senesky, and A. P. Pisano, "High temperature energy harvesters utilizing ALN/3C-SiC composite diaphragms," *Proc. SPIE*, vol. 9113. p. 91130C–91130C–6, 2014.
231. J. Zou, C.-M. Lin, and A. P. Pisano, "Quality factor enhancement in Lamb wave resonators utilizing butterfly-shaped AlN plates," in *Ultrasonics Symposium (IUS), 2014 IEEE International*, 2014, pp. 81–84.
232. K. L. Dorsey, D. A. Rolfe, J.C. Chen and A.P. Pisano, "A Model to Guide Template-Based Nanoparticle Printing Development," in ASME 2015 International Technical Conference and Exhibition on Packaging and Integration of Electronic and Photonic Microsystems collocated with the ASME 2015 13th International Conference on Nanochannels, Microchannels, and Minichannels, San Francisco, California, 2015, vol. 3, pp. V003T03A006.
233. C.-M. Lin, J. Zou, Y.-Y. Chen, and A. P. Pisano, "High-Q piezoelectric Lamb wave resonators based on AlN plates with chamfered corners," in 2015 IEEE International Ultrasonics Symposium (IUS), 2015, pp. 1–4.
234. J. Zou, C.-M. Lin, and A. P. Pisano, "Anchor loss suppression using butterfly-shaped plates for AlN Lamb wave resonators," in 2015 Joint Conference of the IEEE International Frequency Control Symposium & the European Frequency and Time Forum, 2015, pp. 432–435.

235. J. Zou and A. P. Pisano, “Temperature Compensation of the AlN Lamb Wave Resonators Utilizing the S 1 Mode,” in Ultrasonics Symposium (IUS), 2015 IEEE International, 2015, no. c, pp. 2–5.
236. J. Zou, C. M. Lin, Y. Y. Chen, and A. P. Pisano, “High-frequency and low-resonance-impedance lamb wave resonators utilizing the S1 mode,” in 2015 Transducers - 2015 18th International Conference on Solid-State Sensors, Actuators and Microsystems, TRANSDUCERS 2015, 2015, pp. 2025–2028.
237. M. Makihata, B. Eovino, X. Jiang, A. Toor, K. L. Dorsey, and A. P. Pisano, “Non-Invasive and Remote Pipeline Rehabilitation Technology Using Reactive and Magnetic Particles,” in Pipelines 2015, no. AUGUST 2015, 2015, pp. 1296–1304.
238. A. Toor and A. P. Pisano, “Gold nanoparticle/PVDF polymer composite with improved particle dispersion,” in Nanotechnology (IEEE-NANO) , 2015 IEEE 15th International Conference on, 2016, pp. 706–709.
239. A. Maralani, L. Beker, and A. P. Pisano, “Towards Integrated Sensors for Environments with Temperatures up to 600 °C,” Addit. Conf. (Device Packag. HiTEC, HiTEN, CICMT), vol. 2016, no. HiTEC, pp. 000051–000055, 2016.

Non-Refereed Publications / Technical Reports

1. Pisano, A. P., R. T. Howe, B. E. Boser, R. M. White and R. S. Muller, "Micro Vibratory Rate Gyroscope," California PATH Report to CalTrans, 95-C3 (MOU 41), Mar 1995.
2. Allen, J. J., R. D. Kinney, J. Sarsfield, M. R. Daily, J. R. Ellis, J. Smith, S, Montague, R. T. Howe, B. E. Boser, R. Horowitz, A. P. Pisano, M. A. Lemkin, W. A. Clark, T. Juneau, “Integrated Micro-Electro-Mechanical Sensor Development for Inertial Applications,” IEEE Aerospace and Electronic Systems Magazine, v. 13, n. 11, pp. 36-40, Nov 1998.
3. Lee, L. P., A. P. Pisano, L. A. Pruitt, and D. T. Chiu, Single Molecular Detection via Micro-Scale Polymeric Opto-Electro-Mechanical Systems, United States DOD Report A811634, August 2005.
4. Pisano, A. P., H. Schmitz, and L. Lee, Development of an Uncooled Photomechanical Infrared Sensor Based on the IR Organ of the Pyrophilous Jewel Beetle Melanophila Acuminata, United States DOD Report A220164, January 2007.
5. Stoldt, C., M. H. Stowell, Z. Popovic, A. P. Pisano, and D. C. Walther, Radar Absorbing Colloidal Solutions (RACS), United States DOD Report A608474, August 2007.
6. Pisano, A. P., Electro-Magnetic Actuated Valve for MEMS Fuel Metering System, United States DOD Report A167684, September 2007.

