Hongda Wang

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EDUCATION

University of California, Los Angeles September 2015 - Now
MS&Ph.D in Electrical Engineering, adviced by Aydogan Ozcan, Professor *California, USA*

Peking University September 2011 - July 2015
B.S. in Physics, advised by Yan Li, Professor *Beijing, China*
Dissertation: Laser Focus Engineering for Tight-Focusing.

RESEARCH

University of California, Los Angeles Advisor: Aydogan Ozcan, Professor
Graduate Research Assistant *September 2015 - Present*
Project: Biomedical optics research.

- Investigate novel imaging methods related to lens-free imageing techiniques.

Peking University Advisor: Yan Li, Professor
Undergraduate Research Assistant *April 2013 - July 2015*
Project: Three-dimensional Focus Engineering

- Designed and optimized phase masks for three-dimensional focus engineering with C++ and MATLAB.
- Synthesized three dimensional wave field distribution including double-helix, trefoil knot, double-ring, etc., using spatial light modulator (SLM), femtosecond laser and beam shaping system.
- Fabricated micro-structures via two-photon polymerization and characterized them by Scanning Electron Microscopy.

University of Michigan, Ann Arbor Advisor: L. Jay Guo, Professor
Visiting Student *August 2014 - October 2014*
Project: Photoacoustic Wave Microscopy in Scattering Media

- Established an optical phase conjugation system with optical feedback loop to focus light through scattering media.
- Programmed and implemented phase control algorithms with Matlab SLM and CMOS camera. Increased focus area intensity by an order of magnitude.

University of Tokyo Advisor: Keisuke Goda, Professor
Summer Research Intern *June 2014 - August 2014*
Project: Weber Beam Light Sheet Microscopy

- Calculated phase masks and computer generated holograms for Airy beams and non-paraxial Weber beams.
- Experimentally generated Weber beams with SLM and calibrated beam profiles.

Project: Ultrashort Laser Pulse Measurement

- Built an auto-correlator using the Michelson's interferometer and two-photon absorption photo-detector, measured autocorrelation traces of mode-locked femtosecond laser pulses and obtained pulse durations.
- Built a Fourier transform spectrometer, measured the optical spectrum of a femtosecond laser.

HONORS

- First Prize for Undergraduate Research (top 7 out of 250 students) 2014
- WEIMING scholarship for excellent academic performance 2014
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- Presidential Scholarship for Undergraduate Scientific Research 2013
- First Prize in National Physics Competition for Undergraduates 2012
- First Prize in Chinese Physics Olympiad (CPhO) 2011

TECHNICAL STRENGTHS

Programming Languages	C/C++, MATLAB, LaTeX, CUDA, Git
Skills	Optical Alignment, Beam Shaping, Microscopy

PUBLICATIONS

1. Zhang, S. J., Li, Y., Wang, Y. K., Liu, L. P., **Wang, H. D.**, Xiao, Y. F., ... & Gong, Q. Controlling Youngs modulus of polymerized structures fabricated by direct laser writing. ***Applied Physics A***, 1-5.