Columbia University
The Fu Foundation School of Engineering and Applied Science

TWO THOUSAND TEN

Celebrating Faculty Excellence

Acclaiming the awards, honors, and recognitions that our faculty received during the past year.
“In our classrooms and laboratories, our faculty, inspired by the scientific breakthroughs of their predecessors, provide the same inspiration for our students as we educate them to be future global engineering and applied science leaders who will address some of the most challenging world problems, providing solutions for the betterment of the human condition.”

—FENIOSKY PEÑA-MORA
Introduction

Columbia Engineering faculty are part of a long tradition of excellence that dates back to the founding of King’s College in 1754 and became more focused with the founding of the School in 1864. This year, as part of this celebration, we are recognizing the School’s endowed chairs and professors, and those donors who have made those chairs and professorships possible.

The first endowed university chair goes back to 1502, when Henry VIII’s grandmother established the Lady Margaret Professorship of Divinity. Perhaps the most famous early endowed chair is Cambridge’s Lucasian Chair of Mathematics, established in 1663 and held by Sir Isaac Newton and, most recently, by Stephen Hawking. The benefits of endowed professorships today are the same as they were in the 16th century. For our School, they have supported some of the best minds in engineering and applied science for generations, fostering our academic excellence and strengthening our place in the academic arena.

We are pleased to honor the holders of our named professorships along with the faculty whose work has been recognized by their peers during the past academic year. Please join us in congratulating these outstanding faculty members who have made our School their academic home. We celebrate them as we also recognize the successes of other faculty in past years and anticipate honoring even more faculty in the future.

Feniosky Peña-Mora
Dean and Morris A. and Alma Schapiro Professor
Named Professors

ALFRED V. AHO
Lawrence Gussman Professor of Computer Science
Computer Science

GEORGE DEODATIS
The Santiago and Robertina Calatrava Family Professor of Civil Engineering
Civil Engineering and Engineering Mechanics

DONALD GOLDFARB
Alexander and Hermine Avanessians Professor of Industrial Engineering and Operations Research
Industrial Engineering and Operations Research

TONY F. HEINZ
David M. Rickey Professor of Optical Communications
Electrical Engineering
David E. Keyes
The Fu Foundation Professor of Applied Mathematics
Applied Physics and Applied Mathematics

Jeffrey T. Koberstein
Percy K. and Vida L. W. Hudson Professor of Chemical Engineering
Chemical Engineering

Klaus S. Lackner
Maurice Ewing and J. Lamar Worzel Professor of Geophysics
Earth and Environmental Engineering

Upmanu Lall
Alan and Carol Silberstein Professor of Earth and Environmental Engineering and of Civil Engineering and Engineering Mechanics
Earth and Environmental Engineering and Civil Engineering and Engineering Mechanics
Named Professors

Kathleen McKeown
Henry and Gertrude Rothschild Professor of Computer Science
Computer Science

Van C. Mow
Stanley Dicker Professor of Biomedical Engineering
Biomedical Engineering

Gerald A. Navratil
Thomas Alva Edison Professor
Applied Physics and Applied Mathematics

Shree K. Nayar
T. C. Chang Professor of Computer Science
Computer Science
Named Professors

Richard M. Osgood Jr.
Higgins Professor of Electrical Engineering
Electrical Engineering and Applied Physics and Applied Mathematics

Feniosky Peña-Mora
Morris A. and Alma Schapiro Professor
Civil Engineering and Engineering Mechanics, Earth and Environmental Engineering, and Computer Science

Peter Schlosser
Vinton Professor of Earth and Environmental Engineering
Earth and Environmental Engineering

Henning G. Schulzrinne
Julian Clarence Levi Professor of Mathematical Methods and Computer Science
Computer Science and Electrical Engineering
Named Professors

PONISSERIL SOMASUNDARAN
LaVon Duddleson Krumb Professor of Mineral Engineering
Earth and Environmental Engineering

JOSEPH F. TRAUB
Edwin Howard Armstrong Professor of Computer Science
Computer Science

YANNIS P. TSIVIDIS
Charles Batchelor Professor of Electrical Engineering
Electrical Engineering

WEN I. WANG
Thayer Lindsley Professor
Electrical Engineering and Applied Physics
and Applied Mathematics
Named Professors

ALAN C. WEST
Samuel Ruben–Peter G. Viele Professor of Electrochemistry
Chemical Engineering

WARD WHITT
Wai T. Chang Professor of Industrial Engineering and Operations Research
Industrial Engineering and Operations Research

