

**Research Positions Available for Simulation of Carbon Nanotube Organic Devices in the School of Chemical and Biomedical Engineering at Nanyang Technological University (Singapore) and Technical University Munich (Germany)**

**Research Topic:**

Printed electronics is predicted to be a \$300billion market within two decades. Printing is a versatile enabling technology for electronic products that cannot be made with Si microelectronics technology. Printed electronics will also lead to completely new products such as sophisticated diagnostic tools and smart packaging and inventory labels. It is believed that printed electronics will revolutionize our lifestyle within the next two decades just as Si microelectronics has done in past decades. Carbon nanotubes are ideal materials for printed electronics.

**Doctoral Fellow in Simulation of Organic Devices**

Job description: the staff shall model carbon nanotube based diodes and transistors by physical and circuit-level simulation. The research activity will be carried out jointly between NTU and TUM

Requirements: MSc in electrical engineering; publication track records

**Professor Mary Chan-Park**

Dr Chan-Park did her PhD in polymers in MIT in 1993. She then did her postdoctoral fellow under the sponsorship of Dow Corning (USA). She worked for 10 years in industries in various technical management positions in USA and Singapore. She was a senior technical manager in Sipix Imaging (CA, USA) from 1999-2001. She then joined the Nanyang Technological University (NTU) as Associate Professor in 2001. She is currently also Associate Chair of the School of Chemical and Biomedical Engineering in NTU.

Dr Chan-Park has a vibrant research group with 6 postdoctoral fellows and 9 PhD/Masters. Her current interests are in Printed Carbon Nanotubes Electronics. She has published more than 80 peered review papers (in Advanced Functional Materials, Small, Chem Mat, Langmuir, Macromolecules, Applied Physics Letters, Nanotechnology, etc). She has also got 15 patents and several patent applications.

**Professor Paolo Lugli**

Paolo Lugli graduated in Physics at the University of Modena, Italy, in 1979. In 1981 he joined Colorado State University, Fort Collins, CO, where he received his Master of Science in 1982 and his Ph.D. in 1985, both in Electrical Engineering. In 1985 he joined the Physics Department of the University of Modena as Research Associate. From 1988 to 1993 he was Associate Professor of "Solid State Physics" at the "Engineering Faculty" of the 2nd University of Rome "Tor Vergata". In 1993 he was appointed as Full Professor of "Optoelectronics" at the same University. In 2003 he joined the Technical University of Munich where he was appointed head of the newly created Institute for Nanoelectronics.

His current research interests involve the modeling, fabrication and characterization of organic devices for electronics and optoelectronics applications, the design of organic circuits, the numerical simulation of semiconductor devices, and the theoretical study of transport processes in nanostructures. He is author of more than 250 scientific papers and co-author of the books "The Monte Carlo Modelling for Semiconductor Device Simulations" (Springer, 1989) and "High Speed Optical Communications" (Kluwer Academic, 1999). In 2004, he served as General Chairman of the IEEE International Conference on Nanotechnology held in Munich.

**Procedure**

Please contact Professor Mary Chan-Park directly: Email: [mbechan@ntu.edu.sg](mailto:mbechan@ntu.edu.sg) or Prof. Paolo Lugli [lugli@tum.de](mailto:lugli@tum.de). Websites: <http://www.ntu.edu.sg/home/mbechan/>, <http://www.nano.ei.tum.de>