

## RAS Fellow listing

### 2023

- Aaron M Dollar – For contributions to dexterous grasping and manipulation
- Dario Floreano – For contributions to bio-inspired drone development and evolutionary robotics
- Antonio Franchi – For contributions to modelling, design, and control for aerial and distributed robotic systems
- Kensuke Harada – For contributions to whole-body manipulation for biped humanoid robots
- Alois C Knoll – For contributions to Human-Robot Interaction and Neurorobotics
- Jana Kosecka – For contributions to robust embodied vision systems and semantic modeling in robotics
- Torsten Kroeger – For contributions to real-time motion planning
- Cecilia Laschi - For contributions to soft robotics
- Karon Maclean – For contributions to the design of haptic communication
- Arianna Menciassi – For contributions to the development of robots for minimally invasive surgery
- Kazuhiro Nakadai – For contributions to robot audition and computational auditory scene analysis
- Christian Ott – For contributions to torque-control theory using passive joint elasticity and the whole-body control of humanoids
- Jose A Santos-Victor – For contributions to biologically inspired cognitive vision and humanoid robotic systems
- Birgit Vogel-Heuser – For contributions to evolvable, adaptable field-level automation architectures for manufacturing systems and logistics
- YuMing Zhang – For contributions to robotized welding manufacturing through machine-vision-based intelligence
- Li Zhang – For contributions to micro-/nanorobot swarms and platforms for translational biomedicine

### 2022

- Harry Asada – For the design, modeling, and control of direct drive robotic arms
- Stephan Biller – For leadership in the applications of Internet of Things and Artificial Intelligence in manufacturing industry
- Darwin Caldwell – For contributions to Actuator Technology, Legged Systems and Soft Human Friendly Robotic
- Abderrahmane Kheddar – For contributions to robotic haptics and humanoids
- Katherine Kuchenbecker – For contributions to interactive haptic systems and robotic touch perception
- Youfu Li – For contributions to active visual sensing using structured light pattern projection
- Juan Tardos – For contributions to simultaneous localization and mapping with visual sensors
- Pietro Valdastri – For contributions to medical capsule robots
- Richard Voyles – For leadership in the implementation of programs that foster robotics research and the robotics community
- Peter Wurman – For contributions to computational auction, multiagent systems and robotics

### 2021

- Gianluca Antonelli - For contributions to modeling and control of underwater robots
- Timothy Barfoot - For contributions to mobile robot navigation
- Shuxiang Guo - For contributions to medical robots for minimally invasive surgery and biomimetic underwater robots
- Ayanna Howard - For contributions to human-robot interaction systems

- Hadas Kress-gazit - For contributions to automated control synthesis and formal methods for robotics
- Jose Neira - For contributions to simultaneous localization and mapping (SLAM) for robot navigation
- Claude Samson - For contributions to mobile and underactuated mechanical systems control
- Jacquélien Scherpen - For contributions to nonlinear model reduction and passivity-based control
- Danwei Wang - For contributions to modelling, analysis, and control for constrained robots
- Yingxu Wang - For contributions to real-time autonomous systems
- Dana Yoerger - For development of autonomous underwater vehicles for deep ocean exploration and

science

- Junzhi Yu - For contributions to bio-inspired swimming robots

## 2020

- Hussein Abbass - For contributions to evolutionary learning and optimization
- Aude Billard - For contributions to robot task learning and programming by human demonstration
- Ravinder Dahiya - For contributions to tactile sensing
- Andrea Garulli - For contributions to set membership identification and robust analysis of uncertain systems
- Satyandra Gupta - For contributions to the development of decision making tools for manufacturing automation
- Christoforos Hadjicostis - For contributions to distributed and discrete event systems
- Tarek Hamel - For contributions to the field of aerial robotics
- Sandra Hirche - For contributions to human-machine interaction and networked control
- Auke Ijspeert - For contributions to biorobotics for locomotion
- F Karray - For contributions to intelligent systems
- Sven Koenig - For contributions to search algorithms and multi-agent
- Claudio Melchiorri - For design and control of robot hands and telemanipulation systems
- Yasamin Mostofi - For contributions to control and communications co-optimization in mobile sensor networks
- Marcia O'Malley - For contributions to rehabilitation robotics and haptic systems
- Saeid Nahavandi - For contributions to haptically-enabled robotic systems
- Nabil Simaan - For contributions to dexterous continuum robotics for surgery
- Yong Song - For contributions to neural adaptive and fault-tolerant control techniques
- Atsuo Takanishi - For contribution to the development of humanoid robots
- Dongbin Zhao - For contributions to adaptive dynamic programming and reinforcement learning

