

Rei Tangko

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Background: A graduate student in Mechanical Engineering looking for internship/co-op in related industries and any applicable fields. Exceptional in combustion kinetics, multidisciplinary research, analysis and design, business and market relations, as well as adaptability and willingness to learn. **Possesses F-1 work authorization, am willing to relocate nationally.**

Education: **M.S Mechanical Engineering, GPA: 3.91/4.0** expected May 2011

University of Southern California (USC), Los Angeles, CA

- Research Topic: Combustion Kinetics and Uncertainty

B.S Mechanical Engineering, GPA: 3.9/4.0 May 2009

Michigan Technological University (MTU), Houghton, MI

- Minor - General Music, Concentration – Enterprise Program

Work Experiences:

Graduate Research Assistant, USC Combustion Kinetics Laboratory, Los Angeles, CA Jan 2010 - Present

- Assisted with uncertainty analysis and kinetic model optimization
- Assisted with combustion phenomena: fuel kinetics and molecular transport supervised by Dr. Hai Wang

Research Engineer, Founder, Enhanced Biomorphic Helmet, Houghton, MI January 2008 - Present

- Developed approved design by National Collegiate Inventors and Innovators Alliance (NCIIA)
- Invented patent-pending scalp-mimicked helmet design to reduce oblique impact concussion by 50%
- Delivered winning design proposal (\$15,500) for National Collegiate Inventors & Innovators Alliance 2008 I2V Convention
- Founded the first student-run football and hockey helmet testing and R&D business in Northern Michigan
- Successfully completed Enable Ventures Inc. 2008 Invention to Venture Seminar
- Won 3rd place in Michigan Tech 2008 Elevator Pitch Competition

Design Engineer, Residential Solar Absorption Cooling System, Houghton, MI January 2009 – May 2009

- Formulated design proposal for traditional HVAC system substitution using solar absorption method
- Conducted energy lifecycle and budget analysis of solar-based HVAC system at Hancock MI, and Austin TX

Acoustic Engineer, Project Manager, Noise, Vibration, and Harshness Enterprise Sep 2006 – May 2009

- Designed movable cab stand for Volvo EC210C Cab
- Assisted with the noise-reduction test for GTH 644 Terex Telehandler muffler
- Introduced +3dB sound pressure level reduction for Volvo EC210C HVAC system
- Generated dBFA acoustic intensity analysis for General Dynamics Land System muffler redesign
- Led team of 6 undergraduates in developing and establishing impact & airborne noise fixture system for MTU acoustic chamber

Teaching Assistant, MTU Mathematics Department, Houghton, MI Sep 2006 – May 2009

- Managed Mathematics Laboratory student services, grading system and course-system integration
- Supervised 1500+ students in Wolfram Mathematica training program and MTU Calculus w/Technology program

Student Liaison, MTU Office of International Programs, Houghton, MI September 2007 – May 2009

- Coordinated 50+ merchants and student organizations with City of Houghton in organizing Parade of Nations
- Increased campus-wide support and attendance for diversity awareness and multicultural events by 60%

Referee, MTU Water Polo Intramural, Houghton, MI January 2006 – May 2006

- Supervised the Water Polo Intramural Tournament
- Assisted the IM Department in various sporting event
- Assisted in the International Sports Competition program

HRD Supervisor, Tangko Inn Resort, West Java, INDONESIA May 2007- Present

- Evaluate work standards and work ethics of all employees
- Involve in decision making process of the delegated task of all employees

Other Projects:

