

## 2019 Summer Internship project list

No.	Teacher	Project title or area	Theory or Experiment	No. of students	Special remark
1.	Dajun Wang	Preparing optical potentials for trapping ultracold atoms	Experiment	1	
2.	Jiangfang Wang	nanophotonics	Experiment	1	
3a.	Hua Bai Li	Radio Telescope	Experiment	2	
3b.	Hua Bai Li	Principal component analysis and turbulence	Theory	2	
4.	Emily Ching	Complex networks	Theory	1-2	Computational skills needed
5a.	Swee Kuan Goh	Optimization of high pressure devices for pulsed magnetic field experiments up to 65 T	Experiment	1	In collaboration with Los Alamos National Lab
5b.	Swee Kuan Goh	Electrical transport measurements under extreme conditions	Experiment	1	
6.	Yi Wang	Computer simulations of biomolecules	Theory/computation	2	
7.	Kai Ming Cheng	Quantum Mechanics	Theory	1	
8a.	Sen Yang	Quantum sensing on magnetic signals	Experiment	1	
8b.	Sen Yang	Nanostructure fabrication	Experiment	1	
9.	Yande Que	Two-dimensional materials	Experiment	1	Those who have quantum physics background will be favored
10.	Lei Shao	Electrophoretic control of plasmonic nanocrystals for dynamic full-color display	Mainly experiment	Max 2.	

11a.	Xinhui Lu	Perovskite Solar Cells	Experiment	1	
11b.	Xinhui Lu	Perovskite Nanocrystals Synthesis and Doping	Experiment	1	
12	Daniel Ong	Photonic topological insulators	Experiment	1	
13.	Quan Li	Material engineering	Experiment	1	
14.	Lei Xu	Measuring the temperature field during water freezing	Experiment	1	
15a.	Tjonnie Li	Gravitational waves from colliding black holes	Theory	1	
15b.	Tjonnie Li	Supernova explosions	Theory	1	
16	Yilin Wu	Biophysics and imaging processing	Experiment	1 to 2	
17a	Junyi Zhu	Machine learning project in the inverse problem of band structure to crystal structure searching.	Theory/computation	1	
17b	Junyi Zhu	Stability analysis of low dimensional materials.	Theory/computation	1	