Non-Refereed Publications / Conference and Symposium Proceedings

1. Pisano, A. P. and F. Freudenstein, “Experimental and Analytical Investigation of the Dynamic Response of High-Speed CAM-Follower Systems-1: Experimental Investigation,” ASME Design and Production Engineering Technical Conference, 82-DET-135, 1982.
2. Pisano, A. P. and F. Freudenstein, “Experimental and Analytical Investigation of the Dynamic Response of High-Speed CAM-Follower Systems-2: Experimental Investigation,” ASME Design and Production Engineering Technical Conference, 82-DET-136, 1982.
3. Pisano, A. P. and H. T. Chen, “Coulomb Friction and Optimal Rocker Arm Ration for High-Speed CAM Systems,” ASME Design Engineering Technical Conference, 85-DET-61, 1985.
4. Wu, L. and A. P. Pisano, “Development and Application of Kinematic Icon and Inactive-Joint Concepts in Automated Mechanism Sketching,” ASME Design Engineering Technical Conference, pp. 86-DET-122, 1986.
5. Pisano, A. P., "Cam Systems with Coulomb Friction: Comparison of Two Models and Experiment," ASME Paper 86-DET-96. (Presented at ASME 1986 Design Automation Conference, Columbus, Ohio, 1986).
6. Chan, C. and A. P. Pisano, “Dynamic Model of a Fluctuating Rocker-Arm Ratio CAM System,” ASME Design Engineering Technical Conference, pp. 86-DET-79, 1986.
7. Chan, C.-Y. and A. P. Pisano, Optimal Valve Lift Curve Design for Valve Train Cam Systems, 1987. (Presented at the ASME Design Automation Conference, Boston, 1987).
8. Pisano, A. P. and Y.-H. Cho, "Comparison of Laterally-Driven Microflexure Suspension Systems," Proc. JIEE Micromechatronics Workshop, University of Tokyo, Tokyo, 1989.
9. Pisano, A. P., "Electrostatic Micromotors," International Symposium on the Application of Electromagnetic Forces, Sendai, Japan, 28-30 Jan 1991. (Invited Lecture).

10. Pisano, A. P., "Electrostatic Microgrippers," IEEE Forum on Control in Micro Electromechanical Systems, Nagoya, Japan, 29 Jan 1991 (Invited Lecture).
11. Pisano, A. P., "Electrostatic Design of Micromotors," Proc. Transducers'91, San Francisco, Jun 1991. (Invited Lecture).

Non-Refereed Publications / Edited Volumes

1. "Micromechanical Systems 1993," Proc. of the 1993 Symposium on Micro Mechanical Systems, ASME WAM, Nov 1993, DSC-Vol. 46. (With J. Jara-Almonte and W. Trimmer).
2. "Microstructures, Sensors and Actuators," Proc. of the 1992 Symposium on Micro Mechanical Systems, ASME WAM, Nov 1992, DSC-Vol. 40. (With D. Cho, J. P. Peterson and C. Friedrich).
3. "Microstructures, Sensors and Actuators," Proc. of the 1991 Symposium on Micro Mechanical Systems, ASME WAM, Dec 1991, DSC-Vol. 32. (With D. Cho, R. Warrington, Jr., H. Bau, C. Friedrich, J. Jara-Almonte and J. Liburdy).
4. "Microstructures, Sensors and Actuators," Proc. of the 1990 Symposium on Micro Mechanical Systems, ASME WAM, Nov 1990, DSC-Vol. 19. (With D. Cho, R. Warrington, Jr., C. Blechinger, W. Trimmer and L. Trefethan).
5. "Mechanism Synthesis and Analysis," Proc. of the 1990 ASME Design Technical Conferences-21st Biennial Mechanisms Conference, DE-Vol. 25, Chicago, Sep 1990. (With S. Derby and M. McCarthy). (ASME Order Number H00624).
6. "Cams, Gears, Robot and Mechanism Design," Proc. of the 1990 ASME Design Technical Conferences-21st Biennial Mechanisms Conference, DE-Vol. 26, Chicago, Sep 1990. (With S. Derby and M. McCarthy). (ASME Order Number H00625).
7. "Flexible Mechanism, Dynamics and Robot Trajectories," Proc. of the 1990 ASME Design Technical Conferences-21st Biennial Mechanisms Conference, DE-Vol. 24, Chicago, Sep 1990. (With S. Derby and M. McCarthy). (ASME Order Number H00623).