## 2019

- Hyouk Ryeol Choi - For contributions to robotic interactive sensing
- Jose Luis Contreras – For contributions to brain-machine interfaces and wearable exoskeletons
- Kerstin Dautenhahn - For contributions to social robotics and human-robot interaction
- Santosh Devasia - For contributions to feedforward control of nonminimum-phase systems
- Robert Fish – For application of visual communications and networking
- Emilio Frazzoli - For contributions to motion planning and control of autonomous vehicles
- Keum-Shik Hong - For contributions to adaptive estimation and brain-computer interface techniques
- Zeng-Guang Hou - For contributions to neural network optimization and control for rehabilitation
- Xiaoping Liu - For contributions to system identification and networked teleoperation
- Anibal Ollero Baturone - For contributions to the development and deployment of aerial robots
- Evangelos Papadopoulos - For contributions to space and field robotics
- Jan Peters - For contributions to robot learning of dexterous motor skills
- Hong Qiao - For contributions to robotic manipulation and biologically inspired robotic cognition

- Fuchun Sun - For contributions to neural network control of nonlinear systems with applications to robotic manipulators
- Carme Torras - For contributions to learning algorithms for robot perception, planning and manipulation
- Robert Wood - For contributions to small-scale and soft robotics
- Min Wu - For contribution to control and automation for complex systems
- Naiqi Wu - For contributions to discrete-event production systems
- Eiichi Yoshida - For leadership in the development of modular reconfigurable robotic systems

## 2018

- Pieter Abbeel - For contributions to apprenticeship and reinforcement learning for robotics and autonomous systems
- Hajime Asama - For contributions to distributed autonomous robotic systems
- Erik Blasch - For leadership in aerospace information fusion systems
- Oliver Brock - For contributions to mobile manipulation and grasping
- Mark Campbell - For contributions to control and estimation theory for autonomous systems
- Wen-Hua Chen - For contributions to the applications of nonlinear disturbance observer based control
- Jian Dai - For contributions to reconfigurable and metamorphic mechanisms
- Jaydev Desai - For contributions to medical and swarm robotics
- Maria Gini - For contributions to multi-agent programming in robotics
- Haibo He - For contributions to adaptive learning
- Jonathan How - For contributions to guidance and control of air and space vehicles
- David Hsu - For contributions to robot motion planning
- Lynette Jones - For contributions to tactile and thermal displays
- Shugen Ma - For contributions to the design and control of environment-adaptive robots
- Sonia Martinez - For contributions to the geometric mechanics and control
- Silviu-Iulian Niculescu - For research on the effects of delays in system dynamics
- Kazuhiro Saitou - For contributions in computational assembly and disassembly design of mechanical products
- Siddhartha Srinivasa - For contributions to robotic manipulation and human-robot interaction
- Peter Stone - For contributions to reinforcement learning, multiagent systems, and robotics
- Shuji Tanaka - For contributions to micro-electromechanical systems for acoustic wave devices, physical sensors, and power generation
- Jocelyne Troccaz - For contributions to robotics and imaging for medical applications

## 2017

- Calin Belta - For contributions to automated control synthesis and robot motion planning and control
- Zi-xing Cai - For contributions to evolutionary optimization and intelligent robotics
- Andrea Caiti - For contributions to geo-acoustic inversion and autonomous underwater vehicles
- Jose Carmena - For contributions to the neural basis of motor skill learning and neuroprosthetic systems
- Gordon Cheng - For contributions in humanoid robotic systems and neurorobotics
- Pablo Estevez - For contributions to feature selection and visualization of large data sets
- Mariapia Fanti - For contributions to modeling and control of discrete event systems

- Michael Gard - For contributions to instrumentation-and-measurement technology for petroleum exploration, computed tomography, and underground construction
- Alessandro Giua - For contributions to discrete event and hybrid systems
- Uwe Hanebeck - For contributions to nonlinear estimation and control
- K Kyriakopoulos - For contributions to robot motion planning and control of multirobot systems
- Bengt Lennartson - For contributions to hybrid and discrete event systems for automation and sustainable production
- Jingshan Li - For contributions to manufacturing system automation
- Li Li - For contributions to intelligent transportation systems and vehicles
- Robert Mahony - For contributions to control aspects of aerial robotics
- Jose Del R Millan - For contributions to brain-controlled robots
- Eduardo Nebot - For contributions to robotics and applications in vehicle navigation and mining
- Giuseppe Oriolo - For contributions to motion planning and control methods in complex robotic systems
- Kristin Pettersen - For contributions to control of marine vessels and snake robots
- Ram Duvvuru Sriram - For leadership in developing computational tools for healthcare enterprises
- Hong Tan - For contributions to wearable haptics
- Xiaobo Tan - For contributions to modeling and control of smart materials and underwater robots
- Ching-chih Tsai - For contributions in intelligent adaptive learning control for industrial systems and machinery
- Frank Van Der Stappen - For contributions to the algorithmic foundations of robotics and automation

