Mauro Ferrari, PhD
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EDUCATION

1985	Universita' di Padova, Padova, Italy	Dottore in Matematica
1987	University of California, Berkeley	MS (Mechanical Engineering)
1989	University of California, Berkeley	PhD (Mechanical Engineering)
2002 –'04	Ohio State University, Columbus	Medical student (no degree)

CURRENT PROFESSIONAL APPOINTMENTS

Houston Methodist Hospital

Sep 2010 –	President, Chief Executive Officer, Houston Methodist Research Institute
Sep 2010 –	Ernest Cockrell Jr. Presidential Distinguished Chair
Dec 2012 –	Director, The Institute for Academic Medicine at Houston Methodist Hospital
Dec 2012 –	Executive Vice President, Houston Methodist Hospital

Houston Methodist is an academic medical center, including seven hospitals, an education institute, and a research institute. The flagship Houston Methodist Hospital in the Texas Medical Center is ranked among the country's top hospitals in 11 specialties in U.S. News & World Report's 2015 "Best Hospitals" issue, and for the fourth year in a row is named the No. 1 hospital in Texas and No. 1 in the Houston area. Mauro Ferrari, PhD is Executive Vice President, Academics, of Houston Methodist, Director of the Institute for Academic Medicine, and president and CEO of the Research Institute. He oversees all research and education programs throughout the Houston Methodist academic medical center, including over 650 faculty and 1,400 credentialed researchers, performing 1000 clinical studies and trials; a research portfolio in excess of $130M in annual expenditures; and 37 residency & fellowship programs with 360 graduate and postgraduate trainees.

Weill Cornell Medical College, New York

2011 –	Professor, Biomedical Engineering in Medicine
2012 –	Senior Associate Dean

Weill Cornell Medical College is the foundational medical school partner of Houston Methodist.

Affiliated Faculty Positions

Rice University, Houston, Texas

Feb 2006 – Adjunct Professor, Department of Bioengineering

Baylor College of Medicine

2007 – Affiliated Faculty, Structural and Computational Biology and Molecular Biophysics Graduate Program

University of Houston

2008 – Adjunct Professor Medical Engineering, Biomedical Engineering Program, Cullen College of Engineering

University of Texas Health Science Center at Houston & University of Texas MD Anderson Cancer Center Graduate School of Biomedical Sciences
2010 – Adjunct Professor

The Chinese Academy of Sciences, Beijing
2010 - Honorary Professor

Swansea University, College of Science [Wales]
2011 – Honorary Chair

The Tecnologico de Monterrey School of Medicine and Health Sciences, Monterrey, Mexico
2012 – Adjunct Professor, Research and Innovation Department,
School of Medicine and Health Sciences

University of Naples "Federico II", Naples, Italy
2012 – Senior Adjunct Professor, Department of Biochemistry and Biotechnology Medicine,
CEINGE Biotecnologie Avanzate

Northeastern University, Boston, Massachusetts
2014 – Affiliate Faculty Member, Department of Chemical Engineering

University of St. Thomas, Houston, Texas
2015 – Adjunct Professor, Cameron School of Business

Institute for Spirituality and Health, Houston, Texas
2015 – Adjunct Faculty Member

Alliance for NanoHealth
Apr 2006 – President and ANH Investigator †

† The Alliance for NanoHealth is a multi-disciplinary, multi-institutional research consortium of Baylor College of Medicine, UT M.D. Anderson Cancer Center, Rice University, University of Houston, UT Health Science Center at Houston, Texas A&M Health Science Center (Houston), University of Texas Medical Branch (Galveston), and The Methodist Hospital Research Institute. IN its history, under Dr. Ferrari's guidance it has provided funding for over 300 investigators in collaborative programs at the 8 member institutions.

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PREVIOUS PROFESSIONAL APPOINTMENTS

University of Texas Health Science Center at Houston

Feb 2006 – Jul 2008	Professor and Division Head, Division of Nanomedicine (Institute of Molecular Medicine)
Feb 2006 – Jul 2008	Professor, Brown Foundation Institute of Molecular Medicine for the Prevention of Human Diseases
Feb 2006 – Aug 2010	Professor (tenured), Internal Medicine (Division of Cardiology, School of Medicine)
Feb 2006 – Aug 2010	Professor, Graduate School of Biomedical Sciences
Feb 2006 – Aug 2010	Adjunct Professor, School of Health Information Sciences
Sep 2006 – Aug 2010	Deputy Chairman (UT-HSC H), UT Department of Biomedical Engineering*
Aug 2008 –Aug 2009	Professor and Division Head, Division of Nanomedicine** (UT Department of Biomedical Engineering)
Sep 2009 – Aug 2010	Professor and Founding Chair, Department of Nanomedicine and Biomedical Engineering (nBME, School of Medicine) University Endowed Chair, Biomedical Engineering (UTHSC-H)

* The UT Department of Biomedical Engineering is a multi-institutional department serving UT Austin, UT Health Science Center at Houston, and UT M.D. Anderson Cancer Center.

** This was the first Department of Nanomedicine in a medical school.

University of Texas M.D. Anderson Cancer Center, Houston

Feb 2006 – Aug 2010	Professor (tenured), Experimental Therapeutics

University of Texas Medical Branch, Galveston

Feb 2006 – July 2008	Adjunct Professor, Department of Biochemistry and Molecular Biology

National Cancer Institute, Bethesda, Maryland

2003 – 2006	Eminent Scholar and Special Expert on Nanotechnology [to establish the NCI Alliance for Nanotechnology in Cancer; http://nano.cancer.gov] (50% time 2003 – 2004; 70% time 2004 – 2005; concurrent full faculty status at O.S.U.)

Ohio State University, Columbus, Ohio

1998 – 2006	Professor, Biomedical Engineering
1999 – 2002	Director, Biomedical Engineering Center
1999 – 2006	Professor, Internal Medicine
1999 – 2006	Professor, Mechanical Engineering
2000 – 2006	Member, Immunology Group, Comprehensive Cancer Center
2000 – 2006	Associate Director, Dorothy M. Davis Heart and Lung Research Institute
2000 – 2006	Professor, Materials Science and Engineering
2001 – 2006	Edgar Hendrickson Designated Chair in Biomedical Engineering
2002 – 2006	Scientific founder and scientific advisor, the Ohio MicroMD Lab
2002 – 2006	Associate Vice President for Health Science Technology and Commercialization

University of California, Berkeley

1991 – 1996	Assistant Professor, Materials Science and Engineering
1991 – 1996	Assistant Professor, Civil Engineering
1994 – 1998	Faculty, Bioengineering Program, UC San Francisco/Berkeley
1995 – 1998	Faculty, Applied Science and Technology Program

1996 – 1998	Associate Professor (with tenure), Materials Science and Engineering
1996 – 1998	Associate Professor (with tenure), Civil and Environmental Engineering
1996 – 1998	Faculty, Biophysics Program
1996 – 1998	Director, Biomedical Microdevices Center

University of Udine, Udine, Italy

1988 – 1990	Assistant Professor (Ricercatore), Theoretical and Applied Mechanics

Visiting Professorships

1998 (summer)	Visiting Research Scientist, Lawrence Livermore National Laboratory, California, US (Microtechnology Center)
2002	Scuola Superiore Sant' Anna, Pisa, Italy (Biomedical Engineering)
2002	Politecnico di Torino, Italy (Nanotechnology)
2003	University of Udine, Italy (Clinical Methodologies)
2009	Visiting Professor, Chinese Academy of Sciences, Key Laboratory for Biomedical Effects of Nanomaterials and Nanosafety, Institute of High Energy Physics

Previous Affiliated Faculty Positions

University of Texas, Austin

2007 – 2010	Adjunct Professor, College of Engineering

University of Texas Medical Branch (Galveston)

2007 – 2010	Adjunct Professor, Biochemistry and Molecular Biology

RESEARCH INTERESTS

- Primary interests in medicine: Cancer, orthopedic and spinal medicine, infectious diseases, cardiovascular diseases, pain medicine, transplants, metabolic and endocrine disorders.

- Nanomedicine, nanofluidics, nanotechnology, microtechnology, BioMEMS, mathematical models, delivery of drugs and biological therapeutic agents, regenerative medicine & tissue engineering, proteomics, molecular medicine, medical ethics, mechanics of materials, structures, and biological tissues, multiscale mechanics, pharmaceutical sciences.

ACADEMIC AND PROFESSIONAL AWARDS AND HONORS (selected)

1993 – 1998	Young Investigator Award, National Science Foundation
1999 – 2000	James A. Shannon Director's Award, National Institutes of Health
1999	Wallace H. Coulter Award for Innovation and Entrepreneurship, Georgia Institute of Technology
2003	Italiani Nel Mondo Award / Mirko Tremaglia Award, Ministry of Foreign Affairs, Italy
2006 – 2010	Research Superiority Award, State of Texas Emerging Technology Fund
2008	Fellow, American Institute for Medical and Biological Engineering
2009 – 2014	Department of Defense Innovator Award, Congressional Designated Medical Research Program, Breast Cancer Research Program

2009 –	Corresponding Member, Accademia Udinese di Scienze, Lettere, ed Arti
2009	Robert and Virginia Heinlein Prize Trust, Microgravity Research Competition: Decoupling Diffusive Transport Phenomena in Microgravity
2009	Fellow, American Academy for the Advancement of Science. Section: Biological Sciences
2010	Professorship for Distinguished International Senior Scientists, Chinese Academy of Science
2010	Fellow, American Society of Mechanical Engineers
2011	John P. McGovern Award for Excellence in Biomedical Communication, Southwest Chapter, American Medical Writers Association
2011	Founders Award, Controlled Release Society
2011	Honorary Chair of NanoMedicine, Swansea University
2012	Blaise Pascal Medal in Biomedical Engineering, European Academy of Sciences
2012	Member, European Academy of Sciences
2012	Honorary Doctorate (Laurea Magistrale Honoris Causa) in Electrical Engineering, University of Palermo, Italy
2014	Honorary Doctorate (Laurea Magistrale Honoris Causa) in Biotechnology, University of Naples "Federico II", Italy
2015	Aurel Stodola Medal, Mechanical Engineering, ETH Zurich, Switzerland
2016	Italian Natioanal Academy of Sciences "Detta Quaranta"

SPIRITUALITY AND FAITH BASED AWARDS

2012	Premio"Maestri del nostro tempo nel campo della Cura, dell'Assistenza e dell'Educazione" (Masters of our Time in Health Care and Education)", Enzo Piccinini Foundation
2013	Knight of the Equestrian Order of the Holy Sepulchre
2014	Archbishop J. Michael Miller Lecture, University of St. Thomas, Houston, TX
2016	Global Impact Award of the Shul of Bellaire, Bellaire, TX
2016	Woodrow B. Seals Laity Award of the Perkins School of Theology of Southern Methodist University, Dallas, TX

ADDITIONAL CIVIC AWARDS AND HONORS (selected)

1999, 2003	Presidential (Italy) recognition, leading Italian scientist
2001	Greater Columbus Chamber of Commerce: Ambassador Award
2002	Ohio Academy of Science, Frontiers of Science All-Academy Lecture (Capital University, Columbus, OH)
2007	Knight of the Order of Merit of the Italian Republic
2007 –	Aspen Institute, invited member
2008	St. George Award, Kraguyevac, Serbia
2009	Premio Friulano della Diaspora (Friuli [Italy] Fogolar Furlan)
2013	Premio Coraggio di Agire, from FederSanita' ANCI, Italy
2014	PrimiDieci Society's Ten Most Distinguished Italians
2016	Officer Knight of the Order of Merit of the Italian Republic

RECENT NAMED LECTURES

2009	Green Endowed Engineering Lecture, Texas Christian University, Ft. Worth, TX
2010	Beyer Distinguished Lecture, University of Houston, Department of Civil and Environmental Engineering, Houston, TX
2011	William C. Reynolds Memorial Seminar, Stanford University, Department of Mechanical Engineering, Stanford, CA
2011	Ming Hsieh Institute for Engineering Medicine for Cancer, University of Southern California, Los Angeles, CA. Keynote Inaugural Lecture.
2012	AIRC (Italian Association for Cancer Research) Lecture, The Eighth World Conference on the Future of Science, entitled "Nanoscience Society" Venice, Italy
2012	Joseph L. Melnick Distinguished Lecture at Baylor College of Medicine, Houston, TX
2013	Page Morton Lecture in Materials Sciences and Engineering at Clemson University, Clemson, SC
2013	Presidents' Distinguished Lecture in Engineering, Science & Medicine, Texas Tech University, Lubbock, TX
2014	Brown Symposium Lecture, Southwestern University, Georgetown, TX
2014	Masters of Surgery Lecture, Albert Einstein College of Medicine of Yeshiva University, New York, NY
2015	Aurel Stodola Lecture in Mechanical Engineering at ETH Zurich, Switzerland
2016	Louis W. Busse Lectureship, University of Wisconsin-Madison School of Pharmacy, Madison, WI

