

News from the International Federation of Robotics for Robotica

UNITED KINGDOM

29th ISR and Automation and Robotics '98

By IFR Vice Chairman and President of the B.R.A., Mike Wilson

During the week of the 27th April 1988, many of the leading figures in the world's robotics industry gathered in Birmingham. The occasion was the 29th International Symposium on Robotics being hosted by the B.R.A. on behalf of the International Federation of Robotics. The event comprised a four-day symposium, specialist one-day sessions, the Gala dinner and specific Federation meetings. Over 250 delegates, from 32 countries, attended the event, which was held at the Metropole Hotel on the NEC Site. The symposium included over 100 papers covering a wide range of topics from manipulator and controller design to industrial applications. Many presentations focused on the latest developments in newer areas such as mobile robots. The four, specialist one day sessions covered: food and agriculture, medical and healthcare, hazardous environments (subsea, nuclear, space and defence) and finally service applications. Experts in these fields provided contributions, and very interesting debates arose with significant input from the audiences in each case.

The Gala Dinner provided the opportunity to celebrate the 21st Anniversary of the B.R.A. The B.R.A. was honoured to host the presentation of the Engelberger award, presented by Joe Engelberger himself and the Golden Robot award, presented by Eric Drewery, Chief Executive Officer of ABB in the UK. The evening concluded with an excellent illusion act that had most, if not all of the audience, baffled.

At the same time as these events the inaugural Automation and Robotics exhibition was held at the NEC. This provided the opportunity for many of the automation suppliers to demonstrate their latest products to UK industry. The show ran in parallel with eight other exhibitions including Mach. Metalworking and Welding and Metal Fabrication. This combination of events has become the leading engineering show in the UK. The B.R.A. looks forward to the next Automation and Robotics show in the year 2000.

1998 ENGELBERGER AWARD WINNERS

Robotics Industries Association (RIA) presented four industry leaders with the 1998 Joseph F. Engelberger Robotics Award, during the 29th International Symposium on Robotics in Birmingham, England on April 29, 1998.

Award for Application

Steven W. Holland, Director-Controls, Robotics & Welding, General Motors Corporation, won the award for Application. Throughout his 28 years at GM, Holland has

spearheaded the development of new robot applications that have greatly expanded GM's use of robots in body shop processes like spot welding as well as more recent advances in robotic fixturing and human assist devices. He has demonstrated that for many applications, robots are more economical and effective than traditional hard automation. In recognition of his outstanding work, in 1994 he won GM's "Boss Kettering Award", the company's top technical honor. He also serves as a member of the Board of Directors and Executive Committee of RIA.

Award for Leadership

Guy Potok, President, GP & Associates, and a Past President of RIA, won the award for Leadership. Potok held several key management positions at FANUC Robotics North America from 1983 to 1995, before leaving to form his own consulting firm. In addition to helping make FANUC one of North America's largest robotics suppliers, he also served as President of RIA from 1993–1995. During his tenure as RIA President, the organization launched several new initiatives, including a series of application specific robotics workshops that have helped RIA provide vital information to thousands of current and prospective robotics users.

Award for Education

Marco Somalvico, Professor of Artificial Intelligence and Robotics, Politecnico de Milano (Italy) won the award for Education. Professor Somalvico is the author of more than 120 scientific papers, four books, and a frequent lecturer on robotics in Austria, China, Czechoslovakia, France, Germany, Poland, Russia, the United Kingdom, and the United States. He has represented Italy as a National Co-ordinator at the International Symposium on Robotics since 1978. He still serves as Director of The Artificial Intelligence and Robotics Project he founded in 1971 at the Politecnico di Milano (PM-AIR Project).

Award for Technology Development

Kenneth A. Stoddard, Senior Staff Engineer, Trellis Software & Controls, a subsidiary of Hewlett-Packard Company, won the award for Technology Development. Stoddard was a co-founder of Trellis in 1987 and the company's Vice President of Development until it was acquired by Hewlett-Packard in 1996. Previously he was chief architect of the original KAREL robot controller and KAREL robot language while working as a staff engineer at GMF Robotics (now FANUC Robotics North America). Before joining GMF, he was the group leader for robotics activity within the Machine Perception Group at the General Motors Research Laboratories.