## 2016

- Alin Albu-Schaeffer - For contributions to compliant and lightweight robots
- Tatsuo Arai - For contributions to micro manipulators and sensors, and applications to cellular biology
- Michael Branicky - For contributions to switched and hybrid control systems
- Chun-Hung Chen - For contributions to simulation-based optimization of automation systems
- Wan Kyun Chung - For developments in robust control theory for mechanical systems
- Armando Colombo - For contributions to industrial cyber-physical systems
- Warren Dixon - For contributions to adaptive control of uncertain nonlinear systems
- Gabor Fichtinger - For contributions to medical robotics and computer-assisted intervention
- Dinei Florencio - For contributions to statistical and signal processing approaches to adversarial and security problems
- Qiang Huang - For contributions to the design and control of biped robots
- Danica Kragic - For contributions to vision-based systems and robotic object manipulation
- Zhiwu Li - For contributions to Petri nets and their applications to automated manufacturing systems
- Domenico Prattichizzo - For contributions to haptics and multi-fingered robotic hands
- Wei Ren - For contributions to distributed coordination and control of multi-agent systems
- Stergios Roumeliotis - For contributions to visual-inertial navigation and cooperative localization
- Il-Hong Suh - For contributions to the design and control of redundant and multiple-arm robot systems

## 2015

- Randal Beard - For contributions to the theory and practice of guidance, control, and team coordination of unmanned aerial vehicles

- Wolfram Burgard - For contributions to mobile robot navigation and simultaneous localization and mapping
- Howie Choset - For contributions to the design, control and planning of highly-articulated robots
- Henrik Christensen - For contributions to estimation methods for robot localization and mapping
- Weileun Fang - For contributions to measurement methods and process technologies for micro-electro-mechanical systems
- Dieter Fox - For contributions to Bayesian state estimation and robotic perception
- Dan Halperin - For contributions to robust geometric algorithms for robotics and automation
- Sylvain Martel - For contributions to medical micro- and nano-robotics
- Jean-Pierre Merlet - For contributions to parallel robots
- Paul Newman - For contributions to robot navigation
- Kiyoshi Ohishi - For contributions to development of fast and robust motion control systems
- Spiridon Reveliotis - For contributions to discrete event systems for resource allocation
- Robert Sfrank - For contributions to perceptual image and video compression and quality
- Moshe Shoham - For contributions to robot manipulators and miniature medical robots
- Stefano Stramigioli - For contributions to modeling, control and realization of complex robotics systems
- Yu Sun - For contributions to automated manipulation of biological cells
- Dong Sun - For contributions to robot-aided manipulation of biological cells
- Xiaolan Xie - For contributions to systems engineering for healthcare and manufacturing

## 2014

- Martin Buss - For contributions to haptic telepresence systems and autonomous robots
- James Colgate - For contributions to the field of haptics
- Liyi Dai - For leadership and contributions to discrete event systems and singular systems
- Ali Jadbabaie - For contributions to the theory of multi-agent coordination and control
- Robert Kozma - For contributions to pattern-based computation based on large-scale networks and random graphs
- Hermano Krebs - For contributions to rehabilitation robotics and the understanding of neuro-rehabilitation
- Daniel Lee - For contributions to machine learning algorithms for perception and motor control
- John Leonard - For contributions to navigation and mapping for mobile robots and autonomous underwater vehicles
- Stefan Schaal - For contributions to robot learning and modular motion planning
- Metin Sitti - For contributions to micro and nano-scale robotic systems
- Kazuo Tanaka - For contributions to fuzzy control system design and analysis
- Rene Vidal - For contributions to subspace clustering and motion segmentation in computer vision
- Hong Zhang - For contributions to collective robotics and intelligent sensing in oil and mining

## 2013

- Rodney Brooks - For contributions to theory and practice of behavioral robotics and artificial intelligence
- Martin Buehler - For contributions to design and control of legged robots
- Raja Chatila - For contributions to robot navigation and cognitive robotics
- François Chaumette - For contributions to vision-based robot control
- Jonathan Connell - For contributions to security and privacy in biometrics