COMMENCEMENT ADDRESSES

2015	Universita' Bicocca Milano, Italy December 2015

CURRENT RESEARCH FUNDING: (total costs) (by end date)

2009 – 2016	Center for Transport OncoPhysics NIH/NCI U54CA143837. Physical Science-Oncology Centers (U54) 2009 Sep 28 – 2016 Jul 31 Principal Investigator ($11,647,816)
2010 – 2015	Texas Center for Cancer Nanomedicine NIH/NCI U54CA151668-01. Center for Cancer Nanotechnology Excellence. 2010 Sep 01 – 2015 Nov 30 Principal Investigator ($13,859,038)
2010 – 2015	Alliance for Nanohealth Competitive Research Program FY2009 US Army Medical Research and Acquisition Act, Telemedicine and Advanced Technology Research Center (TATRC) W81XWH-10-2-0125 Principal Investigator ($2,802,000)
2011 – 2015	ANH TATRC 2010 Pre-Center and Seed Grants US Army Medical Research and Acquisition Act, Telemedicine and Advanced Technology Research Center (TATRC) W81XWH-11-2-0168 Principal Investigator ($3,496,000)

2012 – 2015 Development of Multi-Stage Vectors for siRNA Therapeutics
The Cancer Prevention Research Institute if Texas (CPRIT)
RP121071
Principal Investigator ($999,834)

2012 – 2017 Multistage Vector-Enabled Breast Oncology
Department of Defense, Congressionally Directed Medical Research Programs (CDMRP) Breast Cancer Research Program (BCRP) Innovator.
DOD/CDMRP W81XWH-12-1-0404. 2012 Sept 30 – 2017 Sept 29.
Principal Investigator ($3,110,000)

COMPLETED RESEARCH FUNDING (by start date)

1989 – 1990 Mechanical Behavior of Fiberglass Reinforced Pressure Vessels
VetroResina, S.P.A., Udine, Italy
Principal Investigator ($25,000)

1989 – 1990 On the Mechanical Characteristics of Fiber-Reinforced Polymers
Bilateral Italy-USA Research Grant, CNR, Italy (with G.C. Johnson)
Principal Investigator ($4,000)

1990 – 1993 Optimization of Plasma-Spraying Techniques for the Deposition of Ceramic Thermal-Barrier Coatings.
European Community BRITE Grant (PI: G Jacucci)
Co-Principal Investigator ($250,000)

1991 Application of Micro Electro Mechanical Systems
TechSearch International, Austin, TX
Principal Investigator ($5,000)

1991 – 1994 Microstructural Modeling and Probabilistic Prediction of Micro- Electro-Mechanical Systems Response
National Science Foundation (with G.C. Johnson, A. DerKiureghian)
Principal Investigator ($540,000)

1992 – 1993 Thermomechanics of Functionally Gradient Composite Materials
Engineering Foundation, Engineering Research Initiation Grant
Principal Investigator ($25,000)

1992 – 1995 Embrittlement of Nanoscale Structures: An Interdisciplinary Study of Stress-Corrosion Cracking
National Science Foundation (PI: T Devine)
Co-Principal Investigator ($360,000)

1993 – 1994 MEMS Applications for Aircraft Flutter Reduction
Bilateral Italy-USA Research Grant, Italian National Research Council (with A. Castellani, A. Bolis-Crema)
Principal Investigator ($20,000)

1993 – 1998 National Young Investigator Award
National Science Foundation
Principal Investigator ($500,000 with matching funds)

1994 – 1995	Science Support Grant ALCOA Principal Investigator ($7,500)
1994 – 1996	Biomedical Microdevices Viox Pharmaceuticals Principal Investigator ($1,350,000)
1995 – 1996	Esper A. Larsen Jr. Research Award University of California, Berkeley Principal Investigator ($15,000)
1998 – 1999	Micromachined Albumin Retention Membranes, with Controlled Glucose Diffusion Rates Boehringer-Mannheim-Roche Diagnostics Principal Investigator ($168,000)
1999	The Ohio BioMEMS Consortium on Medical Therapeutic Devices Ohio Board of Regents Hayes Investment Fund (Ohio MicroMD) Principal Investigator ($2.1 million with $700,000 in matching funds)
1999	Ohio MicroMD Lab State of Ohio Technology Action Fund Principal Investigator ($1.5 million with $1.5 million in matching funds, with iMEDD, Inc. and SciTech Corporation)
1999 – 2000	James A. Shannon Director's Award National Institutes of Health Principal Investigator ($100,000)
1999 – 2001	Microfabricated Multifunctional Cell Culture Arrays National Institutes of Health Principal Investigator ($69,232)
1999 – 2002	Foundations of Microfabricated Membranes for Bioseparation National Science Foundation (PI: Desai TA) Co-Principal Investigator ($299,978)
2000 – 2001	Immunoisolation Biocapsules for Pancreatic Islet Cells Small Business Innovation Research Program National Institute of Diabetes and Digestive and Kidney Diseases, NIH (PI: Martin FJ) Co-Principal Investigator ($96,771)
2000 – 2003	Experimental and Theoretical Development of Bio-Fluid Transport Models through Nano- and Micro-fluidic Components Defense Advanced Research Projects Agency (DARPA) (PI: Hansford D) Co-Principal Investigator ($2,000,000)
2001	Student Conference Support for "BioMEMS and Biomedical Nanotechnology World 2001" Whitaker Foundation Principal Investigator ($8,000)
2001 – 2003	Micro-Fabricated Natural Killer Cells for the Detection and Treatment of Metastatic Tumors

Completed Research Funding, cont.

	NCI (PI: Martin FJ of iMEDD, Inc.) Subcontract Principal Investigator ($2.5 million)
2001 – 2006	Jeannie Lambert Research Endowment Fund in Biomedical Nanotechnology (co-PI: Sanfillipp F) Co-Principal Investigator ($125,000)
2002	Nanoengineered Devices for the Oral Delivery of Analgesia in Pediatric Oncology Hope Street Kids Foundation Principal Investigator ($35,000).
2002 – 2006	Cardiovascular Bioengineering Enterprise (CBEnterprise) BRTTF from the State of Ohio Principal Investigator ($6.5 million funded by the State, over $14 million with matching funds)
2003 – 2006	Nanomechanical Method for Molecular Analysis of Cancer National Institutes of Health, R21 CA099089 Principal Investigator ($199,972)
2004 – 2006	Nanotechnology Program Development National Institutes of Health, National Cancer Institute, N01-CO-12400 Principal Investigator ($1,572,552)
2005 – 2007	Engineered Nanoparticles for Delivery of Chemotherapeutic Agents Department of Army, W81XWH-04-2-0035 (PI: Ward Casscells) Co-Principal Investigator: ($1,485,107)
2006 – 2007	Nanoparticles for Harvesting and Targeting Angiogenic Proteins National Institutes of Health (NIH), R21 CA122864-01 Principal Investigator ($273,313)
2006 – 2010	Acquisition of Scientific Superiority in Biomedical Nanotechnology. State of Texas Governor's Office, Emerging Technology Fund. 2006 Jun 1 – 2010 Sep 30 Principal Investigator ($2,500,000)
2006 – 2010	Start-up Fund. University of Texas Health Science Center at Houston. Principal Investigator ($2,500,000)
2006 – 2011	Nanotechnology for Space Medicine. NASA Johnson Space Center NSPIRES NNJ06HE06A. 2006 Sep 1 – 2010 Aug 31 no-cost extension to 2011 Aug 31 Principal Investigator ($3,695,927)
2007 - 2008	Innovation or Stagnation: Challenge and Opportunity on the Critical Path to New Medical Products Food and Drug Administration, Purchase Order Award, HHSF223200710792P Principal Investigator ($10,000)
2007 – 2008	BioGEO – Understanding the Effect of Size and Shape in Biological Systems to Learn Fabricating Bio-mimetic Artificial Systems with Superior Properties Department of Army, Defense Advanced Research Projects Agency (DARPA), W31P4Q-07-1-0008 Principal Investigator ($299,780)

Completed Research Funding, cont.

2007 – 2011 The Medical Nanovector Research and Development Center of the Alliance for NanoHealth.
Department of Defense, TATRC. W81XWH-07-2-0101.
2007 Sep 1 – 2009 Aug 19; Principal Investigator ($1,768,000)
continuation 2008 Aug 20 – 2010 Aug 19; no-cost extension to 2011 Aug 11
Principal Investigator ($934,000)

2007 – 2010 Nanovectors for Targeting and Delivery of Therapeutics to HER-2 neu Positive Breast Cancer Cells.
Department of Defense. MPA2. W81XWH-07-1-0596. 2007 Sep 15 – 2010 Oct 14.
(PI: R Serda, postdoctoral fellow) PI mentor. ($658,440) (UTHSC-H)

2007 – 2011 Nanovectors for Characterization and Destruction of Breast Tumor Vasculature.
NIH (BRP) R01CA128797. 2007 Sep 28 – 2011 Jul 31.
Principal Investigator ($1,629,045)

2007 – 2010 Nano-Scale Light Emitting Diode on Silicon Cantilever for Sub-Diffraction-Limit Near-Field Microscopy of Single Molecules on Living Cells.
National Science Foundation. NSF/ECCS-0725886. 2007 Oct 1 – 2010 Sep 30.
(PI: X Zhang) Co-Principal Investigator. ($54,899) (UTHSC-H)

2008 – 2010 Development of Nanochannel Delivery System.
NanoMedical Systems, Inc. Sponsored Research Agreement. 2008 Mar 01 – 2010 Aug 31.
Principal Investigator. ($416,408)

2008 – 2011 Development of Multi-Stage Silicon Nanoparticles to Prevent Placental Passage of Indomethacin.
NIH/K12 (Refuerzo). 2008 Jul 1 – 2011 Jun 30.
PI Mentor ($351,820)

2008 – 2010 MRI Consortium Proposal: Acquisition of a Dual-Beam Focused Ion Beam System to Support Basic Device and Materials Research in the Greater Houston Area
NSF/OIS-0821454. 2008 Sep 1 – 2010 Aug 31.
(PI: D Litvinov) Co-Principal Investigator ($380,000) (no salary support)

2008 – 2010 Alliance for NanoHealth (ANH) Training Program
for the development of future generations of interdisciplinary scientists and collaborative research focused upon the advancement of nanomedicine; administrative core cost only.
Department of Energy. DE-FG02-08ER64712. 2008 Sep 01 – 2010 Aug 31.
no-cost extension to 2011 Sep 14.
Principal Investigator ($717,000) (UTHSC-H)

2008 – 2010 Alliance for NanoHealth (ANH) Training Program for Space Nanomedicine; administrative core cost only.
NASA. NNX08AW91G. 2008 Sep 1 – 2010 Aug 31.
no-cost extension to 2011 Dec 31.
Principal Investigator ($813,490) (UTHSC-H)

2008 – 2012 Alliance for NanoHealth (ANH) Training Program
for the development of future generations of interdisciplinary scientists and collaborative research focused upon the advancement of nanomedicine; administrative core cost only.

Completed Research Funding, cont.

