

ONTARIO PROFESSIONAL ENGINEERS AWARDS

EXCELLENCE

2013 OPEA recipients embody the varied qualities



Stavros A. Argyropoulos
Ph.D., P.Eng., FCAE
Professor Emeritus, Department of
Materials Science and
Engineering, University of Toronto

**ENGINEERING MEDAL –
RESEARCH AND DEVELOPMENT**

For over 27 years at the University of Toronto, Dr. Argyropoulos has focused his research on many aspects of the kinetics and recovery of assimilation of additions in liquid metals, including steel, high carbon iron, nickel, zinc, aluminum and magnesium.

Dr. Argyropoulos has made substantial and sustained contributions to the engineering profession through his groundbreaking research accomplishments, including pioneering the development of innovative sensors to measure the magnitude and direction of velocities in high-temperature liquid metals. He has also contributed to the profession through his mentoring of young engineers, more than 130 publications, productive interactions with industry and his broad range of activities within technical societies.

His work has been recognized nationally and internationally. Some of his awards include the President's Gold Medal from the Canadian Institute of Mining and Metallurgy and the Charles W. Briggs award from the Iron and Steel Society, U.S. in 1984 and again in 1985 – the first time in the history of this award that the same individual received it for two consecutive years. More recently, he received the Canadian Metal Chemistry Award in 2009, and in 2010 he was inducted as a Fellow of the Canadian Academy of Engineering.



Michael Branch
B.A.Sc., P.Eng.
President and CEO, Inovex Inc.

**ENGINEERING MEDAL –
YOUNG ENGINEER AWARD**

Michael Branch is president and CEO of Inovex, a company he founded in 2003, the year he graduated from the University of Toronto with a B.A.Sc. in computer engineering. Inovex develops web and mobile software applications, with a focus on the health care, energy and environmental sectors. This past year, Inovex launched its first software as a service product, Maps BI, which provides visual insight into an organization's geospatial data. Maps BI won two Silver Stevie® Awards for Best New Software Product and Best Software Design at the 2013 International Business Awards.

Mr. Branch also gives back to his alma mater and his community. As an undergraduate at the U of T, he was Vice President of the Engineering Society. In 2007, he joined the Engineering Alumni Association, where he currently serves as president. Mr. Branch is an active member of Streetwise Actors, an organization that allows young people to participate in creative drama and showcase their talents by performing in retirement homes and long-term care facilities. He has also served as a mentor at DREAM – Futures Without Borders, creating and leading workshops for at-risk high school students to help them plan their career paths.



J. Carlos de Oliveira
M.A.Sc., P.Eng.
President and CEO, Cast Connex
Corporation

**ENGINEERING MEDAL –
ENTREPRENEURSHIP**

In early 2007, Carlos de Oliveira won the Heffernan/Co-Steel Innovation Fellowship, awarded by the Faculty of Applied Science and Engineering of the University of Toronto. This was the stimulus that Mr. de Oliveira needed to create his own business, Cast Connex Corporation (CCX). He transformed his graduate thesis into a product that is now used in construction projects throughout North America and is ultimately benefiting society by making buildings safer, easier to construct and more aesthetically pleasing. CCX's products are implemented in the design and construction of countless institutional and commercial construction projects, and the company is also involved in a number of high-profile projects including the new World Trade Center development in New York and the Transbay Transit Center in San Francisco.

In less than six years, Mr. de Oliveira has grown CCX into an industry-leading building products company that has been described as one of the most innovative in the steel construction industry. Mr. de Oliveira is also giving back, with his company's recent donation of products to help rebuild a trade school in Haiti that was levelled during the 2010 earthquake.



Charles Richard Donnelly
M.A.Sc., P.Eng.
Global Director, Water Power,
Hatch Ltd.

**ENGINEERING MEDAL –
ENGINEERING EXCELLENCE**

In 1978, Rick Donnelly was completing his M.A.Sc. in geotechnical engineering when he was recruited by Acres International (now Hatch Ltd.). Today, Mr. Donnelly is a globally recognized leader in dam safety, independent engineer's assessments, geotechnical assessments and project/construction management for water power facilities, dams and underground structures. Mr. Donnelly has worked around the world developing expertise in hydroelectric feasibility studies and fast-track project management. His specialties include designing and constructing concrete and embankment dams, tunnels and underground structures.

In 1997, Mr. Donnelly won an Award of Excellence from Canadian Consulting Engineers for the design and fast-track construction of the Kénogami Dam in Quebec, where he developed the world's first application of a central cement-bentonite core for an embankment dam. In 2007, he won another Award of Excellence from Canadian Consulting Engineers for the fast-track design and construction of Brookfield Power's Shikwanikwa replacement dam. Other awards include Ontario's highest consulting engineering award for Canada's first dam decommissioning and several awards for dam safety in Canada and internationally. Mr. Donnelly is also the author of nearly 100 technical papers.



Mark F. Green
Ph.D., P.Eng.
Professor, Civil Engineering, Queen's
University

**ENGINEERING MEDAL –
RESEARCH AND DEVELOPMENT**

Dr. Mark Green is known for his extensive studies on the dynamics of bridge-vehicle interaction and as a leader in applications of fibre-reinforced polymer (FRP) materials to concrete structures and fire engineering. Through his research, Dr. Green developed and validated a new algorithm for predicting the dynamic response of highway bridges to heavy vehicle loads. His technical paper on bridge-vehicle dynamics has received more than 80 citations and is the third-most-cited paper in the field. Dr. Green's study of strengthening concrete beams and slabs with pre-stressed carbon fibre-reinforced polymer has resulted in an innovative and practical system for rehabilitating these structures. Additionally, his research on fire resistance is widely identified as satisfying one of the most pressing research needs in applications of FRPs in civil engineering.

Dr. Green is chair of the Canadian Society for Civil Engineering's Technical Committee on Advanced Composite Materials and an active board member of the Canada Network Association on Intelligent Sensing for Innovative Structures. In addition to his research and teaching, he is a dedicated advocate of improving access to education for Aboriginal students in Canada. Dr. Green has also recently initiated a major national training program, Sustainable Engineering in Remote Areas, to prepare engineers to work in remote or Aboriginal communities by teaching them about First Nation approaches to engineering and sustainability.

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CELEBRATING GLOBAL ENGINEERING LEADERS

For 140 years, the Faculty of Applied Science & Engineering at the University of Toronto has fostered engineering global leaders, entrepreneurs and agents of change. This year, we celebrate and congratulate five of our finest who are recipients of the prestigious Ontario Professional Engineers Awards:

Professor and Alumnus **Michael V. Sefton**, P.Eng.
Gold Medal

Alumnus **Charles Richard Donnelly**, P.Eng.
Global Director, Water Power, Hatch Ltd.
Engineering Medal, Engineering Excellence

Professor Emeritus **Stavros A. Argyropoulos**, P.Eng.
Engineering Medal, Research and Development

Alumnus **J. Carlos de Oliveira**, P.Eng.
President and CEO, Cast Connex Corporation
Engineering Medal, Entrepreneurship

Alumnus **Michael Branch**, P.Eng.
President and CEO, Inovex Inc.
Engineering Medal, Young Engineer Award

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BOUNDLESS EXCELLENCE



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