- Clément Gosselin - For contributions to parallel robotic mechanisms and to underactuated robotic hands
- Karl Johansson - For contributions to the applications of hybrid and networked systems
- Rolf Johansson - For contributions to system identification and adaptive control
- Yoram Koren - For contributions to flexible automation and manufacturing systems
- Kenneth Kreutz-Delgado - For contributions to sparse signal recovery algorithms and dictionary learning
- Yi Ma - For contributions to computer vision and pattern recognition
- Frank Park - For contributions to geometric methods in robot mechanics
- Weiming Shen - For contributions to agent-based collaboration technologies and applications
- Jing Xiao - For contributions to robot compliant motion and haptic interaction

## 2012

- I-Ming Chen - for contributions to reconfigurable robotic systems and actuators
- Mark Cutkosky - for contributions to bio-inspired robotics, dexterous manipulation and haptics
- K Daniilidis - for contributions to visual motion analysis, omni-directional vision, and three-dimensional robot vision
- Ruediger Dillmann - for contributions to robot programming and human-centered technologies
- Masakatsu Fujie - for contributions to medical robotics
- Robert Howe - for contributions to haptic interfaces and robotic manipulation
- Lydia Kavraki - for contributions to robot-motion planning and computational biology
- Tomas Lozano-Perez - for contributions to robot motion planning
- Dinesh Manocha - for contributions to robot motion planning, rapid prototyping, and virtual environments
- Hiroshi Okuno - for contributions to robot audition technology
- Irfan Essa - for contributions to computer vision and graphics
- Ming Lin - for contributions to real-time physics-based interaction and simulation for virtual environments, robotics and haptics
- Harpreet Sawhney - for contributions to video algorithms
- Gerard Dreyfus - for contributions to machine learning and its applications
- Magnus Bertil Egerstedt - for contributions to hybrid and networked control, with applications in robotics
- Lucy Pao - for contributions to feedforward and feedback control systems
- Edward Tunstel - for contributions to space robotic system applications on planetary missions

## 2011

- Allison Okamura - for contributions to the design and control of haptic systems and medical robotics
- Gaurav Sukhatme - for contributions to multi-robot systems
- Masaru Uchiyama - for contributions to design, modeling, and control of robotic structures
- Manuela Veloso - for contributions to the development of cognition, perception, and action in autonomous robot teams
- Louis Whitcomb - for contributions to the theory and application of robotics for intervention in extreme environments
- L Simar - for leadership in digital signal processor architecture development
- Subhas Mukhopadhyay - for development of low-cost smart sensors and sensing systems
- Wen Li - for contributions in low-power integrated nanotube sensors and devices
- Karl Bohringer - for contributions to microelectromechanical systems, parallel and distributed robotic manipulation, and self-assembly
- Bruce Donald - for contributions in robotics, microelectromechanical systems, and computational molecular biology
- Pierre Dupont - for contributions to modeling and control of frictional contact in robotics
- Maja Mataric - for contributions to robot coordination and learning in human-robot systems

- Yoshihiko Nakamura - for contributions to robotics
- Brad Nelson - for contributions to nano- and micro-scale robots and systems
- Leyuan Shi - for contributions to nested partitions optimization methodology

## 2010

- Nancy Amato - For contributions to the algorithmic foundations of motion planning in robotics and computational biology.
- Stefano Chiaverini - For contributions to kinematics and control of robot manipulators and autonomous vehicles.
- Gregory Chirikjian - For contributions to hyper-redundant manipulators.
- Kevin Lynch - For contributions to robotic manipulation, motion planning, and control of mechanical systems.
- Larry Matthies - For contributions to perception systems for autonomous navigation of unmanned vehicles.
- Robin Murphy - For contributions to rescue robotics and insertion of robots into major disasters.
- Lynne Parker - For contributions to distributed and heterogeneous multi-robot systems.
- Daniela Rus - For contributions to distributed and modular robotics.
- Jeffrey Trinkle - For contributions to analysis of robotic grasping and dexterous manipulation.
- Charles Wampler - For developments in robotics for the automotive industry and for contributions in robot kinematics.
- Francesco Bullo - For contributions to geometric and cooperative control with applications to mechanical and robotic systems.
- Raffaello DAndrea - For contributions to control of multi-vehicle autonomous systems
- Rodolphe Sepulchre - For contributions to energy efficient Adjustable Speed Drive Systems.
- Roger Lawrence - For contributions to energy efficient Adjustable Speed Drive Systems.