	Department of Energy. DE-FG02-08ER64712. 2008 Sep 01 – 2010 Aug 31. no-cost extension to 2011 Sep 14. Principal Investigator ($717,000) (UTHSC-H)
2008 – 2012	Alliance for NanoHealth (ANH) Training Program for Space Nanomedicine; administrative core cost only. NASA. NNX08AW91G. 2008 Sep 1 – 2010 Aug 31. no-cost extension to 2011 Dec 31. Principal Investigator ($813,490) (UTHSC-H)
2008 – 2012	Nanoparticles for Harvesting and Targeting Angiogenic Proteins. NIH R33CA122864. 2008 Sep 1 – 2011 Aug 31. no-cost extension to 2012 Jul 31 Principal Investigator ($1,119,375)
2009 – 2010	BioNanoScaffolds (BNS) for Post-Traumatic Osteoregeneration. Department of Defense, DARPA. W911NF-09-1-0044. 2009 Jan 01 – 2010 Dec 31. Principal Investigator ($7,865,017)
2009 – 2010	Safety of Nano-Engineered Materials. Food and Drug Administration (contracting in process). RFQ 1048351-1. 2009 Mar 1 – 2010 Aug 31. Principal Investigator ($99,999)
2009 – 2011	Subcellular Localization of Nanoparticles NIH/NIGMS RC2GM092599 (GO Grant). 2009 Sep 30 – 2011 Aug 31. Principal Investigator ($3,000,000) no-cost extension 2012 Aug 31
2009 – 2012	Alliance for NanoHealth Competitive Research Program Department of Defense W81XWH-09-2-0139 #09345004 CSI TATRC Proposal 2009 Sep 29 – 2011 Oct 28 Principal Investigator ($3,394,000)
2009 – 2014	Towards Individualized Breast Cancer Therapy: Leveraging Molecular Medicine with Multi-Stage Vector Technology. Department of Defense, Congressionally Directed Medical Research Programs (CDMRP) Breast Cancer Research Program (BCRP) Innovator. DOD/BCRP W81XWH-09-1-0212. 2009 Mar 01 – 2014 Feb 28. Principal Investigator ($7,014,069)

PUBLICATIONS

Bibliometrics (As of 2016 Mar 3)

34188 citations, h-index = 81, i-index = 551 (Google Scholar)
12918 citations, h-index = 56 (SCOPUS)
9808 citations, h-index = 46 (Web of Science)

Publications, cont.

Journal Articles

1. Ferrari M, Johnson GC. On the equilibrium properties of a 6mm polycrystal exhibiting transverse isotropy. *J Appl Physics.* 1988; 63(9):4460-4468.
2. Ferrari M, Johnson GC. The effective elasticities of short-fiber composites with arbitrary orientation distribution. *Mech Mater.* 1989 Aug; 8(1):67-73.
3. Ferrari M, Filipponi M. An appraisal of homogenizing techniques for porous and reinforced glass. *J Am Ceramic Soc.* 1991 Jan; 74(1):229. doi: 10.1111/j.1151-2916.1991.tb07323.x
4. Ferrari M. Asymmetry and the high-concentration limit of the Mori-Tanaka effective medium theory. *Mech Mater.* 1991 May; 11(3):251-256.
5. Ferrari M. Closed form solution for a biphase sphere subject to quadratic eigenstrains of radial symmetry. *J Appl Mech.* 1991 May; 58(3):811-813.
6. Ferrari M. On the domain of applicability of the Mori-Tanaka effective medium theory. *Rendiconti Matematica Accademia Lincei.* 1991 Sep 9; 2:353-357.
7. Ferrari M, Harding J, Marchese M. Computer simulation of plasma sprayed coatings: II. Effective bulk properties and thermal stress calculations. *Surface Coating Technol.* 1991; 48:147-154.
8. Ferrari M, Harding J, Marchese M. Simulation of thermal barrier plasma-sprayed coatings. *Plasma Processing and Synthesis of Materials,* Materials Research Society. 1991; 190:221-226.
9. Ferrari M. Anisotropic layers with through-thickness thermal and material variations. *J Thermal Stresses.* 1992; 15(3):439-445. doi: 10.1080/01495739208946148
10. Ferrari M, Marzari N. A Mori-Tanaka theory for short-fiber composites: Application. *J Energy Resour Technol.* 1992 Jun; 114(2):101-104.
11. Ferrari M, Harding J. Thermal stress field in plasma-sprayed ceramic coatings. *J Energy Resour Technol.* 1992 Jun; 114(2):105-109.
12. Marzari N, Ferrari M. Textural and micromorphological effects on the overall elastic response of macroscopically anisotropic composites. *J Appl Mech.* 1992 Jun; 59(2 Part 1):269-275.
13. Ferrari M, Lutterotti L. Thermal stresses in bi-coated structures. *J Eng Mech.* 1992 Sep; 118(9):1928-1938.
14. Chen JS, Kadic-Galeb A, Ferrari M, Devine TM. Embrittlement of nano-scale structures. Mech *Res Commun.* 1992 Nov-Dec; 19(6):555-561.
15. Ferrari M. Discussion of "Elastic anisotropy of short-fiber reinforced composites," by CM Sayers [comment]. *Int J Solids Struct.* 1993 Apr; 30(8):1147-1149.
16. Granik V, Ferrari M. Micromechanics of granular media. *Mech Mater.* 1993 Jul; 15(4):301-322.
17. Lutz MP, Ferrari M. Compression of a functionally gradient composite sphere. *Composites Eng.* 1993; 3(9):873-884. doi: 10.1016/0961-9526(93)90045-L
18. Ferrari M. Composite homogenization via the poly-inclusion approach. *Composites Eng.* 1994; 4(1):37-45. doi: 10.1016/0961-9526(94)90005-1
19. Ferrari M, Granik V. Doublet-based micromechanical approaches to yield and failure criteria. *Mater Sci Eng A.* 1994 Feb 28; 175(1-2):21-29.

Publications, cont.

20. Kwon P, Dharan CKH, Ferrari M. Macroscopic analysis of axisymmetric functionally gradient materials under thermal loading. *J Energy Resour Technol.* 1994 Jun; 116(2):115-120.

21. Ferrari M, Lutterotti L. New method for the simultaneous determination of anisotropic residual stress and texture by x-ray diffraction. *J Appl Physics.* 1994 Dec 1; 76(11):7246-7255. doi:10.1063/1.358006

22. Maddalena F, Ferrari M. Viscoelasticity of granular materials. *Mech Mater.* 1995 May; 20(3):241-250.

23. Imam A, Johnson JC, Ferrari M. Determination of the overall moduli in second order incompressible elasticity. *J Mech Physics Solids.* 1995 Jul; 43(7):1087-1103.

24. Nadeau JC, Ferrari M. Second-rank equilibrium and transport properties of fibrous composites: Effective predictions and bounds. *Composites Eng.* 1995; 5(7):821-838. doi: 10.1016/0961-9526(95)00042-L

25. Rooney FJ, Ferrari M. Torsion and flexure of inhomogeneous elements. *Composites Eng.* 1995; 5(7):901-912. doi: 10.1016/0961-9526(95)00043-M

26. Ferrari M, Granik VT. Ultimate criteria for materials with different properties in biaxial tension and compression: A micromechanical approach. *Mater Sci Eng A.* 1995 Nov; 202(1-2):84-93.

27. Ferrari M, Hansford D, Mon K. Doublet-based approach to alloy elastic homogenization. *Math Model Sci Comput.* 1996; 6:946-957.

28. Ferrari M, Lutterotti L, Matthies S, Polonioli P, Wenk H.-R. New opportunities in the stress and texture fields by the whole pattern analysis. *Mater Sci Forum.* 1996; 228-231:83-88. doi: 10.4028/www.scientific.net/MSF.228-231.83

29. Rooney FJ, Ferrari M, Imam A. On the pressure distribution within tumors. *Math Model Sci Comput.* 1996; 6:715-721.

30. Mon K, Ferrari M. On corrosion-induced stress states in binary noble metal alloys. *Mater Sci Eng A.* 1997 Jul 31; 232(1-2):88-102.

31. Zhang M, Ferrari M. Reduction of albumin adsorption onto silicon surfaces by Tween 20. *Biotechnol Bioeng.* 1997 Dec 20; 56(6):618-625. doi: 10.1002/(SICI)1097-0290(19971220)56:6<618

32. Desai TA, Chu WH, Tu JK, Beattie GM, Hayek A, Ferrari M. Microfabricated immunoisolating biocapsules. *Biotechnol Bioeng.* 1998 Jan 5; 57(1):118-120. doi: 10.1002/(SICI)1097-0290(19980105)57:1<118

33. Nadeau JC, Ferrari M. Invariant tensor-to-matrix mappings for evaluation of tensor expressions. *J Elasticity.* 1998; 52:43-61.

34. Zhang M, Desai T, Ferrari M. Proteins and cells on PEG immobilized silicon surfaces. *Biomaterials.* 1998 May; 19(10):953-960. doi: 10.1016/S0142-9612(98)00026-X

35. Zhang M, Ferrari M. Hemocompatible polyethylene glycol films on silicon. *Biomed Microdevices.* 1998 Sep; 1(1):81-89.

36. Nashat AH, Moronne M, Ferrari M. Detection of functional groups and antibodies on micro-fabricated surfaces by confocal microscopy. *Biotechnol Bioeng.* 1998 Oct 20; 60(2):137-146. doi: 10.1002/(SICI)1097-0290(19981020)60:2<137

Publications, cont.

37. Desai TA, Hansford DJ, Kulinsky L, Nashat AH, Rasi G, Tu J, Wang Y, Zhang M, Ferrari M. Nanopore technology for biomedical applications. *Biomed Microdevices.* 1999; 2(1):11-40.

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Bashir R, Werely S, Ferrari M, editors. *BioMEMS and Biomedical Nanotechnology. Vol IV: Biomolecular Sensing, Processing, and Analysis.* Springer. 2006.

Cristini V, Ferrari M, Decuzzi P, editors. *Nanoparticulate Delivery to Cancerous Lesions: Advances in Mathematical Modeling.* Ferrari M, series editor. *Fundamental Biomedical Technologies.* Vol. 2. Springer. April 2010.

Series Editor

Ferrari M, series editor. *Fundamental Biomedical Technologies.* Springer.
- Vol. 1: *Nanobiotechnology of Biometric Membranes.* Martin D, editor. 2007.
- Vol. 2: *Nanoparticulate Delivery to Cancerous Lesions: Advances in Mathematical Modeling.* Cristini V, Ferrari M, Decuzzi P, editors. November 2010.
- Vol. 3: *Nanoparticles in Biomedical Imaging: Emerging Technologies and Applications.* Bulte JWM, Modo MMJ, editors. 2008.
- Vol. 4: *Multifunctional Pharmaceutical Nanocarriers.* Torchilin V, editor. 2008.
- Vol. 5: *Nanodevices Based on Protein Molecular Motors: An Engineering Approach.* Nicolau DV, editor. December 2010.
- Vol. 6: *Nanotechnology for Cancer Detection and Diagnosis.* Srivastava S, Cote R, editors. September 14, 2010.

Reports

Executive Office of the President of the United States, National Science and Technology Council, Interagency Working Group on Nanoscience, Engineering, and Technology. *Nanotechnology Research Directions: Visions for Nanotechnology R&D in the Next Decade.* Sep 1999.

National Research Council, Board on Army Science and Technology. *Opportunities in Biotechnology for Future Army Applications.* National Academy Press, June 2001. 61 pp.

National Research Council. *Materials Research to Meet the 21st Century Defense Needs.* 2002.

Institute of Medicine of the National Academies. *Nanotechnology and Oncology: Worshop Summary*. 2011.

KEYNOTE LECTURES AND OTHER INVITED PRESENTATIONS (selected, 2007 –)

Invited presenter. Partners HealthCare Conference: Science and Society: Closing the Gap, Boston, MA, 2007 January 19-21.

Invited speaker. NASA Human Research Program Investigator's Workshop, League City, TX, 2007 February 12-14.

Invited panel member. Biological Geometry Workshop, Defense Advanced Research Projects Agency (DARPA), Defense Sciences Office, Arlington, VA, 2007 March 20.

Invited speaker. "The Demographic Revolution: Its Implications for Society and Business." AspenInstitute Italia, Aspen Seminars for Leaders, San Clemente Palace, San Clemente Island, Venice, Italy, 2007 May 4-6.

Plenary lecture. European Science Foundation (ESF) Summer School in Nanomedicine. Cardiff, UK, 2007 Jun 10-15.

Keynote speaker. Nanobio—Europe International Conference, Muenster, Germany, 2007 Jun 13-15.

Keynote address. Cancer Nanotech 2007 Conference, Paris, France, 2007 Jun 26-28.

Invited speaker. President's Council on Bioethics, Washington, DC, 2007 Jun 29.

Invited presenter. "Models and Methods in Computational Vascular and Cardiovascular Mechanics." Mini-symposium. 9th U.S. National Congress on Computational Mechanics, San Francisco, CA, 2007 Jul 23-26.

Invited speaker. Annual Meeting and Exposition, Nanotechnology. Association of Analytical Communities (AOAC). Anaheim, CA, 2007 Sep16-20.

Keynote speaker. Vaccines and Global Health Issues: All You Never Wanted to Know about Vaccines and How One Could Change Your Life. BioTexas Summit 2007, Austin, TX, 2007 Sep 5.

Invited attendee. The Science and Technology in Society (STS) Forum 2007, Kyoto, Japan, Oct 7-9.

Invited attendee. 2nd NCI Alliance for Nanotechnology in Cancer Investigators Meeting, Chapel Hill, NC, 2007 Oct 16-18.