MIHALIS YANNAKAKIS
Percy K. and Vida L. W. Hudson Professor of Computer Science
Computer Science
Named Professors

Named Junior Professorship

AH-HYUNG (ALISSA) PARK
Lenfest Junior Professor in Applied Climate Science
Earth and Environmental Engineering

Term Junior Professorship

PIERRE GENTINE
The Ju Tang Chu and Wu Ping Chu Foundation Assistant Professor
Applied Physics and Applied Mathematics
Faculty Early Career Development Awards (CAREER)

ELIZABETH M. C. HILLMAN
Assistant Professor, Biomedical Engineering

NSF Faculty Early Career Development Award (CAREER)
to support her research to develop methods for *in-vivo* interventional microscopy

HUIMING YIN
Assistant Professor, Civil Engineering and Engineering Mechanics

NSF Faculty Early Career Development Award (CAREER)
to support his research to develop a hybrid photovoltaic and thermoelectric solar roofing panel
Career Development Awards

LUCA CARLONI
Associate Professor, Computer Science

Office of Naval Research 2010 Young Investigator Award
in recognition of his work in developing methods for design and
programming of multi-core architecture platforms for embedded
computing systems

XI CHEN
Associate Professor, Earth and Environmental Engineering

Outstanding Overseas Young Investigator Award, National
Natural Science Foundation of China
for young scholars of Chinese origin working abroad

Chang Jiang Chair Scholar Award, Ministry of Education
of China
for academic achievements of scholars below the age of 45, irrespective
of the nationality

Innovation Award

SAMUEL K. SIA
Assistant Professor, Biomedical Engineering

2010 Top Young Innovator Under 35
honored by MIT’s Technology Review as part of TR35, a list of technologists
and scientists under the age of 35 whose work the editors believe is
changing the world
Recognition/Achievement Awards

ALLEN H. BOOZER

Professor, Applied Physics and Applied Mathematics

Alfvén Prize from European Physical Society
for outstanding work in the formulation of criteria allowing stellarators to improve fast particle and neoclassical confinement

MARCO J. CASTALDI

Associate Professor, Earth and Environmental Engineering

Los Padres Foundation Appreciation Award
for serving as a mentor and role model

Honorary Professorship at Chongqing University of Science and Technology, China

KARTIK CHANDRAN

Assistant Professor, Earth and Environmental Engineering

Paul Busch Award from the Water Environment Research Foundation
for research on water and wastewater treatment

RAMA CONT

Associate Professor, Industrial Engineering and Operations Research

The Louis Bachelier Prize (Grand Prix Louis Bachelier de l’Académie des Sciences), French Academy of Sciences
for major contributions to research on mathematical modeling in finance, computational finance, and quantitative modeling of financial risks
Kathleen McKeown
Henry and Gertrude Rothschild Professor of Computer Science
Anita Borg Woman of Vision Award
for her seminal contributions to the natural language processing area

Van C. Mow
Stanley Dicker Professor of Biomedical Engineering
Einstein Professorship at the Suzhou Institute of Biomedical Engineering and Technology (SIBET), Chinese Academy of Sciences (CAS)
awarded to distinguished international scientists actively working at the frontiers of science and technology

Ponisseril Somasundaran
LaVon Duddleson Krumb Professor of Mineral Engineering
Padma Shri Award
granted by the Government of India in recognition of his contributions in science and engineering
Recognition/Achievement Awards

JOHN TAYLOR
Assistant Professor, Civil Engineering and Engineering Mechanics

THOMAS FITCH ROWLAND RESEARCH PRIZE OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS
for significant research contributions to construction engineering and management

GORDANA VUNJAK-NOVAKOVIC
Professor, Biomedical Engineering

CLEMSON AWARD OF THE SOCIETY OF BIOMATERIALS
for significant contributions to the literature on the science or technology of biomaterials
Election to Professional Societies

**Gerard H. A. Ateshian**

*Professor, Mechanical Engineering and of Biomedical Engineering*

*Fellow, Biomedical Engineering Society*
elected a Fellow in recognition for his outstanding contributions and achievements in biomedical engineering

**Steven M. Bellovin**

*Professor, Computer Science*

*Member, Computer Science and Telecommunications Board*
selected in recognition of his nearly 30 years’ work on networks and security, and service on numerous National Academies studies

**Kartik Chandran**

*Assistant Professor, Earth and Environmental Engineering*

*Member, Water Environment Federation Board of Trustees*
WEF is the leading association representing water quality professionals around the world.

