Innovative Researchers, Devoted Educators

Academic Appointments

2009–2012
Innovative Researchers, Devoted Educators

The Faculty of Applied Science & Engineering at the University of Toronto is a centre of immense inspiration, remarkable innovation and endless possibilities. And since 2009, we have welcomed 25 professors who will take us even further.

Our new professors are creating solutions to better the world—from addressing human health to developing sustainable technologies. They are also outstanding teachers, dedicated to educating our highly motivated students.

As the premier engineering institution in Canada and one of the best in the world, we have earned a reputation for excellence. That reputation has enhanced our ability to recruit top academics and students from around the globe.

In this brochure, we highlight 12 of the 25 new faculty members at the edge of what can be. To learn more about U of T Engineering and all our new faculty members, see them speak at: uoft.me/AcademicAppointments
New Faculty Members

2009–2010

Timothy Chan, Assistant Professor (MIE)
Birsen Donmez, Assistant Professor (MIE)
Khandker Habib, Assistant Professor (CivE)
Ashish Khisti, Assistant Professor (ECE)

2010–2011

Ya-Huei (Cathy) Chin, Assistant Professor (ChemE)
John Harrison, Professor, W. M. Keck Chair of Engineering Rock Mechanics (CivE)
Oh-Sung Kwon, Assistant Professor (CivE)
Oya Mercan, Assistant Professor (CivE)
Prasanth Nair, Associate Professor, Canada Research Chair in Computational Modeling and Design Optimization under Uncertainty (UTIAS)
Karl Peterson, Assistant Professor (CivE)
Arun Ramchandran, Assistant Professor (ChemE)
Kenneth Tallman, Lecturer, Engineering Communication Program

2011–2012

Kamran Behdinan, Professor, NSERC/U of T Design Chair in Multidisciplinary Design and Innovation (MIE)
Vaughn Betz, Associate Professor, NSERC/Altera Industrial Research Chair in Programmable Silicon (ECE)
Kamran Esmaeili, Assistant Professor (CivE)
Rodrigo Fernandez-Gonzalez, Assistant Professor (IBBME)
Penney Gilbert, Assistant Professor (IBBME)
Ben Hatton, Assistant Professor (MSE)
Partha (Sam) Sampath, NSERC/P&WC Industrial Research Chair in Aviation Gas Turbine Combustion/Emissions Research and Design System Optimization (UTIAS)
Luca Scardovi, Assistant Professor (ECE)
Chandra Veer Singh, Assistant Professor (MSE)
David Sinton, Associate Professor (MIE)
Adam Steinberg, Assistant Professor (UTIAS)
Piero Triverio, Assistant Professor (ECE)
Paul Yoo, Assistant Professor (IBBME, ECE)
Driven

Assistant Professor Birsen Donmez
Mechanical & Industrial Engineering

Birsen Donmez is passionate about designing in-vehicle systems that enhance driver performance, behaviour, productivity and satisfaction. And, she is building statistical models to identify the factors that increase the risk of crashes.

BASc, Boğaziçi University, 2001; MS, University of Iowa, 2004; MS, University of Iowa, 2007 (Statistics); PhD, University of Iowa, 2007

Making it Micro

Associate Professor Vaughn Betz
Electrical & Computer Engineering

Vaughn Betz is the NSERC/Altera Industrial Research Chair in Programmable Silicon. His research interests are in VLSI (computer chip) architecture and Computer-Aided Design (CAD) tools. Prior to joining U of T Engineering, he spent two years at a start-up company, creating CAD tools for Field-Programmable Gate Array (FPGA) chips, and then 11 years at Altera Corporation, developing both FPGA chips and CAD tools.

BASc, University of Manitoba, 1991; MASc, University of Illinois at Urbana-Champaign, 1993; PhD, University of Toronto, 1998
Driven Assistant Professor Birsen Donmez
Mechanical & Industrial Engineering

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Rock Star Professor John Harrison
Civil Engineering

John Harrison is the W. M. Keck Chair of Engineering Rock Mechanics and the Associate Director of the Faculty’s Lassonde Mineral Engineering Program. His main research interests are in the engineering behaviour of fractured rock masses. He is a UK Chartered Civil Engineer, and in addition to his academic career, he has spent nearly a decade in the civil engineering industry.