Host and Co-Chair. USAMRMC-TATRC IRT meeting: Nanotechnology solutions for long-term implantable devices, Houston, TX, 2007 Oct 23-25.

Invited speaker. "Nanomedical Landscapes…" 2007-2008 Materials Council Seminar Series, Georgia Institute of Technology, Atlanta, GA, 2007 Nov 20.

Keynote speaker. NanoBiotech World Congress, Boston, MA, 2007 Nov 13-14.

Invited presenter. Small Times NanoCon International, Drug Delivery and Therapeutics, Santa Clara, CA, 2007 Nov 14-16.

Invited speaker. BioNorth 2007, Discovery to Outcome: Competing in a Global Marketplace, Ottawa, Canada, 2007 Nov 19-20.

Invited speaker. Program of Excellence in Nanotechnology *and* Siteman Center for Cancer Nanotechnology Excellence Seminar Series, Washington University at St. Louis, St. Louis, MO, 2007 Dec 6.

Keynote speaker. SNM Molecular Imaging Center of Excellence, 2008 Mid-Winter Educational Symposium, Newport Beach, CA, 2008 Feb 17.

Keynote speaker. American Institute for Medical and Biological Engineering (AIMBE), The Global Impact of Medical and Biological Engineering. Washington, DC, 2008 Feb 21.

Keynote speaker. National Cancer Institute Meeting Forum, Integrating and Leveraging the Physical Sciences to Open a New Frontier in Oncology, Arlington, VA, 2008 Feb 26-28.

Host. Scientific Workshop: Alliance for NanoHealth (ANH)/Food and Drug Administration (FDA) Nanotechnology Initiative, Houston, TX, 2008 Mar 10-12.

Invited panel member. Department of Defense (DOD) Congressionally Directed Medical Research Programs (CDMRP) Breast Cancer Innovator Research Project Award Panel, Washington, DC, 2008 Mar 26-27.

Invited speaker. Biopharmaceutical Nanotechnology, Café Royal, London, UK, 2008 Mar 30-April 1.

Chairperson. The American Association for Cancer Research Annual Methods Workshop, Nanotechnology and Cancer, San Diego, CA, 2008 Apr 12-16.

Invited speaker. Nanotechnology in Medicine. Serbian Academy of Science, Belgrade, Serbia, 2008 May.

Invited speaker. Bioengineering Cancer Treatment. University of Kraguyevac, Serbia, 2008 May.

Invited speaker. Nanotechnology in Breast Cancer. 27th Annual Meeting of the (ANDOS) National Breast Cancer Association of Italiy, Udine, Italy, 2008 May.

Invited speaker. Institute for Pure and Applied Mathematics (IPAM) Workshop, Los Angeles, CA, 2008 May 19-23.

Opening plenary keynote speaker. Organization of European Cancer Institutes (OECI) Scientific Conference, Discovering New Worlds in Medicine: Towards Nanoapplication in Cancer Prevention and Treatment, Genoa, Italy, 2008 May 21-24.

Invited opening plenary keynote address. 2008 Solid-State Sensor, Actuator, and Microsystems Workshop, Hilton Head, SC, 2008 Jun 1-2.

Invited speaker. EC-US Nanobiotechnology Workshop, Ispra, Italy, 2008 Jun 3-4.

Invited seminar. London Center Nanotech, University College/Imperial College, UK, 2008 Jun 17.

Invited speaker. Oxford University, UK, 2008 Jun 18.

Invited speaker. Swansea University, UK, 2008 Jun 19.

Invited speaker. Univ. Padova Medicina, Italy, 2008 Jun 23.

Invited speaker. Univ. Milano-Bicocca, Italy, 2008 Jun 26.

Invited speaker – Overview lecture. Gordon Research Conference, Metals in Medicine, Procter Academy, Andover, NH, 2008 Jun 29 – July 4.

Invited speaker. Univ. Napoli Federico II, Italy, 2008 Jul 7.

Invited guest. National Breast Cancer Coalition Fund's (NBCCF), think tank meeting, Aspen Institute, Aspen, CO, 2008 Aug 16-20.

Invited speaker. CEA-Leti High Level Workshop on Molecular Imaging, Grenoble, France, 2008 Sep 8-9.

Invited speaker. Nanoforum 2008 Conference: Micro e Nanotechnologies: Where research meets business. Milan, Italy, 2008 Sep 17-18.

Invited speaker. Nanotech Northern Europe 2008 Conference: Making nanotechnology happen. Copenhagen, Denmark, 2008 Sep 22-25.

Invited speaker. First Joint U.S.-China Symposium on Nanobiology and Nanomedicine. Organized by the U.S. National Institutes of Health, The National Center for Nanosciences and Technology (China), and the Chinese Academy of Sciences. Beijing, China. 2008 Oct 20-22.

Invited speaker. Carolina Center of Cancer Nanotechnology Excellence (C-CCNE) 2008-2009 Cancer Nanotechnology Symposium, Chapel Hill, NC, 2008 Nov 14.

Keynote lecture. Ferrari M. 80 anno di ricerca al servzio del paziente. Fondazione IRCCS, Instituto Nazionale Dei Tumori. [80th anniversary, Italian National Cancer Institute] Italy. 2008 Nov 29.

Invited participant. Aspen for the G8: Global Health Forum, Rome, 2009 Feb 12-13.

Plenary speaker. Inaugural Symposium for the Global Center of Exellence (GCOE), "Center for Medical System Innovation through Multidisciplinary Integration", University of Tokyo, Japan, 2009 Feb 20.

Invited lectureship. Texas Christian University, Green Endowed Engineering Lecture Series, Ft. Worth, TX, 2009 Feb 26.

Invited speaker. Frontiers of Cancer Research: Biology, Emerging Technologies and Therapeutics. Houston, TX, 2009 Mar 26.

Invited speaker. "Cancer Nanotechnologies". Texas Academy of Medicine, English, Science, and Technology, Houston, TX, 2009 Mar 26.

Invited speaker. "Nanotechnology Opportunities in Cancer". 2009 Symposium on Nanotechnology for Cancer Prevention, Diagnosis, and Treatment (M Amiji, V Torchilin, chairs). Nanotech Conference and Expo, Houston, TX, 2009 May 6.

Keynote lecture. Center for Nanohealth, Swansea University, UK, 2009 Jun 9.

Invited lecturer. Imperial College, London, 2009 Jun 11.

Invited speaker. Second European Science Foundation Summer School in Nanomedicine. Lisbon, Portugal, 2009 Jun 12-13.

Invited speaker. CeNTech Day, Munster, Germany, Jul 13, 2009.

Invited keynote lecture. International Conference on Nanoscience and Technology, China 2009 (ChinaNANO 2009), Beijing, China, 2009 Sep 1-3.

Invited inaugural speaker. TAMU Nano/Micro Seminar. College Station, TX, 2009 Sep 11.

Invited speaker. Research seminar/core course on Topics in Molecular Medicine, UT joint MD/PhD program. Houston, TX, 2009 Sep16 and 23.

Invited lecture. Nanomedicine Is a Team Sport. Executive Lecture Series, Rice University, Houston, TX, 2009 Sept 18.

Invited speaker. The U.S. Cancer Nanotechnology Plan. International INCa: Symposium OncoNano. Paris, France, 2009 Oct 5.

Invited speaker. University of Texas at San Antonio: Department of Biomedical Engineering and the Research Centers in Minority Institutions; University of Texas Health Science Center at San Antonio, Institute for Integration of Medicine and Science. Seminars in Translational Research (STRETCH). San Antonio, TX, 2009 Oct 21.

Invited keynote address. University of Houston Bio-Research Career Information Day. Houston, TX, 2009 Oct 29.

Invited keynote speaker. 5th Annual MEMS Executive Congress. Sonoma, CA, 2009 Nov 4-5.

Invited opening speaker. "Nanomedicine: A View from the Trenches". 51st Annual Meeting of the Italian Society of Cancerology-Nanotechnologies and Nanodelivery. Milan, Italy, 2009 Nov 23.

Invited speaker. "Nanotechnology for Individualized Medicine." 51st Annual Meeting of the Italian Society of Cancerology-Nanotechnologies and Nanodelivery. Milan, Italy, 2009 Nov 24.

Invited speaker. French-American Innovation Day (FAID) conference on Theranostics and Biology: Technological Challenges and Applicative Breakthroughs Harvard Medical School Conference Center, Boston, MA, 2009 Dec 3-4.

Invited speaker. 24th Symposium on Gravity-Related Phenomena in Space Exploration. Part of the 48th Aerospace Sciences Meeting, American Institute of Aeronautics and Astronautics, Orlando, FL, 2010 Jan 4-7.

Invited colloquium presentation on nanobiomedicine research. Vanderbilt Institute of Nanoscale Science and Engineering (VINSE), Vanderbilt University, Nashville, TN, 2010 Jan 20.

Invited speaker. Multidisciplinary seminar series, California NanoSystems Institute (CNSI) at UCLA. Los Angeles, CA, 2010 Jan 26.

Invited speaker. Conference and Debate: The Nanotechnology Revolution. Sponsored by Nature Publishing Group Iberoamerica. Madrid, Spain. 2010 Jan 28.

Keynote speaker. 4th Annual Molecular Imaging Summit: Nanomedicine and Molecular Imaging. Albuquerque, NM, 2010 Feb 1.

Invited plenary speaker. ASME 1st Global Congress on Nanoengineering for Medicine and Biology (NEMB2010): Advancing Health Care through NanoEngineering and Computing. Co-Sponsored by USACM. Houston, TX, 2010 Feb 7-10.

Invited speaker. Nanobiotechnology Seminar Series. Stanford University. Stanford, CA, 2010 March 2.

Invited participant. Nanoscale Science and Technology: Progress and Long-Term Opportunities. World Technology Evaluation Center. Chicago, IL, 2010 Mar 9–10.

Keynote speaker. Industry and Health Authority Conference on Oligonucleotide Therapeutics. Co-sponsored by the Drug Information Association, Food and Drug Association (U.S.), Health Canada, and the Oligonucleotide Therapeutics Society. Bethesda, MD, 2010 Mar 23.

Invited speaker. Micro/Nano-technology Seminar Series. Massachusetts Institute of Technology. Cambridge, MA, 2010 Apr 1.

Invited speaker. Physics and Astronomy Seminar. University of Texas at San Antonio, 2010 April 2.

Keynote speaker. "The Science of Nanobiotechnology and Oversight Challenges." Conference on Governing Nanobiotechnology: Reinventing Oversight in the 21st Century. University of Minnesota, Minneapolis, 2010 April 15.

Keynote speaker. 42nd Annual Oak Ridge Conference, sponsored by the American Association for Clinical Chemistry. San Jose, CA, 2010 April 22 – 23.

Invited speaker. College of Pharmacy Weekly Seminar Series. University of Houston, TX, 2010 Apr 28.

Invited speaker. Mechanical Engineering Department Graduate Seminar. University of Houston, TX, 2010 April 29.

Keynote speaker. 5th annual CCR Nanobiology Program Think Tank (theme: Nanoparticles for Tumor Targeting). National Cancer Institute, Frederick MD, 2010 Jun 3.

Keynote speaker. ILSI [Israel Life Science Industry]. Biomed Israel: 9th National Life Science and Technology Week. Tel Aviv, 2010 Jun 14 – 16.

Keynote speaker. nanoBio-Europe. Munster, Germany, 2010 Jun 16-18.

Plenary speaker, Controlled Release Society. Portland, OR, 2010 Jul 14.

Invited speaker. American Chemical Society Annual Meeting. Division of Polymeric Materials: Science and Engineering. Multifunctional Nanoparticles for Drug Delivery and Imaging. Boston, MA. 2010 Aug 22.

Plenary lecture. MESA+ Institute for Nanotechnology, University of Twente. Enschede, The Netherlands, 2010 Sep14.

Invited speaker. 2nd US–China Symposium on Cancer Nanotechnology and Nanomedicine. National Cancer Institute's Alliance for Nanotechnology in Cancer, National Center for Nanoscience and Technology of China. Washington, DC, 2010 Sep 16-18.

Invited speaker. Materials Research Society Workshop, Functionalized Nanomaterials for Medical Applications. Denver, CO, 2010 Oct 3-7.

Invited lecturer. Beyer Lecture. Department of Civil and Environmental Engineering, University of Houston. Houston, TX 2010 Nov 23.

Invited conference keynote lecture. NanoMed – 7th International Conference on Biomedical Applications of Nanotechnology. Berlin, 2010 Dec 2-3.

