
Brief Biographies of the Authors

Francis (Frank) M.J. Nickols

Ph.D. Manufacturing Mechatronics, University of Wales, College of Cardiff

M.Sc. Electronic Industrial Systems, Cranfield University

B.A. Engineering Science, Cambridge University

Frank spent his initial 16 career-formative years in U.K. industry working initially as an avionics technician on the Buccaneer fighter/bomber aeroplane. This work concerned solving problems on its air radar, navigation instruments and its bomb delivery computer system. He then completed his tertiary education and progressed to a product designer doing research, design and prototype-to-production manufacture of engineering products for the world market. These products included automotive fuel injection sensors, CNC machine tool components, laser metrology components, manufacturing assembly systems and Electromagnetic Flowmeters. Since that time Frank felt the calling of academia and has spent 25 years doing teaching and research at universities in the U.K., Hong Kong, Singapore, Brunei and China. His primary research areas are Mechatronics Systems Design, Desk Top Educational Robots and Dynamic Agile Animal Robotics. He is a strong advocate of experiential learning for engineering students, focusing on fundamental theoretical principles and precision economical design. He is constantly pursuing improvements to the student teaching and learning experience by designing and building new types of robots and intelligent machine systems. This pursuit has resulted in the winning of numerous design prizes, e.g. his team won the Shell Asia Eco Marathon 2014 Design 1st prize for an all-wood chassis-body construction diesel engine powered automobile. Currently Frank is an engineering consultant in the U.K. developing new mechatronics and robotics practice-based experiential educational products together with novel product design hardware solutions in industry. His main research pursuit is a biomimicking muscle for dynamic agile animal robots for which he has been awarded a US patent.

Yueh-Jaw (YJ) Lin

Ph.D. Mechanical Engineering, University of Illinois, Chicago, (UIC)

MSME University of Illinois, Chicago, (UIC)

BSME Tsinghua University in Taiwan

YJ worked as a design engineer in Taipei before going to the U.S. for his postgraduate education. He then worked on a hospital walking robot project and this was followed by an academic career doing teaching and research for 20 years at the University of Akron. In 2007, he served as acting director of the Innovative Learning Research Division, NASA Safety Center. Later, from 2008 to 2013, YJ joined the University of Texas in Tyler as Professor and Department Chair of Mechanical Engineering. In 2014, he became Professor and Dean of Faculty of Science and Engineering at the University of Nottingham Ningbo China. Here, Professor Lin was also appointed as Associate Provost from 2016 to 2018 in

charge of internationalization. In 2018, he was recruited by Valparaiso University to serve as Professor and Director of the Engineering Dual Degree Program with Asian institutions, mainly to manage and teach for the ongoing 2+2 engineering program development with Jiao Tung University.

In his academic career over two decades, Dr. Lin has built up rich research and teaching experience in mechanical design, structural mechanics and control engineering that has grown into engineering application areas such as aircraft health monitoring, de-icing, and more recently, to the design of MEMS-devices for energy harvesting. Professor Lin has been on the editorial advisory boards of three international journals in automation, sensors, and robotics. He has also served as PI for a number of NASA sponsored key projects in the development of aircraft mechatronic de-icing systems that was commercialized by the aerospace industry. He has authored or co-authored more than one hundred papers published in refereed journals and conference proceedings.

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