## 2009

- Paolo Fiorini - for contributions to mobile robot navigation in dynamic environments.
- Yun-Hui Liu - for contributions to robotic multi-fingered grasping and adaptive visual servo systems.
- Wesley Snyder - for contributions to education in robotics and computer vision.
- Satoshi Tadokoro - for leadership in the development and deployment of rescue robotics.
- Jong-Hwan Kim - for contributions to evolutionary algorithms.
- George Pappas - for contributions to design and analysis of hybrid control systems.
- Dawn Tilbury - for leadership in networked and logic control systems.
- Zheng Zhang - for contributions to the design of advanced variable speed drive systems for appliances.
- Bud Mishra - for contributions to the mathematical modeling of robotic grasping.

## 2008

- Max Qing Hu Meng - For contributions to medical robotics
- Zexiang Li - For contributions to robotic manipulation, nonholonomic motion planning and workpiece utilization
- Tian Chai - For contributions to adapt intelligent decoupling control, and integrated automation of complex industrial processes
- Fan-Tien Cheng - For contributions to semiconductor manufacturing automation and force optimization in multiple-chain robotic mechanisms
- Yadati Narahari - For contributions to the design of manufacturing systems, supply chain networks, and electronic markets
- Alex Zelinsky - For contributions to vision-based robotics
- Peter Corke - For contributions to visual-based robot control and its applications to field robotics
- Roy Featherstone - For contributions to multibody dynamics
- Steve Holland - For leadership in the industrial application of robotic technology
- Vincent Hayward - For contributions to robot manipulator programming and the development of haptics interface technology
- Roland Siegwart - For contributions to mobile, networked, and micro-scale robots
- Dragan Nesic - For contributions to the analysis and control of networked nonlinear sampled-data systems

- Karen Panetta - For leadership in engineering education and curriculum development to attract, retain, and advance women in engineering
- Jujang Lee - For contributions to intelligent robust control and robotics

## 2007

- Mengchu Zhou - For contributions to Petri nets and their applications
- Franz Leberl - For contributions to the development of radargrammetry and the demonstration of the usefulness of aircraft and satellite radar imagery in mapping tropical; land, sea-ice, and planetary surfaces
- Nikos Papanikolopoulos - For contributions to distributed robotics and the creation of the miniature scout robot
- Alessandro De Luca - For contributions to modeling and control of robotic systems
- Seth Hutchinson - For contributions to visual servo control and robot motion planning
- Michael Y Wang - for leadership in research and development of vision-based autonomous outdoor vehicles
- Jean-Paul Laumond - For contributions to robot motion planning and control
- Charles Thorpe - for leadership in research and development of vision-based autonomous outdoor vehicles
- Shigeki Sugano - for contributions to design, control and system integration of human symbiotic robots
- Zeungnam Bien - For contributions to development of assistive robots and human-robot interaction systems
- Mo-Yuen Chow - For contributions to diagnostics and control in mechatronics
- Xiaohong Guan - For contributions to optimization of hydrothermal generation scheduling
- Mu-Der Jeng - For applications of Petri nets to semiconductor manufacturing automation
- Brian Sadler - For contributions to signal processing and sensor networks
- Toshiharu Sugie - For contributions to tracking control and its application to mechanical systems
- Jun Wang - For contributions to recurrent neural networks for optimization and engineering applications
- Ning Xi - For contributions to nano-robotic manipulation and assembly

## 2006

- Guenther Schmidt - For contributions to theory and practice of sensor-guided locomotion in biped and mobile robotics.
- Antonio Bicchi - For contributions to automatic control of mechanisms and robots.
- Hugh Durrant-Whyte - For contributions with application to decentralized data fusion algorithms with application to simultaneous localization and navigation
- Michael Erdmann - For contributions to robotic manipulation and perception of shape
- Gregory Hager - For contributions to vision-based robotics
- Blake Hannaford - For contributions to haptic interfaces and telerobotic systems
- Makoto Kaneko - For contributions to design, sensing, and manipulation schemes for robotic hands
- Kazuhiro Kosuge - For contributions to multiple robots coordination and human-robot interface
- Vijay Kumar - For contributions to the development of robotics and automation
- Marco Dorigo - For contributions to ant colony optimization and swarm intelligence
- Shuzhi Ge - For contributions to theory and analysis of stable adaptive neural networks for intelligent control systems
- F Groen - For contributions to sensor data processing and shared dynamic world modeling for autonomous real-world multi-agents systems
- Hideki Hashimoto - For contributions to mechatronics systems
- W. Dayawansa - For contributions to analysis and applications of nonlinear control systems. to...
- Jorge Angeles - For contributions to the kinematics, dynamics and design of robotic mechanical systems
- S Pookaiyaudom - For contributions to circuits and systems and engineering education
- Ian Walker - For contributions to under-constrained robot manipulator systems
- Nan-Ning Zheng - For contributions to information processing