Invited plenary speaker. Pacifichem, Symposium #11: Biological Interactions of Engineered Nanoparticles: Novel Functions and Safety Issues. Honolulu, HI, 2010 Dec 19.

Invited panelist. Texas Biotechnology: Implementing Radical Innovation across the Public and Private Sectors. Academy of Medicine, Engineering, and Science of Texas Annual Conference: Innovation in Texas, Past, Present, Future. Austin, TX, 2011 Jan 6.

Plenary lecture. American Association for Cancer Research Special Conference on Nano in Cancer: Linking Chemistry, Biology, and Clinical Applications in Vivo. Miami, FL, 2011 Jan 14.

Invited speaker. National Institutes of Health and IEEE. Life Science Systems and Applications Workshop on Nanomedicine. Bethesda, MD, 2011 Apr 7-8.

Keynote speaker. Design of Medical Devices Conference (10th Anniversary), Mini-Symposium on Nano-Medical Devices. Minneapolis, MN, 2011 Apr 14.

Keynote lecture. XII TTS Basic Science Symposium / II ESOT Basic Science Meeting. Cape Cod, MA, 2011 Jun 11-14.

Invited speaker. Symposium of the Fondazione Pezcoller. Trento, Italy, 2011 Jun 16-18.

Invited speaker. Technical Planning Committee (TPC) for the Department of Defense, Breast Cancer Research Program (BCRP), 2011 Era of Hope (EOH) Conference. Orlando, FL, 2011 Aug 5.

Invited speaker. Fondazione Meeting per l'amicizia fra I popoli. Rimini, Italy, 2011 Aug 25.

Invited speaker. Can Care Conference, Houston, TX, 2011 Aug 27.

Keynote speaker. Intelligence of the World, Europe and Italy. Villa d'Este di Cernobbio 2011 Sep 2.

Invited speaker. The Center of Nanotechnology 15th Anniversary. University of Washington, Seattle, WA, 2011 Sep 7.

Invited panelist. Innovator Award of the Breast Cancer Program. GE Healthcare, New York, NY, 2011 Sep 15.

Keynote speaker. International Conference of Nanodrug Delivery. Advanced Institute of Sanita. Rome, Italy, 2011 Oct 10.

Invited speaker. William C. Reynolds Memorial Seminar, The Mechanical NanoEngineering of Individualized Medicine. Stanford University, CA. 2011 Oct 13.

Keynote speaker. MedConference: Medical Care and the Person: The Heart of the Matter. New York, NY, 2011 Oct 22.

Keynote speaker. CTS-IXA Joint International Congress. Miami, FL, 2011 Oct 24.

Invited speaker. Intelligence on the World, Europe, and Italy. Ambrosetti Forum, Milan, Italy, 2011 Nov 7.

Invited speaker. RSNA: The New Frontier of Device-Based Interventions for Cancer. Chicago, IL, 2011 Nov 30.

Invited speaker. The Academy of Medicine, Engineering & Science of Texas. 9th Annual Tamest Conference. Houston, TX 2012 Jan 12-13.

Invited speaker. University of Oklahoma, Graduate Seminar Series, Norman OK, 2012 Jan 26.

Keynote speaker. ONCO Workshop. Napoli, Italy, 2012 Feb 3-4.

Invited speaker. First USACM Thematic Conference. San Francisco, CA, 2012 Feb 13-14.

Invited speaker. University of St. Thomas, Tri-Beta Biology Honor Society. Houston, TX 2012 Feb 28.

Keynote speaker. BioNanoMed 2012 – Scientific Board. Krems, Austria, 2012 Mar 1-2.

Honorary Lecture. University of California Los Angeles, Jonsson Comprehensive Cancer Center Program Area in Cancer Nanotechnology. Los Angeles, CA 2012 Mar 14.

Invited speaker. Crossroads Cultural Center, Research: the Surprise of Discovery, Houston, TX 2012 May 21.

Invited speaker. Weill Cornell Medical College, The Brain Tumor Biotech Summit, New York, NY, 2012 June 8.

Keynote speaker. Healthcare Executive Summit, Houston, TX 2012 June 20.

Keynote speaker. American College of Clinical Pharmacology (ACCP). San Diego, CA, 2012 Sep 24.

Invited speaker. AIRC (Italian Association for Cancer Research) Lecture - Eighth World Conference on the Future of Science – Nanoscience Society. Venice, 2012 Sep 16-18.

Distinguished Guest Lecturer. Baylor College of Medicine Graduate Student Symposium, Joseph L. Melnick Lectureship, Houston, TX, 2012 October 18.

Invited speaker. The Texas Lyceum: "Healthcare Innovation: The Next Spindletop for Texas?", Rice University, Houston, TX, 2012 Oct 19.

Plenary speaker. Basic Science Symposium, American Society of Nephrology (ASN), San Diego, CA, 2012 Nov 3.

Keynote speaker. International Mechanical Engineering Congress, Biomedical and Biotechnology Engineering Track, Houston, TX, 2012 Nov 12-13.

Invited speaker. Transatlantic Science Week, Research-based Education Keeping Pace with Innovation and Tech Transfer Session, Houston, TX 2012 Nov 14.

Plenary Speaker, NCI Alliance for Nanotechnology in Cancer Investigators' Meeting, Session: Novel Nanoparticles for Therapy and Theranostics, Houston, TX, 2013 Nov 15.

Distinguished speaker. 3rd Annual George P. Noon Conference, Management of Organ Failure: Chronic Heart, Lung, Liver, and Kidney Diseases, Houston, TX 2012 Dec 1.

Invited speaker. Human Subjects Research After the Holocaust, Houston, TX 2012 Dec 5.

Invited speaker. Small Sciences Symposium: Frontiers in Nanomedicine, Wiley-VCH and Nayang Technological University, Singapore, 2012 Dec 10-12.

Invited speaker. 5th International Cardio Event: Cardiology Towards the Future, Nanotechnology in Medicine Session, Florence, Italy, 2013 Jan 17-19.

Invited speaker. Breast Cancer Symposium, Pordenone, Italy, 2013 Jan 25.

Invited speaker. Houston Section of the American Association for Dental Research and UT SOD Houston Center for Biomaterials and Biomimetcs, UT School of Dentistry – Houston, TX, 2013 Feb 18.

Invited speaker. Page Morton Lecture, Clemson University, Clemson, SC, 2013 Feb 21.

Invited speaker. BioNanoMed 2013, Krems Austria, 2013 Mar 13.

Inivited speaker. 2nd Nanomedicine Conference, Cedar-Sinai Medical Center, Los Angeles, CA, 2013 Mar 15-16.

Invited speaker. "Innovazione, Tecnologia e Sostenibilita in Oncologia" (Innovation, Technology, and Sustainabiliity in Oncology), Rome, Italy, 2013 Mar 22.

Invited speaker. Bürgenstock Conference 2013: EUCHEM Conference on Stereochemistry, Brunnen, Switzerland, 2013 April 28 – May 3.

Invited speaker. Information Sciences in Imaging at Stanford (ISIS), Stanford, California, 2013 May 15.

Invited speaker. Student Invited Lecture for Medical Scientist Training Program at the Indiana University School of Medicine, Indianapolis, IN, 2013 August 29.

Keynote speaker. European Society for Organ Transplantation (ESOT), Vienna, Austria, 2013 Sep 9.

Plenary speaker. Materials in Medicine International Conference, Faenza, Italy, 2013 Oct 11.

Invited speaker. Faith & Medicine Luncheon, Houston Methodist, Houston, TX 2013 Oct 21.

Invited speaker. Bioethics Grand Rounds, Houston Methodist, Houston, TX 2013 Oct 30.

Invited speaker. 2013 Horizons: Connecting AAPM & PS-OCs, Bethesda, MD 2013 Nov. 8.

Invited speaker. Presidents' Distinguished Lecture in Engineering, Science & Medicine, Texas Tech University, Lubbock, TX 2013 Nov 15.

Invited speaker. IIT Global Conference, Houston, TX 2013 Dec 7.

Invited speaker. University of Chicago Medicine and Religion Series, Chicago, IL, 2014 Jan 13.

Invited speaker. Brown Symposium, Southwestern University, Georgetown, TX, 2014 Feb 6.

Invited speaker. Archbishop J.Michael Miller Lecture, University of St. Thomas, Houston, TX,

2014 Feb 20.

Plenary Speaker. NanoIsrael 2014: the 4th International Nanotechnology Conference and Exhibition, Tel Aviv, Israel, 2014 Mar 25.

Invited speaker. BioNanoMed 2014, Krems, Austria, 2014 Mar 26-28.

Invited speaker. Visiting Professor's Seminar Tour Lecture Series, 2014 April 8-10.

Invited speaker. CEINGE ISAEC III Meeting, Italy, 2014 Apr 28-30.

Invited speaker. Masters of Surgery Lecture Series, Montefiore Medical Center/ Albert Einstein College of Medicine. New York, 2014 May 5.

Invited speaker. The Roche-Nature Biotechnology Symposium, Luzern, Switzerland, 2014 Sept 3-5.

Plenary Speaker. 61st AVS meeting, Baltimore, MD 2014 Nov 9.

Team Leadership Panel Member, Texas Chapter Annual Scientific Meeting, Houston, TX 2014 Nov 15.

Invited speaker. 5th Annual International Conference in Computational Surgery, Washington, DC 2015 Jan 19-21.

Invited speaker. Texas Medical Center 4th Annual Presidential Career Symposium, Houston, TX 2015 Feb 26.

Invited speaker. 3rd Nanomedicine for Imaging and Treatment Conference, Los Angeles, CA 2015 Mar 13-14.

Invited Speaker. 2015 Aurel Stododa Lecture, ETH Zurich, Switzerland 2015 Apr 1.

Chairperson. American Association for Cancer Research (AACR) 106TH Annual Meeting, Program Committee, Recent Advances in Diagnostics and Therapeutics Research session, Philadelphia, PA 2015 Apr 19-22.

Plenary speaker. 2nd Texas A&M Eng-Life Workshop, College Station, TX, 2015 Apr 24.

Plenary speaker. NISE (Nanoscale Informal Science Foundation) Network-Wide Meeting, Saint Paul, MN 2015 June 3.

Plenary speaker. CLINAM 8th Annual Conference and Meeting, Basel, Switzerland 2015 Jun 29.

Keynote speaker. CanCare Convention, 25th Meeting, 2015 Aug 22, Houston, TX.

Keynote Plenary speaker. 58th Meeting of the Italian Society of Biochemistry and Molecular Biology, Urbino, Italy 2015 Sept 14-16.

Invited speaker. 2015 American Association of Pharmaceutical Scientists (AAPS) Workshop on Nanotechnology in Personalized Medicine, Orlando, FL 2015 Oct 25.

Invited speaker. Wake Forest University, Institute for Regenerative Medicine, Winston-Salem, NC 2015 Nov 4.

Invited speaker. TAMEST 2015 Texas Research Summit, Austin, TX 2015 Nov 13.

Invited speaker. Milano Commencement Address, Milano Universita, Milan, Italy, 2015 Dec 3.

Invited speaker. The Annual Conference on Medicine and Religion, Houston, TX 2016 Mar 6.

Invited speaker. Louis W. Busse Lectureship, University of Wisconsin-Madison School of Pharmacy, Madison, WI, 2016 Apr 7-9.

Invited panel speaker. Medical World Americas Conference & Expo, 2016 May 20.

PATENTS

Patents Granted [23 US; 18 European]

1. Keller CG Ferrari M. **Microfabricated capsules for isolation of cell transplants**. WIPO Publication Number WO/1995/024472 (1995).
2. Keller CG, Ferrari M. **High vertical aspect ratio thin film structures**. WIPO Publication Number WO/1995/024736 (1995).
3. Keller CG, Ferrari M. **Microfabricated particle filter**. WIPO Publication Number WO/1995/024261 (1995).
4. Chu WH, Ferrari M. **Micromachined porous membranes with bulk support**. WIPO Publication Number WO/1996/040420 (1996).
5. Ferrari M. **Therapeutic microdevices and methods of making and using same**. WIPO Publication Number WO/1996/041236 (1996).
6. Keller CG, Ferrari M. **Microfabricated particle filter**. U.S. (1997). U.S. Patent Number 5,651,900.
7. Chu WH, Ferrari M. **Micromachined capsules having porous membranes and bulk supports [I]**. U.S. (1998). U.S. Patent Number 5,770,076.
8. Chu WH, Ferrari M. **Microfabricated filter with specially constructed channel walls and containment well, and capsule constructed with such filters [I]**. U.S. (1998). US Patent Number 5,798,042.
9. Keller CG, Ferrari M. **Microfabricated capsules for immunological isolation of cell transplants**. U.S. (1999). United States Patent Number 5,893,974.
10. Tu J, Ferrari M. **Microfabricated filter and capsule using a substrate sandwich**. U.S. (1999). United States Patent Number 5,938,923.
11. Keller CG, Ferrari M. **Microfabricated particle thin film filter and method of making it**. U.S. (1999). United States Patent Number 5,948,255.
12. Chu WH, Ferrari M. **Method for forming a filter**. U.S. (1999). United States Patent 5,985,164.
13. Chu WH, Ferrari M. **Micromachined porous membranes with bulk support [II]**. U.S. (1999). United States Patent Number 5,985,328.

