

## 2009 Class of Newly Elevated Fellows

Prof. Yuri I. Abramovich  
Defence Science Technology Organisation  
Edinburgh, SA, 5111, Australia

for contributions to adaptive signal processing for detection and estimation in radar arrays

Tülay Adalı  
University of Maryland  
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for contributions to nonlinear and complex-valued statistical signal processing

Kazimierz Adamiak  
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London, ON, N6A 5B9, Canada

for contributions to the numerical analysis of applied electrostatic and electrohydrodynamic processes

Metin Akay  
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Tempe, AZ, 85287, U.S.A.

for contributions to biomedical signal modeling and processing

Bashir Mohammad Al-Hashimi  
University of Southampton  
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for contributions to low power integrated circuits and systems

Mohamed-Slim Alouini  
Texas A&M University at Qatar  
Doha, 23874, Qatar

for contributions to design and performance analysis of wireless communication systems

Nirwan Ansari  
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for contributions to broadband networks and communications

Alexander P. Apostolov  
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Los Angeles, CA, 90064, U.S.A.

for contributions to use of digital computers for power system protection, communication, and operation

Francisco Jose Ares-Pena  
Universidad de Santiago de Compostela  
Santiago de Compostela, A Coruna, 15782, Spain

for contributions to antenna array pattern synthesis

Anish K. Arora  
Ohio State University  
Columbus, OH, 43210, U.S.A.

for contributions to scalability and stabilization of networks of sensors and computers

Alessandro Astolfi  
Imperial College London  
London, SW7 2AZ, UK

for contributions to nonlinear control theory and its applications to mechanical, electromechanical and power systems

Yves Baeyens  
Bell Laboratories, Alcatel-Lucent  
Murray Hill, NJ, 07974, U.S.A.

for contributions to the broadband and millimeter-wave circuits for optical and wireless communications

Thomas L. Baldwin  
Florida State University  
Tallahassee, FL, 32310, U.S.A.

for contributions to grounding and protection in industrial power distribution systems

Utpal Banerjee  
Intel Corporation  
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for contributions to the mathematical theory of optimizing parallelizing compilers

Rashid Bashir  
University of Illinois at Urbana-Champaign  
Champaign, IL, 61801, U.S.A.

for contributions to development of micro-systems and nanotechnology for medical applications

Roberto Battiti  
University of Trento, Italy  
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for contributions to machine learning techniques for intelligent optimization and neural networks

Les Baxter  
Baxter Enterprises  
Little Silver, NJ, 07739, U.S.A.

for contributions to high-speed digital communication networks

Ilan Ben-Zvi  
Brookhaven National Laboratory  
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for leadership in superconducting accelerators, high brightness electron sources and free electron lasers

Jean-Pierre Gabriel Berenger  
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for contributions to perfectly matched layer absorbing boundary condition in computational solutions of Maxwell's equations in open regions

Keren Bergman  
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for contributions to development of optical interconnection and transport networks

Claude Berrou  
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for invention of turbo codes, generalization of the turbo principle in receivers, and influence in standardization

Glen John Bertini  
Novinium, Inc.  
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for applications to the dielectric performance of underground electrical power cable

John W. Betz  
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for contributions to signal design and radio frequency compatibility of global positioning and navigation satellite systems

Dr. Navin Bhatt  
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for contributions to technologies and standards for power system performance

Ronald DeShawn Blanton  
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for contributions to testing of microelectromechanical systems and integrated circuits

Gerald V. Blessing  
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for contributions to ultrasonic techniques in materials evaluation and sensor systems

Georg Böck  
Berlin University of Technology  
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for contributions to radio frequency and microwave integrated circuits and systems

Helmut Bölcskei  
ETH Zurich  
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for contributions to multiple input/multiple output wireless communication and filter bank theory

Shekhar Yeshwant Borkar  
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for contributions to low power digital circuits in deep submicron technology

David Jones Brady  
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for contributions to computational optical imaging and spectroscopy

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for leadership in research and development in magnetics and applied superconductivity

Michael S. Brandstein  
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for contributions to microphone array signal processing for speech and multimedia applications

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for contributions to radiation effects in semiconductor devices for space microelectronics

Nicholas E. Buris  
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for contributions to electromagnetic design automation and multidisciplinary optimization of complex wireless communications problems

Kenneth M. Butler  
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for contributions to testing of digital integrated circuits

Gary Milton Carter  
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for contributions to understanding nonlinear and polarization effects in optical fiber communications systems

John C. Cartledge  
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for contributions to modulation dynamics of optical devices

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for contributions to design and noise control for power and signal distribution in digital systems

