

Jie Xiang

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Objective

- Ph.D. degree in Electrical Engineering

Education

- 2007.9- 2009.7** M.S. in Instrument Science and Technology ,School of EE ,HIT, Harbin, China
- GPA: **3.56/4.00**
 - Scholarship: Graduate Student's Scholarship **First Grade** (twice, 2007-2008); AUO Corporation Scholarship (**6 out of 210**,2008)
 - Experience: Monitor of the graduate class (2007-present); Teaching Assistant in School of EE (9/2007-present)
 - Affiliation: **OSA** (Optics Society of America) member
- 2003.9- 2007.7** B.S. in Optoelectronic Information Engineering, School of EE ,HIT, Harbin, China
- GPA : (**3.63/4.0**), Top 10 in the department
 - Scholarship: People's Scholarship Grade (**9 out of 157**, twice,2004-2005); National Scholarship Grade (**5 out of 313**,2005)
 - Awards: **Excellent Students Award (10 out of 313**, twice, 2005-2006)
 - Experience: **Director** of Students' volunteer Activities Centre(2005)
Service in Community of Harbin as **Director**(5/2005-11/2005)
Intern in Panasonic China Corporation (7/2006-8/2006)

Research Experience

- 2008.8 – Now** **M.S. Thesis “Simultaneous measurement of all four Stokes parameters of light based four-CCD detector”**
- Seek a method for measuring two-dimensional distributions of the four Stokes parameters by utilizing four-CCD.
 - Design four-CCD image acquisition and processing system, and applying this system into parameters measurement of LC cells.
- 2008.4 – 2008.8** **“Research of precise multiple beam control of high resolution Liquid Crystal Spatial Light Modulator (LC-SLM)”**
The Natural Science Foundation of China (NSFC)
- Realize multiple laser beams steering by utilizing high resolution LC-SLM.
 - LC Electromagnetic propagate simulation and optimizing parameters of LC cells.
- Since 2008** **“2D/3D Super-resolution Imaging Based on Superlens”**
- Demonstrate new imaging techniques with resolution beyond the diffraction limit.
 - Theoretical Analysis of How Electromagnetic Parameters Influence the Super-resolution Imaging Properties through Negative Refractive Index Materials.
 - Pursue the possibility of LC-based superlens.

- 2008.1 – 2008.4** **“Design laser beam steering structure based on microlens array”**
- Seek a way to steer laser beam by utilizing microlens arrays.
 - Design mechanics and optimize microlens arrays.
- 2007.9 – 2008.1** **“Large-aperture Aspheric Surface Testing Technology Based on LC-SLM”**
- Seek a proper way to realize Large-aperture aspheric surface testing.
 - Optical setup design, experiments and consideration of the basic factors that influence the measurement.
- 2007.7 – 2007.9** **“Wavefront Correction Using LC-SLM”**
- Seek a proper way to improve the precision of wavefront correction using LC-SLM.
 - Optical setup design, experiments and error analysis.
- 2007.2—2007.7** **B.S. Thesis “Design of Voice Coil Actuator(VCA) based driving and control system”**
- Seek a proper way to drive and control VCA with microlens array.
 - Design driver and controller of VCA.
- 2006.2 – 2007.1** **College Innovators Competition “Image Acquisition Based on USB2.0”**
- Realize the high speed image acquisition and processing.
 - Design image acquisition hardware and image processing software with USB.

Special qualifications & skills

- **Mathematics**, especially Numeral Computation, Field Theory, Wavelet Analysis, Mathematics Modeling, Theoretical Deduction.
- **Optics Fundamentals**, especially Diffractive Optics, Polarized Optics, Electromagnetic Theory of Optics.
- **Algorithm Analysis and application**
e.g. Neural Network(NN), Fuzzy Algorithm(FA), Simulated Annealing (SA), Genetic Algorithm (GA), Wavelet Transformation, FFT.
- **Computer Programming Languages**, especially VC++, Matlab.
- **Practical skills** in image acquisition system design and actuator controller design.

Conference Experience

- International Symposium on Instrument Science and Technology(ISIST), 2008, ShenYang, China.
- International Conference on Computational Intelligence and Security(CIS), 2007, Harbin, China.
- National laser Symposium (NLS), 2007, Harbin, China.

Publication

- “Design of driving and control system based on Voice Coil Actuator for linear motion of micro-lens array”, Jie Xiang, Wu Nan, Jian Zhang, Liying Wu. (to be published by SPIE)
- “Wavefront correction using Liquid Crystal Spatial Light Modulator,” [J] Infrared and Laser Engineering, December,2008(EI)

English Proficiency

- GRE: Verbal: 460 (50%); Quantitative: 800 (94%); Analytical Writing: 3.5 (20%)
- TOEFL(ibt): (Reading:29; Listening:24; Speaking:18; Writing:24)