14. Keller CG, Ferrari M. **High vertical aspect ratio thin film structures**. U.S. (2000). United States Patent Number 6,015,559.

15. Chu WH, Ferrari M. **Microfabricated filter with specially constructed channel walls and containment well, and capsule constructed with such filters [II]**. U.S. (2000). United States Patent Number 6,044,981.

16. Ferrari M. **Therapeutic microdevices and methods of making and using same**. U.S. (2000). United States Patent Number 6,107,102.

17. Ferrari M, Dehlinger PJ, Martin FJ, Grove CF, Friend DR. **Particles for oral delivery of peptides and proteins**. WIPO Publication Number WO/2000/041740 (2000).

18. Essenpreis M, Desai TA, Ferrari M, Hansford DJ. **Implantable analyte sensor**. WIPO Publication Number WO/2001/068901(2001).

19. Ferrari M, Dehlinger PJ, Martin FJ, Grove CF, Friend DR. **Particles for oral delivery of peptides and proteins**. U.S. (2002). United States Patent Number 6,355,270.

20. Essenpreis M, Desai TA, Ferrari M, Hansford DJ. **Implantable analyte sensor**. U.S. (2002). United States Patent Number 6,405,066.

21. Ferrari M, Liu X, Sinha PM, Smith B, Sharma S. **Diffusion delivery systems and methods of fabrication**. WIPO Publication Number WO/2006/108053 (2006);

22. Ferrari M, Liu X, Sinha PM, Smith B., Sharma S. **Diffusion delivery system and methods of fabrication**. WIPO Publication Number WO/2006/108054 (2006).

23. Ferrari M, Cheng MM-C, Cuda G, Gaspari M, Geho D, Liotta L, Petricoin E, Robertson F, Terracciano, R. **Nanoporous substrates for analytical methods**. WIPO Publication Number WO/2007/120248 (2007).

24. Decuzzi P, Ferrari M. **Methods and compositions for targeting fenestrated vasculature.** WIPO Publication Number WO/2008/041970 (2008).

25. Ferrari M, Liu X, Cheng MC. **Porous particles and making thereof**. WIPO Publication Number WO/2008/134637 (2008).

26. Decuzzi P, Ferrari M. **Endocytotic particles**. WIPO Publication Number WO/2008/106350 (2008).

27. Ferrari M, Tasciotti E. **Multistage delivery of active agents**. WIPO Publication Number WO/2008/021908 (2008).

28. Decuzzi P, Ferrari M. **Particles for cell targeting**. WIPO Publication Number WO/2008/067049 (2008).

29. Liu J, Ferrari M, Rokhlin SI, Sedmark DD. **System and method for screening tissue**. U.S. (2011). United States Patent Number 7,993,271 B2.

30. Ferrari M, Liu X, Chiappini C, Fakhour JR. **Porous and non-porous nanostructures**. WIPO Publication Number WO/2011/156028 (2011).

31. Ferrari M, Tasciotti E, Liu X, Bouamrani A, Hu Y. **Combinational multidomain mesoporous chips and a method for fractionation, stabilization, and storage of biomolecules**. WIPO Publication Number WO/2011/025602 (2011).

32. Ferrari M, Decuzzi P. U.S. (2012). **Particle compositions with a pre-selected cell internalization mode**. United States Patent Number 8,173,115.

33. Decuzzi P, Ferrari M. U.S. (2013). **Endocytotic Particles**. United States Patent Number 8,361,508.

34. Ferrari M, Liu X, Grattoni, Fine D, Goodall R, Hosali S, Medema R, Hudson L. U.S. (2013). **Nanochanneled device and related methods**. United States Patent Number 8,480,637.

35. Decuzzi P, Ferrari M. U.S. (2013). **Particles for cell targeting**. United States Patent Number 8,563,022.

36. Ferrari M, Liu X, Chiappini C, Fakhoury JR. U.S. (2013). **Porous and non-porous nanostructures**. United States Patent Number 8,568,877.

37. Ferrari M, Tasciotti E, Liu X, Bouamrani A, Hu Y. U.S. (2014). **Combinational multidomain mesoporous chips and a method for fractionation, stabilization, and storage of biomolecules**. United States Patent Number 8,685,755.

38. Ferrari M, Cheng MM-C, Cuda G, Gaspari M, Geho D, Liotta L, Petricoin E, Robertson F, Terracciano R. U.S. (2014). **Nanoporous substrates for the [sic] analytical methods**. United States Patent Number 8,753,897.

39. Ferrari M, Liu X, Cheng MC. U.S. (2014). **Electrochemical method of making porous particles using a constant current density**. United States Patent Number 8,920,625.

40. Ferrari M, Serda R, Meraz IM, Gu J, Xia X, Shen H, Sun T. U.S. (2015). **Mesoporous silicon particles for the presentation of tumor antigens and adjuvant for anti-cancer immunity**. United States Patent Number 8,926,994.

41. Fine D, Grattoni A, Ferrari M, Liu X, Goodall R, Hosali S. Daniel Fine, Alessandro Grattoni, Mauro Ferrari, Xuewu Liu, Randy Goodall, Sharath Hosali. **Nanochanneled device with electrodes and related methods.** WIPO Publication Number WO/2015/017777 A1 (2015).

Patents Published

1. Martin FJ, Ferrari M. U.S. (2003). **Microfabricated particles and methods for treating solid tumors.** United States Patent Application US20030114366.

2. Hansford DJ, Ferrari M. U.S. (2003). **Method of forming a membrane with nanometer scale pores and application to biofiltration.** United States Patent Publication Number US20030205552.

3. Ferrari M, Lui X, Sinha PM, Smith B, Sharma S. U.S. (2007). **Diffusion delivery systems and methods of fabrication.** United States Patent Publication Number US20070066138.

4. Ferrari M, Tasciotti E. U.S. (2008). **Multistage delivery of active agents.** United States Patent Publication Number US20080311182.

5. Decuzzi P, Ferrari M. U.S. (2010). **Methods and compositions for targeting fenestrated vasculature**. United States Patent Publication Number US20100074958.

EDITORIAL ACTIVITIES

Editor-in-Chief

1997 – *Biomedical Microdevices: BioMEMS and Biomedical Nanotechnology* (Springer)

Series Editor-in-Chief

2007 – *Fundamental Biomedical Technologies* (Springer)

Editorial Boards

1991 – 1994 *Composite Engineering*
1995 – 1999 *Composites, Part B: Engineering*
2003 – *International Journal of Mechanics and Materials in Design*
2003 – *Clinical Proteomics*
2004 – *NanoBiotechnology*
2005 – *International Journal of Nanomedicine*
2005 – *NanoMedicine*
2007 – *Trends in Biotechnology* (Tibtech)
2007 – *Nanotechnology, Science, and Applications* (Honorary)
2007 – *Open Structural Biology Journal*
2007 – *Open Structural Biology Reviews*
2007 – *Journal of the Serbian Society for Computational Mechanics* (SDRM)
2008 – *Cancer Nanotechnology: Basic, Translational, and Clinical Research*
2008 – 2010 Jan *Journal of Biomedicine and Biotechnology* (oncology section)
2009 – *Journal of Tissue Engineering*
2011 – *Nanomedicine: Nanotechnology, Biology and Medicine* (Honorary Board)
2011 – *OMICS Publishing Group: Journal of Bioengineering & Biomedical Science*
2012 – *Springer Medicina e Persona: Journal of Medicine and the Person*
2015 – *Convergent Science Physical Oncology*

Advisory Board

2010 – present Advisory Board, *Encyclopedia of Nanotechnology.* Bharat Bhushan, PhD, editor in chief. Springer-Verlag. (In planning; expected publication date 2012.)

Reviewer

ASME Journal of Applied Mechanics
ASME Journal of Energy Resource Technology
ASCE Journal of Engineering Mechanics
Acta Metallurgica et Materialia
Advanced Materials
Applied Biochemistry
Applied Organometallic Chemistry
Applied Physics Letters
Biomaterials, Biotechnology and Bioengineering
Biotechnology Progress
Cancer Research: 2009
Clinical Proteomics
Colloids and Surfaces B: Biointerfaces
European Journal of Biophysics
IEEE Journal of MicroElectroMechanical Systems
International Journal of Solids and Structures
Journal of Clinical Oncology, 2010
Journal of Controlled Release
Journal of Fluids Engineering
Journal of the Mechanics and Physics of Solids
Journal of Physical Chemistry: 2009
Lancet Oncology
Langmuir: 2009
Nano Letters

Editorial activities, cont.

Nature Biotechnology: 2009
Nature Materials: 2009
Nature Medicine: 2009
Nature Nanotechnology: 2009
Nature Reviews Cancer: 2009
Nature Reviews Clinical Oncology: 2010
Proceedings of the National Academy of Sciences
Science Translational Medicine: 2010

PROFESSIONAL MEMBERSHIPS: CURRENT

1989 – Materials Research Society (MRS)
1992 Reviewer

1992 – American Society of Mechanical Engineers (ASME)
1990 – 1995 Reviewer
1990 – 1995 Session Developer
1990 – 1995 Session Chair
1995 – 1996 Materials Committee, Petroleum Division
2009 – 2010 Chair, Organizing Committee, ASME First Global Congress on NanoEngineering for Medicine and Biology [NEMB]: Advancing Health Care through Nanoengineering and Computing; 2010 Feb 7–10, Houston, Texas
2010 Fellow

1995 – American Association for the Advancement of Science (AAAS)
2002 Review Panel
2002 Chairman, Review Panel
2009 Fellow (Section: Biological Sciences)

2000 – 2004 International Society for BioMEMS and Biomedical Nanotechnology
2000 – 2004 Founding President
2004 merged with American Academy of Nanoscience

2004 – American Association for Cancer Research
2008 – 2009 Member, 2009 Education Committee

2008 – American Institute for Medical and Biological Engineering (AIMBE)

2008 – American Physical Society (APS)

2008 – Biomedical Engineering Society (BMES)

Invited Platform Session Chair for Biomedical Nanotechnology II session, BMES 2009: Bridging the 3 Rivers of Biology, Engineering, and Medicine, Pittsburg, Pennsylvania, 2009 Oct 7–9.

Invited Technical Program Co-Chair for 2010 Annual Fall Meeting (Austin, Texas, Oct 6–9, 2010)

2009 – NetWork di Bioetica

2010 – Controlled Release Society

PROFESSIONAL MEMBERSHIPS: PREVIOUS

1985 – 1991 International Union Theoretical and Applied Mechanics (IUTAM)

Professional memberships, previous, cont.

1988 – 1990 Society for Natural Philosophy

1992 – 2000 American Society of Civil Engineers

1995 – 1998 California Academy of Sciences

1995 – 1998 New York Academy of Science (NYAS)

1995 – 1999 International Society for Optical Engineering (SPIE)
Micro- and Nanofabricated Structures and Devices for Biomedical Environmental Applications (BioS Conferences)
1995 – 1999 Scientific Committee
1999 Conference Chairman

OTHER PROFESSIONAL SERVICE (2007 to present)

2007 Program Committee Member, IEEE/ICME International Conference on Complex Medical Engineering.

2007 Technical Planning Committee, 5th Era of Hope Conference, Baltimore, MD, June 25-28.

2008 Program Committee Member, American Vacuum Society International Symposium and Exhibition, BioMEMS: From Science Discovery to Technology to Clinic, Boston, MA, October 19-24.

2009 Symposium Co-Chair, Symposium on Nano Medicine, Nanotech Conference and Expo 2009, Houston, TX, 2009 May 5.

2010 External Advisory Committee member, Partnership for Education and Research in Materials (PREM) [sic], University of Texas San Antonio–Northwestern University. National Science Foundation grant DMR-0934218; PI: Dhiraj Sardar, UT-SA.

2012 External Advisory Board member, Cancer Nanotechnology Program Area, University of California – Los Angeles (UCLA) Jonsson Comprehensive Cancer Center (JCCC).

