

## 2011 IEEE Canada A.G.L. McNaughton Gold Medal

For outstanding contributions to the development of design methods for communication protocols and services



**Gregor v. Bochmann (FIEEE)** is professor at the School of Information Technology and Engineering at the University of Ottawa since 1998, after 25 years at the University of Montreal. He is a Fellow of IEEE, ACM and the Royal Society of Canada. After initial research work on programming languages and compiler design, he started work on communication protocols around 1974 and developed the field of "protocol engineering," applying software engineering principles to communication protocols.

In the early eighties, he participated in standardization committees of ISO and ITU and took a leading role in the standardization of Formal Description Techniques for communication protocols and services at the Canadian and international levels. He is internationally well recognized for his innovative work on modeling the behavior of distributed systems by extended finite state machines, and on their verification and testing. He has had many research collaborations with industry and, from 1989 to 1997, held the Hewlett-Packard - NSERC - CITI Industrial Research Chair on communication protocols at the University of Montreal.

Dr. Bochmann has received many prizes for his work, including the Thomas W. Eadie Medal of the Royal Society, the Award for Excellence in Research of the University of Ottawa, and in 2005 was recognized as a "Pioneer of Computing in Canada" at the CASCON conference organized by IBM and NRC. His recent work has been in the areas of software engineering for distributed applications, peer-to-peer systems, quality of service and security management for Web applications, and control procedures for optical networks.

### Médaille d'or A.G.L. McNaughton de l'IEEE Canada 2011

Pour contributions exceptionnelles à l'élaboration des méthodes de conception des protocoles et services de communication

## 2011 IEEE Canada R.A. Fessenden Medal

For pioneering contributions in electronics and optoelectronics for communications



**M. Jamal Deen (FIEEE)** is the Canada Research Chair in Information Technology and Professor, at McMaster University. Earning his BSc from the University of Guyana, his achievements won him the Chancellor's Medal and the Dr. Adler's Prize. At Case Western Reserve University (MS and PhD), he was a Fulbright-LASPAU Scholar and an American Vacuum Society Scholar for his graduate work. His doctoral work there on designing and modeling of a new Raman spectrometer for dynamic temperature measurements and combustion optimization in rocket and jet engines, was sponsored and used by NASA, Cleveland, USA. His research record includes approximately 430 peer-reviewed articles, seven best-paper awards and six patents that were used in industry.

Dr. Deen is regarded as the world's foremost authority in modeling and noise of electronic and optoelectronic devices for communication systems. He has successfully transferred powerful engineering and circuit models for designing communication circuits to numerous companies. His practical models for high-performance optical detectors and experimental innovations for reliability prediction have contributed to the design and manufacture of reliable photodetectors for fiber optic communications.

Dr. Deen's peers have elected him to Fellow status in eight national academies and professional organizations, including Fellow of The Royal Society of Canada (RSC), The American Physical Society and The Electrochemical Society. His other awards include the 2002 Callinan Award and the 2011 Electronics and Photonics Division Award from the Electrochemical Society; a Humboldt Research Award from the Humboldt Foundation, Germany, in 2006; and the 2008 Eadie Medal from the RSC.

### Médaille R.A. Fessenden de l'IEEE Canada 2011

Pour contributions de pointe en électronique et optoélectronique pour les communications

Dr. Bochmann a participé à la standardisation des systèmes gérés par des machines à états finis étendus, et sur leur vérification et tests. Il a mené plusieurs collaboration de recherches avec l'industrie et, de 1989 à 1997, a dirigé la chaire de recherche industrielle Hewlett-Packard - CRSNG - CITI sur les protocoles de communication à l'Université de Montréal.

Dr. Bochmann a reçu plusieurs prix pour son travail, y compris la médaille Thomas W. Eadie de la Société royale du Canada, le prix d'excellence en recherche de l'Université d'Ottawa, et en 2005 a été reconnu en tant que « Pionnier de l'informatique au Canada » à la conférence CASCON organisée par IBM et le CNRC. Ses travaux récents ont porté sur les secteurs du génie logiciel pour applications réparties, les systèmes poste à poste, la qualité de service et la gestion de la sécurité pour applications Web, et les procédures de contrôle des réseaux optiques.

Dr. Deen est considéré comme l'autorité mondiale sur la modélisation et le bruit dans les dispositifs électroniques et optoélectroniques pour les systèmes de communication. Il a transféré avec succès vers de nombreuses compagnies des maquettes de circuits et modèles technologiques puissants pour la conception de circuits de communication. Ses modèles pratiques pour les détecteurs optiques à haute performance et ses innovations expérimentales pour la prévision de la fiabilité ont contribué à la conception et à la fabrication de détecteurs photoélectriques fiables pour les communications à fibre optique.

Les pairs de Dr. Deen l'ont nommé Fellow dans huit académies nationales et organismes professionnels incluant la Société royale du Canada, l'American Physical Society et l'Electrochemical Society. Ses autres récompenses incluent le Prix Callinan 2002 et le Prix 2011 de la division photonique et électronique de l'Electrochemical Society; un Prix de recherches Humboldt de la Fondation du même nom en Allemagne en 2006, et la médaille Eadie 2008 de la Société royale du Canada.



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