#	A*STAR Researcher	Designation	Email Address	Research Area
1 A	rseniy Kuznetsov	Principal Scientist / Head o Department	^{of`} arseniy_kuznetsov@imre.a star.edu.sg	As consumer electronics continuously shrink in size and weight there is a continuous demand for making optical components (e.g. lenses or camera modules), which can be very compact and lightweight while still keeping high performance. While conventional lenses have already reached their fundamental limits, the field of nanoantennas and metasurfaces (so called nano for flat topic) offers novel solutions for miniaturized optical components that can control light at subwavelength dimensions. In particular, resonant nanostructures made of dielectric and semiconductor materials with high refractive index (so called nanoantennas) offer a possibility to manipulate the phase, amplitude and directivity of light propagation with sub micrometer resolution through the design and control of their optical resonant modes. Our group in Singapore was one of the world pioneers of this exciting field and is currently at the forefront of both scientific advances in the field as well as in commercialization efforts. This student project will be carried out within a dynamic, international and interdisciplinary team of researchers toward one of the following major directions: (i) Novel metasurfaces and flat optics for consumer electronics and beyond; (ii) Tunable metasurfaces for next generation LiDAR and 3D holographic display technologies; (iii) Active metasurfaces for next generation light sources and displays. Exploration of other research directions is also possible. The skills to be acquired will include design and optical simulations.

4 Liu Hailong

Scientist

liu_hailong@imre.a star.edu.sg

The research in my laboratory focuses on 3d printing for micro optical devices, dynamic metasurfaces, and plasmonic enhanced luminescence. I would like to collaborate with groups which have expertise in two photon polymerization lithography, phahave

12	Xu Xuewu Princi	cipal Specialist X	/u_Xuewu@imre.a star.edu.sg	The research in my lab focuses on the development of metasurface based spatial light modulators (SLMs) for various applications in 3D and holographic displays as well as light detection and ranging (LiDAR). I would like to collaborate with groups, which are interested in the manipulation of phase, amplitude and polarization of light by tuning the resonances of optical nanoantennas embedded in active materials, especially have expertise in liquid crystals (LCs) such as LC alignment, thin LC cell fabrication and simulation of LC devices.
----	-----------------	--------------------	-----------------------------	---