2012 Industry Advisory Board member, Texas A&M Institute for Preclinical Studies (TIPS), Texas A&M University – College of Veterinary Medicine & Biomedical Sciences. College Station, Texas.

2012 Committee of Review Member, Weill Cornell Medical College, New York, NY.

2012 Medical Advisory Board, CanCare, Houston, TX.

2014 External Advisory Board, Depart of Biomedical Engineering, Columbia University, New York.

2014 Strategic Planning Committee of the Board, University of St. Thomas, Houston, TX.

2014 Cullen College of Engineering Leadership Board, University of Houston, Houston, TX.

INTERNATIONAL SERVICE (selected)

2001 UK: Medical Research Council of the United Kingdom: Residential Strategy Development Meeting, Heathrow, London.

2003 Italy: University of Calabria, Magna Grecia, Italy: Senior Advisor to the Rector, Medical Research Strategic Initiatives.

2003 Italy: Advisor, biomolecular medicine, Area di Ricerca di Trieste.

2003	Italy: Member, Industrial Advisory Board, Synchrotron of Trieste.
2004	Italy: President, Scientific Advisory Board of the Consortium for Biomolecular Medicine of the Friuli Venezia Giulia.
2005	Italy: Advisor to the National Committee on Bioethics.
2005 – 2006	Italy: Chairman of the National Committee on Bionanotechnology.
2006	Canada: Member, International Panel to Assess Canadian Research Strength in Nanotechnology.
2006	Italy: Advisor on Innovation to the Governor of the Region Friulli Venezia Giulia, Trieste.
2007	Austria: Vienna Science and Technology Fund (WWTF: Wiener Wissenschafts-Forschungs- und Technologiefonds), International Jury, invited expert reviewer, Project Call 2007: Mathematics *and …* thematic program.
2007	Organizing Committee Member, IEEE International Conference on Nano/Molecular Medicine and Engineering (IEEE-NANOMED), Macau SAR, China.
2008	Founder, Accademia d'Nanogagliato (annual by-invitation-only international conference)
2008	Member, iNANO-MEDICINE International Advisory Board, University of Aarhus, Denmark.
2008	Steering Committee, NanoBio – Seoul 2008, Yonsei University, Seoul, Korea, Oct 30-31.
2008 –	Italy: Scientific Advisory Board, Alta Scuola Politecnica Italia.
2008 –	UK: Chairman, International Advisory Board, Center for Nanomedicine, Swansea University.
2008 – 2009	Invited member, Scientific Committee. 2009 South-East European Conference on Computational Mechanics (SEECCM), Special Interest Conference, Rhodes, Greece, 2009 June 22-24.
2008 – 2009	International Advisory Committee, International Conference on Nanoscience and Technology, China 2009 (ChinaNANO 2009), 2009 Sep 1-3, Beijing, China.
2009 – 2010	International Advisory Board, 7th International (biennial) Conference on Porous Semiconductors: Science and Technology (PSST-2010), Valencia, Spain, 2009 March 14-19.
2009 –	International Scientific Advisory Board, Waterloo Institute of Nanotechnology, University of Waterloo, Canada.
2009 -	Founding Chairman, Scientific Advisory Board, Centro Europeo Nanomedicina, Milan, Italy
2010 –	CEINGE-Biotecnologie Avanzate (Naples, Italy). International Scientific Advisory/Evaluation Committee (ISAC).
2011 –	Honorary Chair of NanoMedicine, Swansea University, Wales, UK.
2011 – 2015	Scientific Board of Gemelli Lab, Universita Cattolica Del Sacro Cuore, Milano, Nominated Member

FEDERAL AND NATIONAL SERVICE (selected)

1999	Executive Office of the President, United States of America: Nanotechnology Research [report]
1999	National Science and Technology Council, Committee on Technology: Interagency Working Group on Nanoscience, Engineering and Technology. [report: Directions, 2000]
1999 – 2000	National Research Council, Board on Army Science and Technology, Committee on Opportunities in Biotechnology for Future Army Applications. [report: Jan 2001]
2001	Science Applications International Corporation (SAIC, McLean, VA): Innovative Approaches to Countering Biological Terrorism.
2001	National Institute of Standards and Technology (NIST, Gaithersburg, MD): Panelist, Workshop on Nanotechnology in Early Detection of Cancer.
2001	National Reconnaissance Office: Invited Tutorial on Biomedical Nanotechnology.
2001	Science Applications International Corporation (SAIC, Del Mar, CA): Sensors and Sensing Workshop.
2002	National Institutes of Health: Session Chair, BECON 2002 Symposium, Biosensors for Research and Medicine.
2002	Food and Drug Administration: (first invited) Tutorial on Biomedical Nanotechnology.
2002	U.S. Department of Agriculture: Session Chair and Speaker, Nanoscale Science and Engineering for Agriculture and Food Systems.
2002 – 2003	National Heart, Lung, and Blood Institute: Chairman, Planning Committee and Working Committee, National Initiative on Nanotechnology.
2003	National Cancer Institute: Special Expert Advising the Director on Cancer Nanotechnology.
2003	U.S. Department of Defense: Member, Integration Committee, Congressionally Mandated Army Breast Cancer Research Program.
2003	National Cancer Institute: Meeting of Distinguished Scientists on the Future of Cancer Research.
2003	National Science Foundation: Chair of the U.S. Delegation, Workshop on Medical Nanotechnology, National Science Foundations of the U.S. and Japan, (joint), Yokohama, Japan.
2003 – 2006	National Cancer Institute: Eminent Scholar and Special Expert on Nanotechnology [to establish the NCI Alliance for Nanotechnology in Cancer; nano.cancer.gov]
2004	National Cancer Institute: Meeting of Distinguished Scientists on the Future of Cancer Research.
2004	National Cancer Advisory Board: Development of a National Biotechnology Initiative for Cancer, member, Cancer in the Organism working group.
2004	Institute of Medicine: Appointed Reviewer of the Congressionally Mandated Army Cancer Research Program. [Congressional briefing on Cancer and Nanotechnology, Oct 18.]
2005	Strategic Consensus Conference on Biomarker Research in Breast Cancer (NBCCF), Philadelphia, PA, Nov 14-15.

Federal and national service, cont.

2007– National Cancer Institute, Board of Scientific Counselors: Member, External Advisory Board Committee to Nanobiology Program, Center for Cancer Research.

2007 June 29 President's Council on Bioethics.

2009 National Institutes of Health: Invited participant and speaker, NIH Nanoweek 2009. Nanotechnology at NIH: Basic Concepts, Current Research, and Medical Applications.

2009 Jan 27–29 DARPA Strategic Technology Office. Keswick, VA.

2009 U.S. Department of Defense: Member, Integration Panel, Peer Reviewed Cancer Research Program.

2009 Jul 27–29 DARPA/DSO Fracture Putty Program Review Meeting (with presentation). New York.

2009 – 2012 National Institute of Standards and Technology: Advisory Board, Technology Innovation Program.

2009 – 2010 Institute of Medicine: Member, Planning Committee, National Cancer Policy Forum Workshop on Nanotechnology and Oncology, 2010 summer.

2010 – National Cancer Institute: Member, Coordinating and Governance Committee, Alliance for Nanotechnology in Cancer.

2011 Jan 16–19 Sandia National Laboratories: External Review, Microelectronics and Microsystems Research Foundation.

TEACHING: PREVIOUS

University of Texas Health Science Center at Houston

HI 4324 Nanomedicine in Health Care (Instructor: Ananth Annapragada, associate professor)
SHIS: School of Health Information Sciences; 3 credit hours
Fall 2007, Fall 2008

GSBS: Graduate School of Biomedical Sciences (joint program): visiting rotation (one quarter each)

Year	*Student*	*Degree*	*Concentration*	*Institution / program during rotation*
2006	Sandra Saldana	PhD	Biochemistry	UTHSC-H / graduate student
2006	Sung Kim	MS	Biomedical Eng	UT Austin / graduate student
2006	Cynthia Chmielewski	MS	Biomathematics	UTHSC-H / graduate student
2006	Zongxing Wang	BE	Biomedical Eng	UT Austin / graduate student
2006	Ye "Tony" Hu	MS	Biomedical Eng	UT Austin / graduate student
2007	Jorge Del Aguila	MS	Biochemistry	UTHSC-H / graduate student
2007	Jorge Maisonet-Colón		Biochemistry	UTHSC-H / graduate student

Graduate Students Supervised in Texas

Year	*Student*	*Degree & Field*		*Institution / Position*
2006–2009	Ye "Tony" Hu	BS	Biomedical Eng	UT Austin
2006–	Zongxing Wang	PhD	Biomedical Eng	UT Austin
2007–2014	Brandon Brown	PhD	Biomedical Eng	UTHSC-H/GSBS
2007–2009	Sanga Sandeep	PhD	Biomedical Eng	UT Austin
2007–2011	Ciro Chiappini	MS	Biomedical Eng	UT Austin
2007–2010	Seiyoung Lee	PhD	Biomedical Eng	UT Austin

2007–2009	Aman Mann	PhD	Biochemistry	UTHSC-H/GSBS
2008-2012	Silvia Ferrati	PhD	Biomedical Eng	UTHSC-H/GSBS
2009-	Rachel Buchanan	PhD	Biomedical Eng	UT Austin
2009-	Jean Raymond Fakhoury	PhD	Biomedical Eng	UT Austin
2009-2014	Jonathan Martinez	PhD	Biomedical Sci	UTHSC-H/GSBS
2009-2014	Srimeenakshi Srinivasan	PhD	Biomedical Sci	UTHSC-H/GSBS

International Students Supervised in Texas

Year	*Student*	*Degree*		*Last known institution/position*
2006–2007	Fabio Fais	BS	Engineering	Student/Italy
2006–2009	Alessandro Grattoni	PhD	Mechanical Eng	Assistant Member, Interim Co-Chair Department of Nanomedicine Houston Methodist Research Institute
2007–2008	Francesco Gentile	PhD	Biomedical Eng	UMG, Italy
2008–2009	Yuahua Cheng	PhD	Chemistry	Tsinghua University, China
2008–2010	Rita Bosetti	PhD	Economics	Hasselt University, Belgium
2008–2011	Novellino Tommaso	PhD	Biomedical Eng	Research Fellow Houston Methodist Research Institute
2008–2011	Nicoletta Quattrocchi	PhD	Biomedical Eng	Clinical Research Associate Mediolanum Cardio Research, Italy
2009–2010	Lara Lacerda	PhD	Biochemistry	Universidade de Lisboa, Portugal
2011-2014	Guillemo Ulises Ruiz-Esparza	PhD	Biotechnology (Nanomedicine)	Tecnologico de Monterrey (Mexico)
2012-	Joy Wolfram	PhD	Nanomedicine	National Center for Nanoscience and Technology Chinese Academy of Sciences (Beijing)
2013-	Thomas Geninatti	PhD	Biomedical Eng	College of Materials Science and Engineering Chinese Academy of Sciences (Beijing)
2013-	Laura Pandolfi	PhD	Biomedical Eng	College of Materials Science and Engineering Chinese Academy of Sciences (Beijing)

Postdoctoral Fellows in Texas

Year	*Fellow*	*Field*	*Last known institution/position*
2006-2008	Ennio Tasciotti, PhD	Biochemistry	Assistant Member, Interim Co-Chair Department of Nanomedicine Houston Methodist Research Institute
2006-2009	Rohan C. Bhavane, PhD	Chemical Engineering	Pediatric Radiology, Texas Children's Hospital
2007-2010	Rita Serda, PhD	Biochemistry	Associate Professor of Surgery Baylor College of Medicine
2007-2010	Biana Godin-Vilentchouk, PhD	Pharmacology (Pathology, toxicology, drug delivery)	Assistant Member Department of Nanomedicine Houston Methodist Research Institute

