

# Quantum & Biophotonics in Health & MedTech

Short bios of invited speakers

## Dr. Anna Paterova

Scientist, Institute of Materials Research and Engineering (IMRE), A\*STAR

Dr. Anna Paterova received her undergraduate degree in 2014 from Lomonosov Moscow State University. Then, from 2014 to 2018 she has been doing joint PhD research related to quantum optics and interferometry in Data Storage Institute, Agency for Science, Technology and Research (A\*STAR) and Nanyang Technological University (NTU) in Singapore. She successfully defended her PhD degree in 2018 at NTU with the topic "IR metrology using visible light". Since receiving her PhD, Anna has been a research scientist in the Institute of Materials Research and Engineering at A\*STAR. Currently, her research interests focus in the field of quantum interferometry and its applications.

## Dr. Dinish U. S

Group Leader, Institute of Bioengineering and Bioimaging (IBB), A\*STAR

Dr. Dinish U. S is a Group Leader at Translational Biophotonics Lab, Institute of Bioengineering and Bioimaging (IBB), Agency for Science, Technology and Research (A\*STAR). He also holds a joint adjunct faculty position at School of Physical and Mathematical Sciences, Nanyang Technological University. Dinish is working on developing Photonics based technologies for biomedical research in Skin Health, Women's Health, Vascular Health and Biosensors. He filed 17 patents/patent applications and has published over 140 research papers in top rated international journals and conferences proceedings. He co-edited a book titled 'frontiers in biophotonics for translational medicine'. Currently, Dinish is also serving as the editorial board member of 'Scientific Reports' (Nature Publishing Group) and as a consulting editor for 'International Journal of Nanomedicine' (Dove press). He is also acting as the editor for Springer's book series titled, 'Progress in Optical Science and Photonics'

#### Dr. Bi Renzhe

Research Scientist, Institute of Bioengineering and Bioimaging (IBB), A\*STAR

Dr. Bi Renzhe is a Research Scientist in Translational Biophotonic Laboratory, IBB. He obtained his PhD degree in Biomedical Engineering from NTU in 2015. His research interests include medical device development, Raman spectroscopy,

diffuse optics, Photoacoustic imaging and advanced image processing algorithms. With > 10-year experience in MedTech translational research, he has developed several high impact medical device prototypes, such as Auretek and HaloFlow. 3 of his patents have been licensed to MedTech companies.

### Dr. Li Hao

Senior Scientist, Singapore Institute of Manufacturing Technology (SIMTech), A\*STAR

Dr. Li Hao received his PhD in Optics and Photonics from Nanyang Technology University in 2006. His PhD work focused on acoustic fiber optics filtering technology for optical signal processing and communication. He then worked as a post-doctoral at NUS on fluorescence-based bio-optical imaging study. From 2010, Dr Li Hao started to work in SIMTech Advanced Imaging and Machine Vision Group (former Precision Measurement Group) on the development of multiple ultrafast lasers, covering MIR to VUV spectrum with pulse duration from picosecond to attosecond, as well as laser based industrial instruments and systems in various biomedical, life-science and precision manufacturing applications.

## Dr. Li Xiang Leon

Principal Research Engineer, Singapore Institute of Manufacturing Technology (SIMTech), A\*STAR

Dr. Li Xiang Leon, a Principal Research Engineer from Singapore Institute of Manufacturing Technology (SIMTech), Advanced Imaging and Machine Vision Group. He has more than 20 years' experience in the area of dimensional measurements, surface inspection and bio – imaging based on optical technologies. His main research projects include interferometry, wavefront sensing, fiber sensor, stem cell imaging, digital pathology and cytometry. Some of his research outputs have been applied in different industrial sectors, such as biotech, semi-conductor, precision engineering, construction etc.

## Dr. Teng Jing Hua

Principal Scientist, Institute of Materials Research and Engineering (IMRE), A\*STAR

Dr. Teng Jinghua is a Principal Scientist and Senior Group Leader in IMRE, A\*STAR, and an Adjunct Professor in SPMS, NTU. He has edited/authored 5 book/book chapters, published over 230 journal papers and filed 29 primary patents. His research interests include nano-optics & photonics, metamaterials and metasurfaces, 2D optoelectronics, THz technology, plasmonics, semiconductor materials and devices. He is an editorial board member of the Journal of Optics, Opto-Electronic Advances, PhotoniX, Journal of Molecular and Engineering Materials and A\*STAR Research Publication. He is a Fellow of SPIE.