BSc (Eng), Imperial College, 1979; MSc, Imperial College, 1985; PhD, University of London, 1993

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Fluid Thinking Associate Professor David Sinton
Mechanical & Industrial Engineering

Focusing in the area of sustainable energy, David Sinton’s research involves the study and application of small-scale fluid mechanics for use in energy systems and analyses. Before joining U of T Engineering, he was an Associate Professor and Canada Research Chair at the University of Victoria from 2003 to 2011.

BASc, University of Toronto, 1998; MEng, McGill University, 2000; PhD, University of Toronto, 2003

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Catalyst for Change Assistant Professor Ya-Huei (Cathy) Chin
Chemical Engineering & Applied Chemistry

Cathy Chin’s research, focusing on advances in catalytic technology, touches on the environment, health, medicine and energy. That diversity requires a deep understanding of its engineering, right down to the molecular level. Prior to joining U of T, she was a researcher at the Pacific Northwest National Laboratory (PNNL).

BASc, University of Oklahoma, 1998; MASc, University of Oklahoma, 2000; PhD, University of California, Berkeley, 2010

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Associate Professor Prasanth Nair
University of Toronto Institute for Aerospace Studies

Prasanth Nair is the Canada Research Chair in Computational Modelling and Design Optimization under Uncertainty. His research interests lie in computational modelling of deterministic and stochastic systems governed by partial differential equations, optimization algorithms for design, control and parameter estimation. He is also interested in greedy algorithms and Bayesian methods for function approximation.

BTech, Indian Institute of Technology, Bombay 1995; MTech, Indian Institute of Technology, Bombay 1997; PhD, University of Southampton, 2000

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BASc, University of Oklahoma, 1998; MASc, University of Oklahoma, 2000; PhD, University of California, Berkeley, 2010
Assistant Professor **Timothy Chan**  
Mechanical & Industrial Engineering

Timothy Chan’s primary research interests are in optimization under uncertainty and the application of optimization methods to radiation therapy, healthcare operations and policy. Before joining U of T Engineering, he was an Associate in the Chicago office of McKinsey & Company.

BSc, University of British Columbia, 2005;  
PhD, Massachusetts Institute of Technology, 2007

Assistant Professor **Rodrigo Fernandez-Gonzalez**  
Institute for Biomaterials & Biomedical Engineering

Rodrigo Fernandez-Gonzalez is researching developmental biology. His laboratory at U of T uses a combination of bioengineering, molecular and cell biological tools in Drosophila to heal wounds.

BSc, Universidad Autónoma de Madrid, 2000;  
PhD, University of California, Berkeley and San Francisco, 2006
Assistant Professor **Chandra Veer Singh**  
Materials Science & Engineering

Chandra Veer Singh’s expertise is in the area of computational materials science. Using computer simulation, his lab employs atomistic modelling techniques to develop a deeper understanding of deformation and failure mechanisms in a variety of engineering materials.

BASc, Dayalbagh Educational Institute, 2001; MTech, Indian Institute of Science, 2003; PhD, Texas A&M University, 2008

Assistant Professor **Oya Mercan**  
Civil Engineering

Working in the field of structural engineering, Oya Mercan’s primary research areas are in dynamic behaviour of complex structures, vibration mitigation and structural control. Before joining U of T Engineering, she was an Assistant Professor at the University of Alberta.

BSc, Boğaziçi University, 2001; MASc, Lehigh University, 2003; PhD, Lehigh University, 2007
Assistant Professor Arun Ramchandran  
Chemical Engineering & Applied Chemistry

Arun Ramchandran is researching suspensions — the mixture of particles in fluids — with applications in petroleum, food, detergent, wastewater and biomedical engineering. He is a member of The Society of Rheology, the American Institute of Chemical Engineers and the Biophysical Society.

BChemEng, University Institute of Chemical Technology, 2001;  
PhD, University of Notre Dame, 2007

Assistant Professor Paul Yoo  
Institute for Biomaterials & Biomedical Engineering, Electrical & Computer Engineering

Paul Yoo's research employs engineering techniques to understand and control neural function. He develops technology that uses electrical activation of the nervous system to restore function to individuals with chronic neurophysiological disorders.

BASc, University of Toronto, 1995; MSc, University of Southern California, 1998;  
PhD, Case Western Reserve University, 2004
University of Toronto Engineering

More about U of T Engineering’s new academic appointments at:

uoft.me/AcademicAppointments