Each winner receives a commemorative medallion and a \$2,000 honorarium. Named after Joseph F. Engelberger, known throughout the world as "the father of robotics", the

awards have been presented to 68 international robotics leaders from 13 countries since 1977.

Nominations

RIA is now seeking nominations for the 1999 Engelberger Awards. For details on how to submit a nomination, contact RIA Headquarters at 734/994-6088 or email ria@robotics.org.

JARA AWARDS

Nominations are sought for the 1999 JARA Awards. The JARA Awards will be given to the authors of the three best papers presented at the 29th ISR in Birmingham, in the following three fields; Research and Development, Application Technology and Management. Nominations should reach the JARA Secretariat not later than August 30, 1998. Tel. +81 3 3434 2919, fax. +81 3 3578 1404.

TOYOTA ENGINEERING INNOVATOR WINS 1998 GOLDEN ROBOT AWARD

Dr Hisanori Nakamura of the Toyota Motor Corporation is the recipient of the 1998 Golden Robot Award. The award, which has been endowed annually since 1984, is presented to a robotics researcher/developer who has exhibited distinguished work in the field of industrial robot technology. For Dr Nakamura, it is in recognition of his outstanding contribution to the development of advanced efficient robot spot welding systems.

Since graduating with a Master of Engineering degree from Osaka University in 1977 followed by a Doctorate in Precision Mechanical Engineering from the University of Tokyo in 1994. Dr. Nakamura has spent all his professional life with Toyota Motor Corporation and is currently a General Manager in the Project Planning Department of the company's Body Assembly Engineering Division. During this time he has been involved in the development of body assembly technologies that are now widely applied within Toyota's production operations. Also, during his years as Technical Director of Body Production Engineering Associates (BPA), Dr Nakamura was a key person in the development and refinement of Toyota's Body Assembly System that has been adopted not just in Toyota but by other vehicle builders around the world. BPA Inc is a 100% owned Toyota company that also markets its body production methodologies and devices outside the Corporation.

Dr Nakamura's outstanding expertise is his ability to apply theoretical skills to real practical problems and to make true advances in the state-of-the-art of robot technol-

ogy. This has been demonstrated in several areas most notably in the field of off-line programming for spot welding robots.

In the off-line and robot systems design method developed by Dr Nakamura, geometric and non-geometric errors between the robot model and the actual robot on the line are automatically corrected without the need for costly time consuming on-line measurement. The method has several other unique features not found in commercial systems and has been classed as one of the world's major breakthroughs in robot programming. Automatic generation of the weld schedules and selection of the optimum weld gun are other unique features of the system.

Dr Nakamura has also contributed to the development of Geisha (Gun Employing Integrated Servo-motor with High control Abilities) system. It integrates the welding process and robot motion control systems by means of an electrical servo motor that functions as a pressure actuator. The system has been implemented into Toyota's robot spot welding lines since 1996 and has given benefits such as a 30% energy saving, a 30% productivity gain, a 20% quality improvement and 20% less noise.

30TH ISR IN TOKYO

The 30th International Symposium on Robotics will be held between October 27 and 29, 1999 alongside the '99 International Conference on Advanced Robotics (ICAR) under the sponsorship of the Robotics Society of Japan and the Japan Robot Association. For further information, please contact; '99 ICAR & 30th ISR Secretariat, c/o Japan Robot Association, Kikaishinko Bldg., 3-5-8 Shibakoen, Minato-ku, Tokyo 105-0011, tel: +81-3-3434 2919, fax: +81-3-3578 1404.

ISR 2000-MONTREAL

The 31st ISR will be held in Montreal, Canada, May 14-17, 2000. As part of the symposium and in conjunction with the 10th annual IRIS and PRECARN conference, the Montreal Fabrication and Machine Tool Show and National Factory Automation Show, ISR will feature its Exhibition, Robotics of Tomorrow.

The organisers of the event are welcoming exhibitors and those interested in presenting papers to contact them.

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