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Future robotics and automation for the third millennium

The future research innovation and development is in the field of Automation and Robotics in conjunction with the ubiquitous access to Internet, Information Communications Technologies (ICT), Smart Computational Devices (SCD) and Ultrafast Global Communication. The third millennium is a new era the Smart Cyberspace that is becoming pervasive in its nature while connecting the next generation of Ultra-Smart Robotic. Device with the computationally powerful SCDs is accessible to anyone, anywhere and at any time. In support of Automation and Robotics, the telecommunications networks providers and SCDs developers, are working together to create much faster transmission channels with provision of higher quality of service for any multimedia content for anyone, anywhere at any time. The human machine interface with high definition audio and video facilitates seamless control of Smart Robotics and Computational Devices (SRCD), which are becoming a common technology in family homes, business, academic, and business, and industry worldwide. Today, SRCD are communicating via Robotic Internet and may be accessible to public and private customers, while storing important and to some extend confidential information in their memory. In case that SRCD may be lost, stolen or hacked into, the information stored in the memory could be abused, compromised or used for malicious purposes. In near coming future, we may see the SRDC be used to aid, or to protect family residential areas, private homes, schools, hospitals, manufacturing plants, as well as, Cyber Physical Critical Infrastructures (CPCI) such as, atomic power and chemical plants, and large cities. The further research, innovation and development of Future Ultra-SRCD side by side with Future Ultrafast Robotic Internet, will require even more research, innovation and development in the field of Cyber Assurance and Security. Proper safety and security mechanisms and policies will become critical to protect the SRCD and COIP from any form of intrusion or cyber threads from anyone, from anywhere at any time. The author discusses the current and future trends of research, innovation and developments in SRCD, CPCI and Cyber Assurance, in conjunction with the Future Ultra-Fast Internet and Ultra-SRCD. The author promotes creation of multidisciplinary multinational research teams and development of next generation SRCD and Fully Automated Environment while utilizing Ultra-Smart Robotic and Computational Devices, in conjunction with the critical Cyber Safety and Assurance challenges for today and for tomorrow.

Biography

Eduard Babulak is accomplished international scholar, researcher, consultant, educator, professional engineer and polyglot, with more than thirty years of experience. He served as successfully published and his research was cited by scholars all over the world. He serves as Chair of the IEEE Vancouver Ethics, Professional and Conference Committee. He was Invited Speaker at the University of Cambridge, MIT, Yokohama National University and University of Electro Communications in Tokyo, Japan, Shanghai Jiao Tong University and Sungkyunkwan University in Korea, Penn State in USA, Czech Technical University in Prague, University at West Indies, Graz University of Technology, Austria, and other prestigious academic institutions worldwide. Academic and engineering work was recognized internationally by the Engineering Council in UK, the European Federation of Engineers and credited by the Ontario Society of Professional Engineers and APEG in British Columbia in Canada. He was awarded higher postdoctoral degree DOCENT - Doctor of Science (DSc.) in the Czech Republic, PhD, MSc and High National Certificate (HNC) diplomas in the United Kingdom, as well as, the MSc and BSc diplomas in Electrical Engineering Slovakia.

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