

# **Chung-Hau Wang**

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## **EDUCATION**

<b>University of Southern California (USC)</b> , Los Angeles, CA	Dec 2013
Master of Science, Mechanical Engineering (Specialized in Control and Design)	
<b>Chen Kuo Professional Education Institute</b> , Taichung, Taiwan	2008-2010
Student, Chinese Medicine	
<b>National Chung Cheng University (CCU)</b> , Chiayi, Taiwan	2007
Bachelor of Science, Mechanical Engineering	
<b>Moscow Aerospace School's 2005 Program</b> , Russia	Sep 2005

## **TECHNICAL SKILLS**

SolidWorks, CATIA, MatLab, AutoCAD, Visual C++, Java, Visual Basic, Python, Verilog, and MS Office

## **WORK EXPERIENCE**

### **Volunteer**

<b>Aminggo Lu Tech</b> , Arcadia, CA	Feb 2014-Present
<b>Grader for Engineering Vibrations I</b>	
USC, Los Angeles, CA	Jan 2013-May 2013

- Corrected the students' homework and guided the students in homework

### **Directing Officer (Military Service)**

<b>Level A Ordnance Repair Depot, Combined Logistics Command, DOD</b> , Taiwan	Jul 2007-Jun 2008
· Managed the repair technicians and maintained the armament (rifle, artillery, telescopes, etc.)	

## **HONORS & AWARDS**

<b>Taiwan Patent</b> (Work Name: Manual Wheelchair for All-terrains)	Pending
This patent is to protect a wheelchair of new type	
<b>First Place</b> (Work Name: Running Chair)	Oct 2006
<b>2006 Taiwan Innovative Mechanism Design Competition</b> (National Science Council of Taiwan sponsored)	
This project was to modify wheelchairs' mechanism and function to make them more ergonomic	
· Led the team to design the prototype and the mechanism, and determined the configuration	
<b>Finalist</b> (Work Name: Swift-Cart)	Sep 2006
<b>The 7<sup>th</sup> International Creativity-in-Action Contest for University Student</b> (National Science Council of Taiwan sponsored)	
This project was to add functions to shopping carts to make them more functional and user-friendly	
· Led the team to design the prototype and the mechanism, and determined the configuration	
<b>Finalist</b> (Work Name: Reusable Chop-Pen-Sticks)	Sep 2006
<b>The 7<sup>th</sup> International Creativity-in-Action Contest for University Student</b> (National Science Council of Taiwan sponsored)	

This project was to combine chopsticks and pens to create more functions and quality of convenience

- Led the team to design the prototype and determined the coating paint material

## PROJECT EXPERIENCE

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### Toothpaste Dispenser Design Challenge from Apple Inc.

This project is to design a toothpaste dispenser for assembly manufacturing line

- Conceived the concept and designed the prototype and configuration

### Regenerative Speed Reducer (RSR)

This project is to design a device to collect and transform vehicle's kinetic energy to electrical power

- Led the team to design the prototypes and configurations, and to determine the components' materials
- Analyzed the model by finite element analysis (FEA) with SolidWorks and CATIA

### Computer-Aided Design of Mechanical Systems

This project is to analyze different models by FEA with SolidWorks and CATIA

- Analyzed the stress/strain and their distributions, the vibration natural frequencies and the corresponding vibration modes, the buckling boundary conditions, and thermal stress/strain for different models

### SpaceBot

This project is to design a Geosynchronous (GEO) satellite life-extension vehicle

- Determined the required propellant masses, scales of SpaceBot and its subsystems
- Evaluated the feasibility and the cost for the whole project

### Da Vinci Flyer

This project is to reconstruct Da Vinci's flyer

- Designed the model and determined the flyer's scales, flying modes, and the feasibility with SolidWorks

### Modeling and Analyzing Vibrating Systems

This project is to analyze the vibrations of lump-mass systems and continuous systems

- Modeled and analyzed a suspension system model of automobiles and a model of airplane wings with mounted engines with MatLab

## EXTRACURRICULAR ACTIVITIES

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Taiwanese American Chamber of Commerce - Young Career Adult Group

2014-Present

Club for Initiative Design & Engineering

CCU, 2004-2007

Club of Taijiquan (a soft Chinese martial arts)

CCU, 2003-2007

## ADDITIONAL INFORMATION

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Languages: Native in Mandarin/Taiwanese, Fluent in English

Interests & Hobbies: Taijiquan (10-year formal training), Chinese martial arts, sports, Chinese calligraphy, reading, and traveling (visited England, France, Russia, Singapore, Vietnam, Japan, the US)