## 2005

- Anthony Maciejewski - For contributions to the design and control of kinematically redundant robots.
- Xiaoping Yun - For contributions to robotic control and human body motion tracking systems



- Tim Salcudean - For contributions to haptic interfaces, teleoperation systems and applications.
- Ronald Lumia - For leadership in the development of open architecture control systems for applications in robotics
- Dr. Junku Yuh - For contributions to autonomous underwater robots
- Beom Lee - For contributions to the design and analysis of multiple robot systems
- Kok-Meng Lee - For contributions to actuator and vision-based sensor design for manufacturing automation
- Minoru Asada - For contributions to robot learning and applications
- Ken Goldberg - For contributions to networked telerobotics and geometric algorithms for automation.
- Yoichi Hori - For contributions to advanced motion control
- Mohamed Kamel - For contributions to pattern recognition and intelligent systems
- Deirdre Meldrum - For contributions to genome automation

## 2004

- Mel Siegel - For contributions to the field of sensors, measurement and robotics
- Tieniu Tan - For contributions to pattern recognition research and applications
- Yilin Zhao - For contributions to location and navigation technologies and systems
- Li-Chen Fu - For contributions to robotic control and computer-integrated manufacturing
- Ralph Hollis - For contributions to multi-degree-of-freedom robotic devices
- Dan Koditschek - For contributions to the theory and practice of robotics and intelligent systems
- Friedri Pfeiffer - For contributions to for contributions to multibody dynamics and control with application to complex mechanical systems
- Toshi Takamori - For contributions to robotic and mechatronic systems
- Kazuo Tanie - For contributions to humanoid and human friendly robotics
- Richard Murray - For contributions to the theory of nonlinear control and its applications to robotics, flight control, and fluid systems

## 2003

- Ronald Arkin - For contributions to behavior-based robotic control, multi-robot systems, and hybrid deliberative/reactive software architectures
- Paolo Dario - For contributions to development of biomedical robotics
- Thomas Henderson - For contributions to sensor systems, discrete relaxation algorithms, and CAD-based computer vision
- Shigeo Hirose - For contributions to the design and control of mobile robots
- Dong-Seok Hyun - For contributions to the design, analysis, and implementation of high performance power conversion systems and for leadership in power electronics education
- Oussama Khatib - For contributions to planning and control of complex robotic systems
- Andreas Varga - For contributions to the development of numerical methods for computer aided analysis and design of control systems
- Daniel Whitney - For contributions to robot control, robot assembly, and fundamentals of mechanical assembly
- Yangsheng Xu - For contributions to the design and control of space robot and dynamically stabilized systems
- Jean Ponce - For contributions to geometric shape representation in computer vision

## 2002

- Atsuo Kawamura - For contributions to real-time digital feedback control of PWM inverters and its application to UPS
- Kazuhiko Kawamura - For contributions to the understanding, the modeling, and the realization of human-robot symbiotic systems
- Imre Rudas - For contributions to the theory and applications of computational intelligence for the control of electro-mechanical and robotic systems
- Hisato Kobayashi - for contributions to the research field of human-robot interactive communication
- Georges Giral - For research in robot autonomy and intelligence

## 2001

- Steven Dubowsky - For contributions to the dynamics and control of flexible and rigid manipulators and robotic vehicles
- Moshe Kam - For contributions to the theory of decision fusion and distributed detection
- Kouhei Ohnishi - For contributions to the development of disturbance observer and its applications to motion control
- Emil Petriu - For contributions to the development of pseudorandom encoding techniques for absolute position measurement
- Bertram Shi - For contributions to the analysis, implementation and applications of cellular neural networks
- John Wen - For contributions to the control of nonlinear electro-magnetic systems and robotic manipulation
- Anders Rantzer - For contributions to the theory and computational analysis of uncertain and nonlinear systems

## 2000

- Matthew Mason - For contributions to robotics manipulation and graduate education in robotics
- Hendrik Nijmeijer - For contributions to the theory and application of nonlinear control system design
- Soo-Chang Pei - For contributions to the development of digital eigenfilter design, color image coding and signal compression, and to electrical engineering education in Taiwan
- Rejean Plamondon - For contributions to signature verification, hand writing recognition, assisted learning and biosignal analysis
- Bruno Siciliano - For contributions to dynamic modeling and control of robotic systems and for leadership in robotics education
- Tsuneo Yoshikawa - For contributions to the analysis and control of robotic mechanisms
- Shinichi Yuta - For contributions to navigation, programming, and architectures of sensor-based mobile robots

