

CHU-YI WANG

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Interest	Associate Product Manager Intern • Mechanical Engineering Intern	Summer 2017
Education	University of Southern California (USC) , Los Angeles, CA, USA Ph.D. Candidate in Mechanical Engineering National Taiwan University (NTU) , Taipei, Taiwan M.S. in Applied Mechanics (GPA: 3.79/4.00; Thesis won the HiWin Thesis Award.) B.S. in Bio-Industrial Mechatronics Engineering (GPA: 3.82/4.00, rank: 3/43)	Dec. 2017 (Expected) Jun. 2009 Jun. 2007
Technical Skills	Profession: product design process, conceptual design and improvement, engineering modeling and analysis. Instrument: CNC lathe, milling, drill, dicing saw, e-gun evaporator, x-ray diffractometer, various lasers & microscopies. Language/Software: MATLAB, SolidWorks, JAVA, C/C++.	
Selected Projects	Some projects were executed simultaneously. I am a good problem solver and project organizer. I can be a good leader and/or a collaborator.	Publication or Report
Product design	1. Managing design coupling to reduce complexity during concept improvements. • Analyzed the concept properties then developed a strategy to improve designs • Skills: cross functional reviews, strategies for complexity reduction. 2. Regenerative Speed Reducer (<i>AME410</i> , #1 in class). • Developed an innovative bumper that can collect the vehicle's energy and reduce speed. • Skills: QFD, EMS model, design evaluation, SolidWorks. 3. Product Development for Bike Theft Prevention (<i>AME503</i> , team leader). • Analyzed user needs to define a product vision and strategy, and then built a prototype. • Skill: design target identification, decision-making, smart question strategy. 4. Bike Sale System (<i>AME505</i> , team leader and the major programmer). • Designed a bike sale system that enables users design bikes and track shipping status. • Skills: JAVA, object-oriented modeling.	Paper1: goo.gl/ga5wBH Proposal: goo.gl/wjq5WT Paper 2: goo.gl/OsHolh Report: goo.gl/elajB1 Videos: goo.gl/IqsEFw Report: goo.gl/3A6bXt Report: goo.gl/JZkd46
ME projects	5. Bi-pedal robot project (<i>Principles & Applications of Microprocessor</i> , #1 in class). • Designed a simple robot with a controller, which can wave hands, move forward/back. • Skills: microprocessor, mechanical design. 6. Tooth birefringence measurement methods (<i>Nano-BioMEMS Lab</i> , team leader). • Led the team to design an optical detector for tooth examination. • This research won the 1 st place in NTU Engineering Technology Contest. 7. Study of sub-wavelength annular aperture and optical drill (<i>M.S. Thesis</i>). • Fabricated and designed optical heads to generate high aspect ratio beams to drill silicon • Skills: fabrication process, optical design, LightTools, MATLAB, XRD.	youtu.be/6O_XsUJKrTo Paper 3: goo.gl/0hxl0q Paper 4: goo.gl/2jT2TD Thesis: goo.gl/MxbuOc
TA Experiences	Duties: a bridge between the professor and the students (understand and solve students' difficulties and problems)	
Material design	1. AME 588 Material Selection , USC: focused on structural applications but also considering physical properties, cost, and environmental considerations.	Fall, 2016
Product design	2. AME 503 Advanced Mechanical Design , USC: provided the rational thinking methods for identifying design opportunities from market and solving design problems optimally.	Fall 2014, Summer & Fall 2015, Summer 2016
System design	3. AME 527 Elements of Vehicle and Energy Systems Design , USC: focused on multidisciplinary design optimization and quantitative tools for design process.	Spring, 2016
System design	4. AME 505 Engineering Information Modeling , USC: covered symbolic logic, AI techniques, object-oriented technologies, and design theory and methodologies.	Spring, 2015
Mathematics	5. AME 525 Engineering Analysis , USC: linear algebra, vector analysis, complex variable.	Fall, 2015
CAD design	6. AME 105 Introduction to Aerospace Engineering and Graphics , USC: I was responsible for being a lecturer in a session to teach 3D graphics (CAD tool: SolidWorks)	Fall, 2014
Selected Awards	1. 34th CIE Conference Poster Award in CAPPD , ASME CIE Division • This award w/ travel grant is for outstanding students presenting their research in conf. 2. USC-Taiwan Fellowship , USC Viterbi School & Taiwan Ministry of Education • A four-year fellowship plus assistantship to outstanding USC Taiwanese PhD students. 3. Excellence Award in 6th HiWin Master's Thesis Award , HiWin Company • One of the best Master's thesis awards in Mechanical Engineering in Taiwan. 4. 2005 & 2006 Presidential Award (top 5% in class), NTU. 5. 1st place in 14th National Taiwan University Engineering Technology Contest , NTU • An annually university-wide contest. Our topic: the tooth birefringence measurement. 6. 1st Macronix Science Award (4 year fellowship award for university years), MXIC. • It's for high school talents who create innovative inventions. Mine: a novel chalk eraser.	2014 2012 2010 2005 and 2006 2005 2002