**Tony F. Heinz**

*David M. Rickey Professor of Optical Communications, Electrical Engineering*

*Vice President of the Optical Society of America (OSA)*
As vice president, he will automatically become president-elect in 2011 and the Society’s president in 2012.
Election to Professional Societies

Clark T. Hung

Professor, Biomedical Engineering

Fellow, American Society of Mechanical Engineers
elected a Fellow in the premier organization for promoting the art, science, and practice of mechanical and multidisciplinary engineering and allied sciences

Christopher R. Jacobs

Associate Professor, Biomedical Engineering

Secretary/Treasurer, Society for Physical Regulation in Medicine and Biology
elected an officer in this international society that explores physical forces that influence the biological functions of cells, tissues, and organisms

Angelos Keromytis

Associate Professor, Computer Science

Senior Member, Institute of Electrical and Electronics Engineers (IEEE)
elected to highest level of membership in the leading professional association for the advancement of technology, for significant performance in professional practice

Senior Member of the Association for Computing Machinery
selected for demonstrated excellence in the computing field
Election to Professional Societies

PONISSERIL SOMASUNDARAN
Lavon Duddleson Krumb Professor of Mineral Engineering, Earth and Environmental Engineering
Fellow, American Institute of Chemical Engineers (AIChE) inducted as a Fellow of the premier professional chemical engineering group for extraordinary accomplishments in the field
Balkan Academy of Sciences elected a Foreign Member

JOSEPH F. TRAUB
Edwin Howard Armstrong Professor of Computer Science
Member, Division Committee on Engineering and Physical Sciences (DEPSCOM), The National Academies appointed to the national committee that provides advice and strategic insights to the major military services, the intelligence community, and the Department of Homeland Security

MICHAEL I. WEINSTEIN
Professor, Applied Physics and Applied Mathematics
Fellow, Society for Industrial and Applied Mathematics (SIAM) named a Fellow for his contributions to the analysis and applications of nonlinear waves
Notable Professional Recognitions

EITAN GRIINSPUN
Associate Professor, Computer Science

Sloan Research Fellowship
for his research computing the movements of materials in the everyday world

IOANNIS KIMISSIS
Assistant Professor, Electrical Engineering

IBM Faculty Award
a competitive worldwide program intended to foster collaboration between researchers at leading universities worldwide and those in IBM

SAMUEL K. SIA
Assistant Professor, Biomedical Engineering

selected to co-organize the National Academy of Engineering Indo-American Frontiers of Engineering

YANNIS P. TSIVIDIS
Charles Batchelor Professor of Electrical Engineering

Education Award from the Circuits and Systems Society of the Institute of Electrical and Electronics Engineers (IEEE)
for extensive contributions to the teaching of electronic circuits and systems using motivational learning
José Blanchet
Assistant Professor, Industrial Engineering and Operations Research

Best Publication Award at the Institute for Operations Research and Management Systems (INFORMS) conference for a series of papers on sampling and simulation algorithms

Steven K. Feiner
Professor, Computer Science

Best Paper Award, International Symposium on Mixed and Augmented Reality (ISMAR), of the Institute of Electrical and Electronics Engineers (IEEE) for “Evaluating the Benefits of Augmented Reality for Task Localization in Maintenance of an Armored Personnel Carrier Turret”

Salvatore J. Stolfo
Professor, Computer Science

for paper, “A Data Mining Framework for Building Intrusion Detection Models,” designated as one of the “Most Influential Oakland Papers” in the last 30 years of the prestigious IEEE Security and Privacy conference

John E. Taylor
Assistant Professor, Civil Engineering and Engineering Mechanics

Best Paper Award, Specialty Conference on Global Governance in Project Organizations (LEAD 2009) for “Cultural Boundary Spanning in Global Project Networks”
Van C. Mow

*Stanley Dicker Professor of Biomedical Engineering*

invited lecturer at the first combined Symposium of the National Academy of Engineering (NAE) and the Institute of Medicine, speaking on the use of advanced engineering models to describe the diminishing load-carrying capacities of articular cartilage in osteoarthritic joints

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Shree K. Nayar

*T. C. Chang Professor of Computer Science*

recipient of the Carnegie Mellon University Alumni Association’s Alumni Achievement Award for his work in computer vision and graphics
“Columbia University’s Fu Foundation School of Engineering and Applied Science seeks to educate socially responsible global engineering and applied science leaders whose work results in the betterment of the human condition, locally, nationally, and globally.”

—MISSION STATEMENT