



Name: KHURSHEED, Anjam

Present Appointment: Associate Professor and Director of Engineering Science Programme

Contact Information: Department of Electrical Engineering, National University of Singapore, Singapore 119260.

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Research Areas

- Charge Particle Optics
- Electron/ion source design
- Scanning Electron/ion Microscope design
- Electron energy/ion mass spectrometer design

Teaching Areas

- Electronics and Microelectronics
- Numerical methods
- Charged particle Optics

Academic/Professional Qualifications

1983 PhD, University of Edinburgh, Scotland

1979 BSc honors, University of Edinburgh, Scotland

Awards/Honours

1975 Dux School Prize, Kelso, Scotland

Career History

1995- present Associate Professor, NUS

1992-1995 Research Fellow, Politecnico di Torino, Italy

1987-1992 Research Fellow, University of Edinburgh, Scotland

1984-1987 Research Fellow, CERN, Geneva, Switzerland

Administrative Leadership

- Deputy Head of the NUS Engineering Science programme
- Associate Director of CDTL
- Chairman of ELTEC Faculty of Engineering teaching and learning committee
- Student Exchange Coordinator for the Electrical Engineering Department, NUS

Professional/Consulting Activities

- IEEE Member
- IEE Member
- IOP Member

Research and publications

Over 130 international publications, 2 textbooks, Conference Chair of the Charged Particle Optics (CPO conference series), Chief editor of an international Physics Research journal

volume, over 7 US patents and principal investigator of 8 research grants imaging from 50,000 to 8 million S\$.

Selected Publications (Books)

- 1) Book on the Scanning Electron Microscope Optics and Spectrometer, World Scientific publisher (2010), 402 pages.
- 2) Book Chapter on Add-on Attachments for the SEM (2002)
- 3) Book chapter on Scanning Electron Microscope development (2000)
- 4) Book on the Finite Element method in Charged Particle Optics, Kluwer Publisher (1999), p274 pages

Selected Publications (Papers)

- 1) **Khursheed, A.** and Ang W. K. (2016), Annular Focused Electron/Ion Beams for Combining High Spatial Resolution with High Probe Current, *Microscopy and Microanalysis*, 22(5):948-954.
- 2) Shao X, Srinivasan A, Zhao Y, **Khursheed A.** (2016), A few-layer graphene ring-cathode field emitter for focused electron/ion beam applications. *Carbon* 110, 378-383 (2016).
- 3) Luo, T., **Khursheed, A.** and Osterberg, M., et al. (2009). "Design of a multiple-electron-beam imaging technique for surface inspection," *Journal of Vacuum Science & Technology B*, **27**(6), 3256-3260.
- 4) Osterberg, M., Hoang, H.Q. and **Khursheed, A.** (2009). "Initial experimental results on a magnetic beam separator spectrometer for the SEM," *Ultramicroscopy*, **109**(10), 1310-1314.
- 5) **Khursheed, A.** (2009). "A multi-beam ion/electron spectra-microscope design," *Optik*, **120**(6), 280-288.