## 1999

- Yilong Chen - For contributions to integrated robotics and CAD systems with application to the automotive industry
- Howard Chizeck - For contributions to the use of control system theory in biomedical engineering
- Gerard Gaynor - For contributions to engineering and technology management
- William Hamel - For leadership in the developments and utilization of robotics and remote technologies in nuclear, space, and military applications
- Benjamin Kuipers - For contributions to qualitative reasoning and representation
- Adel Razek - for contributions to 3D electromagnetic field modeling and coupled phenomena analysis in electromagnetic systems
- Janos Bito - For leadership in the application of robotics and automation technology

## 1998

- Yasuo Matsuyama - For contributions to learning algorithms with competition
- Jeffrey Lang - For contributions to the design, analysis, estimation, and control of electromechanical energy conversion and motion control systems, including novel micro-electromechanical systems
- Homayoun Seraji - For contributions to the control of robotic systems for space applications
- Sukhan Lee - For contributions to human machine systems and intelligent robots through development of teleoperator control systems and neural networks
- Howard Moraff - For technical leadership in fostering basic research in robotics and computer vision
- Hooshang Hemami - For contributions to the dynamics, control and computer modeling of robotic and human bipedal locomotion systems
- Katsushi Ikeuchi - For contributions to advancement of robot vision technology

## 1997

- C L Philip Chen - For contributions to intelligent manufacturing systems design and integration

- Jessy Grizzle - For contributions to the theory and practice of nonlinear control systems design
- Masayoshi Tomizuka - For contributions to the analysis and design of mechanical control systems and for leadership in control education
- Tsutomu Ohmae - For contributions to microprocessor controlled motor drives and their industrial applications
- W Trybula - For contributions in developing and advancing electronics manufacturing technology
- Stanley Gershwin - For leadership in the development and implementation of systems and control approaches to manufacturing
- Gerhard Hirzinger - For contributions in robot mechatronics, telerobotics, man-machine interface research and pioneering of space robotics
- Tsu-Tian Lee - For contributions to the analysis and control of walking robots and leadership in robotics engineering education
- Richard Volz - For contributions in robot and manufacturing software, model driven manufacturing systems and tele-autonomous systems

## 1996

- Bir Bhanu - For contributions to sensor-based navigation, automatic object recognition and closed-loop adaptive techniques for developing robust algorithms
- Nikolaos Bourbakis - For contributions to digital image scanning algorithms
- Katsuhisa Furuta - For contributions to digital control theory and its applications to robotics and industrial processes
- Andrew Goldenberg - For contributions to the theory of robot control and development of advanced flexible automation systems for industrial applications
- Bill Gruver - For leadership of major systems engineering programs in robotics and manufacturing automation
- Enrique Ruspini - For contributions to the understanding of fuzzy logic concepts and their application to pattern recognition and numerical classification
- Linda Shapiro - For contributions to the theory of relational matching and its application to model-based computer vision
- Mark Spong - For contributions to the control of robot systems using nonlinear control techniques
- Wayne Book - For seminal contributions to the modeling analysis and control of robotic arms and other flexible multibody systems and the leadership in the development of a multidisciplinary c
- John Hollerbach - For contributions to autonomous robot calibration, novel robot systems and human motor control
- Richard Kjafer - For contributions to robotics education and graduate training in electrical and computer engineering
- Yuan-Fang Zheng - For contributions to the development of mechanisms for coordination of multiple robots and manipulators

## 1995

- Sotirios Sastry - For contributions to the theory of nonlinear circuits, nonlinear control systems, and robotics
- Toshio Fukuda - For the development of distributed intelligent robotics and system control with neuron-fuzzy-genetic-algorithms based computational intelligence.
- Hendrik Van Brussel - For contributions to research and teaching in robotics, mechatronics and flexible automation
- Alan Desrochers - For contributions to modeling, synthesis, and performance analysis of discrete event dynamic systems and for contributions to manufacturing systems engineering education
- Peter Luh - For contributions to the development of near-optimal and efficient manufacturing scheduling methodologies
- Pradeep Khosla - For contributions to reconfigurable manipulators and reconfigurable software for sensor-based control, and for leadership in curriculum development

## 1994

- Ahmed ElSerafi - For contributions to the understanding of the cross-magnetizing effect in synchronous machines
- Norman Caplan - For leadership in engineering research in robotics
- Vladimir Lumelsky - For contributions to the field of robotics and automation, particularly for developing the theory of sensor-based motion planning in an uncertain environment
- Russell Taylor - For contributions and leadership in the theory and implementation of programmable sensor-based robot systems and in their application to surgery and manufacturing

