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Wasif Naeem PhD, MSc, BEng (1*)

Queen's University Belfast, Belfast, UK. Summary Current responsibilities include improving international outreach of the School, in particular and the University, teaching at undergraduate level, supervising research appears and research proposals and various other administration related tasks as assigned by the school. Experienced conference organiser with three international conferences organised in Belfast from 2016 – 2019 as the General Chair, Co-Chair and Local Organising Chair. Research Interests > Automatic Control Systems Nationality: > Dintanned Systems Nationality: British and Pakistani Date of Birth: February 17' 1976 Home Address: 41 Front Road, Lisburn BT27 5JX, UK Professional Experience School of Electronics, Electrical Engineering and Computer Science, Queen's University Belfast, Belfast, UK Reader (Associate Professor), Centre for Intelligent Autonomous Manufacturing Systems (iAMS) School of Electronics, Electrical Engineering and Computer Science, Queen's University Belfast, Belfast, UK Ang' 2016 – July' 2020 School of Electronics, Electrical Engineering and Computer Science, Queen's University Belfast, Belfast, UK • Senior Lecturer, Centre for Intelligent Autonomous Manufacturing Systems (iAMS) July' 2007 – July' 2016 School of Electronics, Electrical Engineering and Computer Science, Queen's University Belfast, Belfast, UK • Lecturer (Assistant Professor), Intelligent Systems and Control Aug'2005 – Jun' 2007 Scho	Job Title	Reader (Associate Professor) and Director of Internationalisation , School of Electronics, Electrical Engineering and Computer Science (EEECS), Queen's University Belfast, Belfast, UK.		
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Research and Development Engineer	Oct' 1998 – Jul' 1999	Laser Manufacturing Pvt. Ltd. K	arachi, Pakistan	
	Research and Dev	elopment Engineer		

Awards/ Achievements

Awarded the *Michael Richey Medal* for the best paper published in the Journal of Navigation by the Royal Institute of Navigation in 2007. Duke of Edinburgh presented the award at an award ceremony held at the Royal Geographical Society, London in 2008.

- Awarded the *Denny Medal* by the Institute of Marine Engineering Science and Technology for the best paper published in IMarEST journal Part C: Journal of Marine Science and Environment, 2012.
- Awarded a three year Engineering and Physical Sciences Research Council, UK, PhD studentship at the University of Plymouth, Plymouth, UK.
- Gained a full scholarship for MSc at the King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia.
- Awarded full financial support from Institute of Marine Engineering Science and Technology, UK, to present an invited paper at the World Maritime Technology Conference 2003, San Francisco, California, USA.

Education

Feb' 2019 - Oct' 2019 William J. Clinton Leadership Institute, School of Management, Queen's University Belfast, Belfast, UK

• Emerging Leaders Programme (ILM Level 5 Award in Leadership & Management)

Sept' 2007 – Jun' 2009 School of Education, Queen's University Belfast, Belfast, UK

Post Graduate Certificate in Higher Education Teaching

Jun' 2006 – Jul' 2006 School of Education, University of Plymouth, Plymouth, UK

• General Teaching Associate (CPD Course)

Oct' 2001 – Dec' 2004 School of Engineering, University of Plymouth, Drake Circus, Plymouth, Devon, UK

• PhD in Mechanical and Marine Engineering with major in Control Systems

Sept' 1999 – Aug' 2001 King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia

• MS in Electrical Engineering with major in Control Engineering

Jan'1994 – Apr' 1998 NED University of Engineering and Technology, Karachi, Pakistan

• BEng in Electrical Engineering

Research and Funding

- CI £33M UKRI 'UKRI Strength in Places Fund' to develop Autonomous Electric Ferries led by Artemis Technologies as part of the Belfast Maritime Consortium (2020 - 2024).
- ▶ PI €389k EU Erasmus+ 'A Trans-National Smart Manufacturing Education Hub' partnered with South East Regional College (UK), University of Limerick (Republic of Ireland) and National Technical University Athens (Greece) (2020 – 2023).
- CI €55k EU Fed4FIRE Grant entitled 'HoT-REPLAN' (2018 2019)
- PI from Queen's £1.3m InnovateUK Grant entitled 'Robust Machine Executable COLREGs for Marine Autonomous Systems' partnered with Rolls Royce, Lloyds Register, Atlas Eletronik UK and Warsash Maritime Academy (2015 – 2017).
- PI £125k EPSRC Research Grant (EP/I003347/1) entitled 'COLREGs-based Evasive Decision Making in Maritime Vehicles' (2010 – 2012).
- CI £358k EPSRC Grant (EP/K029371/1) Small items of research equipment at Queen's University Belfast (2012 – 2013).
- Authored over 85 journal and conference publications. Two journal papers received best paper awards by the Royal Institute of Navigation and Institute of Marine Engineering, Science and Technology.

Relevant Publications

- Hu, L., Naeem, W., Rajabally, E., Watson, G., Mills, T., Bhuiyan, Z., Raeburn, C., Salter, I. & Pekcan, C. A Multiobjective Optimization Approach for COLREGs-compliant Path Planning of Autonomous Surface Vehicles Verified on Networked Bridge Simulators. In: IEEE Transactions on Intelligent Transportation Systems, pp. 1-13, April 2019. DOI: 10.1109/TITS.2019.2902927.
- Chen, L., Yang, A., Hu, H. & Naeem, W. RBPF-MSIS: Towards Rao-Blackwellized Particle Filter SLAM for Autonomous Underwater Vehicle with Slow Mechanical Scanning Imaging Sonar. In: IEEE Systems Journal, pp. 1- 12, Sep 2019. DOI: 10.1109/JSYST.2019.2938599.
- 3. Yang, A., **Naeem, W.**, Fei, M. & Tu, X. A Co-operative Formation-based Collision Avoidance Approach for a Group of Autonomous Vehicles (Special Issue on Adaptive Control and Signal Processing in Marine

System). In: International Journal of Adaptive Control and Signal Processing. Vol. 31, issue 4, pp. 489-506, Apr 2017. DOI:10.1002/acs.2563.

- Yang, A., Naeem, W. & Fei, M. Formation stability analysis of unmanned multi-vehicles under interconnection topologies, In: International Journal of Control, vol. 88, issue 4, pp. 754-767, 2015. DOI: 10.1080/00207179.2014.972465.
- Ihemadu, O., Naeem, W. & Ferguson, S. Optimizing the efficiency of the sub-map technique for largescale simultaneous localization and mapping, In: Transactions of the Institute of Measurement and Control, vol. 37, issue 3, pp. 329-344, Mar 2015. DOI: 10.1177/0142331214538899.