2007-2012	Daniel Fine, PhD	Electrical Engineering (Silicon fabrication)	Private Sector (USA)
2007-2012	Enrica De Rosa, PhD	Biomedical Engineering	Research Lab Manager, Nanomedicine Department, Houston Methodist Research Institute
2008-2010	Ali Bouamrani, PhD	Biochemistry (Biomarker validation, proteomics)	Department of Nanomedicine and BioMedical Engineering, University of Texas Health Science Center at Houston
2009-2010	Elvin Blanco, PhD	Biomedical Engineering (Drug delivery)	Instructor, Department of Nanomedicine, Houston Methodist Research Institute
2009-2010	Alessandro Grattoni, PhD	Biomedical Engineering	Assistant Member, Interim Co-Chair, Department of Nanomedicine, Houston Methodist Research Institute
2009-2011	Ye "Tony" Hu, PhD	Biomedical Engineering	Assistant Member, Department of Nanomedicine, Houston Methodist Research Institute
2009-2010	Shivakumar Ranganathan, PhD	Mechanical Engineering	Assistant Professor, Department of Mechanical Engineering, American University of Sharjah
2009-2012	Anne Van De Ven, PhD	Biomedical Engineering (Imaging)	Associate Research Scientist, Physics, Northeastern University
2009-2010	Arturas Ziemys, PhD	Computational Science (Molecular modeling)	Assistant Member, Department of Nanomedicine, Houston Methodist Research Institute
2009-2010	Alexandra A. Zeidan, PhD	Cancer Biology	Private Sector (Germany)
2011-	Yong Yang, PhD	Nanomedicine	Postdoctoral Fellow, Department of Nanomedicine Houston Methodist Research Institute
2011-	Fransisca Leonard, PhD	Pharmacology (Toxicology, rug delivery)	Postdoctoral Fellow, Department of Nanomedicine Houston Methodist Research Institute
2012-2013	Yeonju Lee, PhD	Biomedical Engineering	Postdoctoral Fellow, Department of Nanomedicine Houston Methodist Research Institute
2013-	Mi Yu, PhD	Biomedical Engineering	Postdoctoral Fellow, Department of Nanomedicine Houston Methodist Research Institute
2013-	Maria Scavo, PhD	Nanomedicine	Postdoctoral Fellow, Department of Nanomedicine Houston Methodist Research Institute

Other Students in Texas

Year	*Name*	*Field*	*From*
2006	Kevin Plant	Biomedical Eng	UT Austin / BS undergraduate student

2009–2010	Giacomo Ferrari	Computer science	Rice U / Volunteer undergraduate
2009	Kim Ferrari (summer)	Biology	Trinity U / Volunteer undergraduate
2009	Chiara Ferrari (summer)	Biology	Trinity U / Volunteer undergraduate
2007–2009	Michael Way (summers)	Biomarker identification/biochemistry	Deer Park / Volunteer high school student

University of California, Berkeley

New classes devised and instituted		*Other classes taught*
1991	Microstructured Materials	Crystallography and Crystal Defects
1992	Mechanics of Solids	Mechanics of Materials
1996	Biomedical Microdevices	Deformation, Fracture, and Fatigue
1997	Biomaterials	Mechanics of Structures
1998	Immunology and Engineerd Implants	

Graduate students supervised

Year	*Student*	*Degree*	*Last known position*
1992	Chung-Lian Lin	MS Civil Engineering	Private sector, (Taiwan)
1993	Ali Imam	PhD Mechanical Engineering	Lecturer, UC-Berkeley
1995	John Kisiday	MS Mechanical Engineering	Associate Professor, Department of Clinical Sciences, Colorado State University
1996	Joseph C. Nadeau	PhD Civil Engineering	Associate Professor, Duke University
1996	Amir Nashat	MS Material Science	Venture capitalist
1996,1998	Derek J. Hansford	MS Material Science	Associate Professor, Biomedical Engineering Material Sciences Engineering Ohio State University
1996,1999	Malisa Sarnitinoranont	MS Mechanical Engineering PhD Mehanical Engineering	Associate Professor, University of Florida
1996	Kevin Mon	PhD Material Science	Private sector, (USA)
1997	Ruby Chin	MS Civil Engineering	Private sector, (USA)
1998	Tejal Desai	PhD Bioengineering	Professor, Bioengineering and Therapeutic Sciences, UCSF/UC Berkeley
1998	Yuchun Wang	PhD Material Science	Private sector, (USA)
1998	Lawrence Kulinsky	PhD Material Science	Staff Scientist, UC Irvine
1998	Miqin Zhang	PhD Material Science	Professor, Department of Materials Science and Engineering University of Washington
1999	Ofer Matalon	PhD Biophysics	Intellectual property law, (USA)

Postdoctral researchers and staff scientists supervised	*Last known position*
Francis J. Rooney, PhD (Theoretical Mechanics)	Professor, Mathematics University of Wisconsin-Madison

Vladimir T. Granik, PhD (Discrete/Continuum Mechanics)	Retired
Tony Huen, PhD (Electrical Engineering)	Retired
Marianna Aita, MD (Immunology)	Oncologist, University of Udine (Italy)
Aida Kadic-Galeb, PhD (Mathematics)	Adjunct Professor, Mathematics Pasco-Hernando State College
Luca Lutterotti, PhD (Material Science)	Professor, University of Trento (Italy)
Makarand Paranjape, PhD (Electrical Engineering)	Associate Professor, Department of Physics Georgetown University
Wen-Hua Chu, PhD (Electrical Engineering)	Private sector, (USA)
Jay Tu, PhD (Electrical Engineering)	Private sector, (USA)
Nicola Marzari, PhD (Physics)	Associate Professor of Computational Materials Science, Toyota Chair of Materials Engineering MIT

Ohio State University

New classes devised and instituted		*Other classes taught*	
1999	Soft Tissue and Functional Biomaterials	2002	Introduction to Biomedical Engineering
2000	Tissue Biomechanics	2002	Medical Humanities: End of Life Module
2000	Introduction to Cardiovascular Bioengineering	2002	Medical Humanities: Bioethics Module
2001	Biomedical Nanotechnology		
2002	Introduction to Medical Technology		

Graduate Students Supervised		*Degree*	*Last known position/institution*
2001,2002	Jun Liu	MS, PhD Biomedical Engineering	Associate Professor, Department of Biomedical Engineering Ohio State Univeristy
2005	Jason Sakamoto	PhD Biomedical Engineering	Assistant Member, Interim Co-Chair, Department of Nanomedicine Houston Methodist Research Institute
2005	Piyush Sinah	PhD Electrical Engineering	Staff scientist, Intel

International Degree Supervised		*Degree*	*Last known position/institution*
2000	Nicolas Szita	PhD, ETH Zurich, Switzerland	Senior Lecturer, Dept. of Biochemical Engineering Faculty of Engineering Science University College of London
2002	Andrea Carbonaro	Dott. Ing., Polytechnic U., Turin	Private sector, (USA)
2002	Medea Nocentini	Dott. Ing., Polytechnic U., Turin	Private sector, (United Arab Emirates)
2003	Bruno Balocco	Dott. Ing., Polytechnic U., Turin	Staff Scientist, (Turin)

2004	Zhang Hongye	Nanyang Tech. U.(NTU), Singapore	Private sector, (China)

Postdoctoral researchers, visiting and staff scientists supervised	*Last known position/institution*
Robert Crane, PhD (Electrical Engineering)	Private sector, (USA)
Jennifer R. Lewis, PhD (Biophysics)	Adjunct Assistant Professor, Department of Opthalmology Ohio State University
Nicanor Moldovan, PhD (Biophysics)	Research Associate Professor, Department of Internal Medicine Division of Cardiovascular Medicine Investigator, Davis Heart and Lung Research Institute Ohio State University
Samir Khouri, MD (Cardiology)	Medidal Practice, Alexandria, Virginia (USA)
Medea Nocentini (Mechanical Engineering)	Private sector, (United Arab Emirates)
Andrea Carbonaro (Mechanical Engineering)	Private sector, (USA)
Bruno Balocco (Mechanical Engineering)	Staff Scientist, (Turin)
Michael Sprintz, MD (Anesthesiology)	Founder/Chief Medical Director, Sprintz Center for Pain and Dependency Houston,TX
Prof. Jing Fang, PhD (Mechanical Engineering)	Professor & Chair, Department of Mechaincal Engineering University of Beijing (China)
Sadhana Sharma, PhD (Biomedical Engineering)	Research Specialist, Department of Physiology and Biophysics Ohio State University
Jun Liu, PhD (Biomedical Engineering)	Associate Professor, Departments of Opthalmology and Biomedical Engineering Ohio State University
Jason Sakamoto, PhD (Biomedical Engineering)	Assistant Member, Interim Co-Chair, Department of Nanomedicine Houston Methodist Research Institute
Paolo Decuzzi, PhD (Mechanical Engineering)	Senior Member, Interim Chair Department of Translational Imaging Houston Methodist Research Institute
Jasper Nijdam, PhD (Cancer Nanotechnology)	Research Associate, Department of Physics Georgetown University
Ming-Cheng Cheng, PhD (Cancer Nanotechnology)	Associate Professor, Depts. of Electrical Engineering and Biomedical Engineering Wayne State University
Giuseppe Gentile (Mechanical Engineering)	Researcher, Università Degli Studi Magna Graecia

	UMG (Italy)
Carlo Cosentino, PhD (Electrical Engineering)	Assistant Professor, Università Degli Studi Magna Graecia UMG (Italy)
Antonella Centonze, MD (Surgery)	Medical Practice, (Italy)
Xue Wu Liu, PhD (Electrical Engineering)	Associate Member , Department of Nanomedicine Houston Methodist Research Institute

ADDENDUM: NEWS COVERAGE IN MAJOR ACADEMIC JOURNALS (2005–)

Nanotechnology takes aim at cancer. [News] *Science.* 2005 November 18. 310:1132-1134.

Jones D. Cancer nanotechnology: Small, but heading for the big time. [News and Analysis] *Nat Rev Drug Disc.* 2007 Mar;6:174-175.
doi: 10.1038/nrd2285

Evans J. Five big ideas for nanotechnology: Landing craft. ["nanoparticles are safely housed within biocompatible silicon particles"] [News] *Nat Med.* 2009 April;15(4):348.
doi: 10.1038/nm0409-348

Re: Tasciotti et al. Mesoporous silicon particles as a multistage delivery system for imaging and therapeutic applications [cover article]. *Nat Nanotechnol* 2008 Mar;3:151-157.

Evans J. Straight talk with … Mauro Ferrari. *Nat Med.* 2009 July;15(7):716-717.
PMID: 19584847. doi: 10.1038/nm0709-716

Gewin V. Big opportunities in a small world: Nanomedicine has started to gather momentum in recent years, and cutting-edge jobs abound for those with the right training. [Careers] *Nature.* 2009 July 23;460:540-541.
doi: 10.1038/nj7254-540a

Nanotechnnology. [Careers and Recruitment] *Nat Rev Drug Disc.* 2009 Nov;8:911.
doi: 10.1038/nrd3029

Kirk R. Research Highlights: NASA-based siRNA nanoparticles. *Nat Rev Clin Oncol.* 2010 July;7:357.
doi: 10.1038/nrclinonc.2010.92

Re: Tanaka et al. Sustained small interfering RNA delivery by mesoporous silicon particles. *Cancer Res.* 2010;70:3687-3696.

Kaiser J. Texas's $3 Billion Fund Lures Scientific Heavyweights. [News and Analysis] *Science.* 2011 May 27;332:1019-1020.

Dusheck J. Getting Physical: Physics, maths and evolutionary biology are among the scientific disciplines providing cancer research with fresh perspective and therapeutic approaches. [Outlook: Oncology] *Nature.* 2012 Nov 22; 491: S50–S51. doi:10.1038/491S50a.

Fischer S. Regulating Nanomedicine: New nano tools offer great promise for the future – if regulators can solve the difficulties that hold development back. *IEEE Pulse*. 2014 Mar-Apr; 5(2):21-4.
doi:10.1109/MPUL.2013.2296797.

Xu R, Zhang G, Deng X, Mai J, Segura-Ibarra V, Wu S, Shen J, Liu H, Hu Z, Chen L, Huang Y, Koay EK, Huang Y, Liu J, Ensor JE, Blanco E, Liu X, Ferrari M*, Shen H*. An injectable nanoparticle generator enhances delivery of cancer therapeutics. *Nature Biotech*. 2016 Mar 14. doi: 10.1038/nbt.3506. [e-pub ahead of print].

- Featured in: "Nano-balls filled with poison wipe out metastatic cancer in mice", Service R., Science. 2016 Mar 14. doi: 10.1126/science.aaf4189.

In other journals

Bullis K. Targeted delivery for nanoparticles: Microcontainers could improve cancer treatment by carrying nanoparticles directly to tumors. *Tech Rev* [MIT]. 2008 Apr 10. http://www.technologyreview.com/nanotech/20547/

Ferrari M. Slipping past cancer's barriers: targeted capsules can find the disease even when it hides in biological bunkers. *American Scientist.* 2013 Nov; Vol. 101: 430-433. doi: 10.1511/2013.105.430.

Winters J. Q&A: Mauro Ferrari. *Mechanical Engineering-CIME. American Society of Mechanical Engineering*. 2015 Dec; 12(137):18.