### 1993

- Irving Engelson - For management leadership of IEEE technical activities worldwide
- J. T. Cain - For leadership and contributions to computer science and engineering education.
- C.S. George Lee - For contributions to computational algorithms and architectures in robot kinematics and dynamics and for leadership in robotics education
- N Viswanadham - For contributions to the modeling and performance of analysis of flexible manufacturing systems.
- Robert Stengel - For contributions to the analysis and design of aerospace control systems
- John Baillieul - For contributions to nonlinear control theory, robotics, and control of complex mechanical systems
- David Orin - For contributions to the computation of robot kinematics and dynamics
- David Grossman - For contributions to Robotics and Automation

### 1992

- Warren Grobman - For contributions to electron-beam and X-ray microlithography and their practical applications
- Takamasa Hori - For contributions to the development of speed control systems for industrial alternating current motors
- Raymond Jarvis - For leadership in and contributions to the fields of computer vision and intelligent robotics
- Ren-Chyuan Luo - For contributions to intelligent sensors and robotics
- Rajnikant Patel - For contributions to the numerical analysis and design of control systems
- H Rauch - For pioneering contributions to and leadership in the field of optimal estimation and control
- A Koivo - For contributions to the modeling and adaptive control of robotic manipulator systems with sensory feedback
- Takeo Kanade - For contributions to vision, manipulators, autonomous mobile robots, and sensors
- Aristides Requicha - For contributions to the theory and practice of three dimensional geometric modeling, and to its applications in programmable automation.

### 1991

- Tien Hsia - For research contributions to control and robotics, and for leadership in applied control and robotics education
- Charles Robinson - For leadership in the field of rehabilitation engineering research and development
- James Tien - For contributions to systems engineering as applied to public systems
- Arthur Sanderson - for contributions to the theory of sensor-based robotic systems and its application to flexible manufacturing automation

### 1990

- Madan Gupta - For contributions to the theory of fuzzy sets and adaptive control systems and to the advancement of the diagnosis of cardiovascular disease
- P Krishnaprasad - For contributions to geometric and nonlinear control and to engineering education

### 1989

- Masakazu Ejiri - For contributions to the development and application of robotics and machine vision technology

## 1988

- George Cook - For contributions to industrial automation and electric arc welding
- Fumio Harashima - For contributions to motion control systems and industrial electronics
- Spyridon Tzafestas - For contributions to distributed parameter multivariable, and multidimensional systems theory

## 1987

- Antal Bejczy - For contributions to the advancement of the theory and application of robots

## 1985

- Tzyh-Jong Tarn - For contributions to system theory and applications which have substantially advanced the field, especially in nonlinear and quantum mechanical systems

## 1984

- A Morse - For contributions to the theory of multivariable control systems

## 1983

- Suguru Arimoto - For contributions to information theory and linear systems theory
- R Bernstein - For contributions to digital image processing techniques of earth observation sensor data and applications to operational systems
- George Lendaris - For conceiving, developing and implementing the use of sampled optical diffraction patterns for image analysis
- Thomas Sheridan - For contributions to engineering education and man-machine systems

## 1982

- A Haddad - For contributions to stochastic systems analysis and electrical engineering education
- James Palmer - For contributions to applying systems engineering and systems sciences techniques to the study of large-scale socio-economic systems

## 1979

- K Narendra - For contributions to stability theory and its application to adaptive control systems
- Elmer Gilbert - For contributions to multivariable and optimal control systems

## 1978

- Ching C Li - For contributions to biocybernetics
- K Smith - For contributions to digital circuit design

## 1977

- M Bachynski - For contributions to the fields of electromagnetic waves and plasmas

## 1976

- J Aggarwal - For contributions to time delay systems and digital filters
- F Kohli - for leadership, planning, control technology, and management of efficient and reliable power systems
- Bernard Widrow - For contributions to adaptive antenna systems and to the theory of quantization error

## 1975

- John Tegopoulos - For contributions to electric machine design and in the investigation of eddy currents in conducting media

## 1973

- Yu-Chi Ho - For contributions to control theory and differential games

## **1972**

- George Bekey - For contributions in the areas of hybrid computation, man-machine systems, and biomedical engineering
- Robert Newcomb - For contributions to network synthesis, time-varying systems, and engineering education

## **1969**

- C.T. Leondes - For contributions to the theory and application of computer and control systems technology, and to the advancement of education in the field

## **1967**

- Herbert Freeman - For contributions to the theory of multivariable discrete-time systems and digital computer graphics
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## **1961**

- Gustave Shapiro - for contributions to the development of electronic miniaturization techniques and components