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for contributions to intelligent learning systems and adaptive signal processing for communications

Gagan L. Choudhury  
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for contributions to design and analysis of telecommunication networks and routing protocols

Weng W. Chow  
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for contributions to semiconductor-laser theory

Andrew R. Chraplyvy  
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for contributions to high-capacity optical communications systems, dispersion management and non-zero dispersion fiber

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for contributions to the simulation and design of communication systems

Panagiotis D. Christofides  
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for contributions to analysis and control of nonlinear and distributed parameter processes

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for leadership in the broadband wireless communications industry

Prof. Cor Claeys  
IMEC  
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for contributions to semiconductor device physics, defect engineering, and low frequency noise characterization

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for contributions to computer science education

Prof. Rodney Coates  
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for contributions to underwater acoustics education

Gerald Cooperstein  
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for contributions to pulsed power and intense electron and ion beam technologies and development of x-ray sources for pulsed radiography

Prof. Ian Cumming  
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for achievements in synthetic aperture radar signal processing

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for contributions to high-speed frequency synthesis and radio frequency integrated circuits

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for contributions to thin-film photovoltaic energy conversion materials and devices

Dragan Damjanovic  
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for contributions to piezoelectric ceramics and single crystals

Pasquale Daponte  
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for contributions to the metrology and standardization of analog to digital and digital to analog converters

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for contributions to the modeling of electrostatic processes in the recycling and mineral processing industries

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for contributions to control techniques in cancer genomics

Fred Daum  
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for the integration of modern mathematical signal processing and tracking techniques to practical radar implementation

Francis P. Dawson  
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for contributions to modeling of excitation and detection of electrical arcs

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for contributions to compound semiconductor optoelectronics

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for contributions to the design of communication networks

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for contributions to optical communication networks and technologies

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for contributions to the theory of electrical power under nonsinusoidal conditions and to direct methods for control of motor drives

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for contributions to instrumentation and methods for assessing cardiovascular and respiratory diseases

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for contributions to data visualization and its applications

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for leadership in developing and commercializing focused ion beam systems,

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for contributions to nonlinear discrete-time circuits and systems

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for contributions to theory and application of fuzzy systems and control

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for contributions to signal processing algorithms and chip implementation architectures for communications

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for contributions to mobile robot navigation in dynamic environments

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for contributions to electronic packaging research and education

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for development of software verification and validation and system safety standards

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for development of multichip module and high density substrate technologies

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for contributions to deep submicron metal oxide semiconductor transistor development for microprocessors

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for application of supercomputers in the automotive industry

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for contributions to wavelet theory and development of electromagnetic sensors and data analysis methods

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for application development in local area network technologies

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for contributions to fast methods and algorithms for computational electromagnetics

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for contributions to robust, nonlinear and hybrid control systems

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for leadership in neural network education, research and applications

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for contributions to the dynamic performance and control of power systems with dispersed energy resources

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for contributions to active and passive signal source location technologies

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for development of spectroscopic and functional magnetic resonance imaging methodologies

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for contributions to kinetic modeling and biological quantification in positron emission tomography

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for contributions to wireless security

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for contributions to modeling, analysis and control of switched reluctance machines

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for contributions to System-in-a-Package technologies

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for contributions to robust control and dynamical systems analysis

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for contributions to resource management and mobility in wireless networks

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for contributions to the characterization and application of composite materials

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for contributions to dependability and security of network systems

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for contributions to multi-agent systems

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for contributions to high-speed analog-digital converter and high-speed digital integrated circuit design

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for leadership in development of cost-effective telecommunications in remote areas

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for contributions to bio-electrics and simulation of cellular responses to pulsed power excitation

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for contributions to circuit breaker technology

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for contributions to lead-free solders in microelectronics

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for contributions to high speed and high performance communication links

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for contributions to sensor interfacing, sensor signal processing and multiple-level signaling

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for contributions to multimedia computing and database systems

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for contributions to image processing and non-rigid shape analysis

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for contributions to spherical-multipole analysis of electromagnetic fields

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for contributions to multi-hop wireless networks

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for contributions to complementary metal-oxide semiconductor analog circuits and data converters

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for contributions to parallel and distributed systems and wireless networks

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for contributions to the design and evaluation of real-time systems

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for contributions to power modeling and performance evaluation of microprocessors

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for contributions to system on chip processors

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for contributions to distributed intelligent systems and architectures

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for contributions to the application of signal processing and communications theory

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for leadership in computer modeling of optical communication systems

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for contributions to theory and practice of iterative coding

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for development of antennas for space exploration

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for contributions to the mathematical modeling of robotic grasping

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for contributions to device physics, nanostructures and heterostructure devices

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