- Music Director, International Night 2009: “Around the World in 90 Minutes”** Spring 2009
- Led, organized, and managed the pit band in coordination with technical staffs and administrators
 - Composed, arranged, and performed supporting music display throughout the 2-hour length performance
- Vice President, Winter Carnival 2009 “A Frigid Place Gets A Blast from Space”** Spring 2009
- Organized the annual Michigan Tech Winter Carnival
 - Successfully improved overall safety and smooth run of the Carnival
 - Implemented Winter Carnival Safety Team with the University task force
- Student Liaison, Parade of Nations 2007: “Smiles Have No Borders”** Fall 2007
- Organized campus community to be involved with the Parade of Nation
 - Led team of students under International Club to provide cultural enrichment and entertainment for the community
 - Worked closely with the City of Houghton and Michigan Tech Executive Committee in the realization of the Parade
- President, International Night 2007: “Spectrum of Cultures”** Spring 2007
- Led team of diverse students to accomplish the established goal of the event
 - Supervised and efficiently delegated tasks to each committee
 - Act as liaison between merchant sponsors, various cultural student organization and the club
 - Successfully promoted I-Nite 2007 to be the best and biggest multi cultural event on campus

Conferences:

Poster(s):

- **Quiet Plywood-Impact-borne Noise Measurement System Development**, MTU Acoustic and Noise Control Preview Day, Spring 2008
- **NVH Enterprise-Industry Partner for Acoustic Noise and Vibrations Solutions**, MTU Undergraduate Expo 2008, Spring 2008
- **Poker Card Retriever Assist for Quadriplegic Patients**, MTU Senior Design 2009, Undergraduate Expo 2009, Spring 2009

Oral(s):

- **Enhanced Biomorphic Helmet-Mimicking Human Scalp to Reduce Sport Related Oblique Impact Induced Concussion**, New Jersey Institute of Technology-NCIIA Advance Invention to Ventures Conference, Summer 2008
- **Roving Microphone-An Alternate Uniform Airborne Noise Measurement System**, MTU NVH Enterprise, Spring 2009

Leadership & Organizations:

MTU International Club

- **President**, January 2007 – April 2007
 - Initiated new campus traditions: International Food Fair, Film Festival & Holiday Celebration
 - Delegated 100+ international and domestic students in International Night 2007 realization
- **Treasurer**, April 2007 – April 2008

MTU Malaysian Student Association

- **Malaysian Night ‘07 Vice President**, January 2007 – April 2007
 - Inspired university-wide recruitment initiative at Malaysian (2008) and Indonesian (2010) institutions
- **Public Relation Officer**, September 2006 – April 2008

Blue Key National Honor Society (Michigan Tech Chapter)

- **Winter Carnival Queens Committee**, September 2007 – February 2008
- **Vice President**, February 2008 – February 2009
 - Oversaw planning and task-force coordination for the nationally renowned Winter Carnival tradition
 - Successfully integrated Michigan Tech as the host of Spring 2010 Blue Key National Convention

Noise, Vibration, and Harshness Enterprise

- **Volvo Cab Stand Team**, September 2007 – March 2008
- **Volvo HVAC Unit Team**, September 2007 – March 2008
- **Quiet Plywood Team**, January 2008 – December 2008
- **Roving Microphone Project Manager**, October 2008 – May 2009

Tau Beta Pi (Michigan Beta) Engineering Honor Society

- **MTU Scholars Night Committee**, November 2007 – February 2008
- **School Outreach Committee**, December 2007 – April 2009
- **Treasurer**, February 2008 – April 2009
 - Secured support from College of Engineering valued at \$4,000 for chapter's revitalization

Pi Tau Sigma (Sigma Iota) Mechanical Engineering Honor Society

- **ME Student Advising Program Committee**, November 2007 – May 2009
- **Corresponding Secretary**, April 2008 – May 2009
 - Mediated the faculty-student mentoring program and corresponded actively with Pi Tau Sigma National

International House (West McNair Residence Hall)

- **Social Chair**, September 2006 – December 2006
 - Led design, organization and construction of 1st Place Float for PON 2007

Alpha Honor Society

- **Service Committee**, September 2005 – May 2007

MTU Film Board

- Assisted in movie selection and license purchase, February 2008 – April 2009

Languages: Fluent in English, Indonesian and Malay languages

Computer / Technical Skills:

- Chemkin
- Kaleidagraph
- Engineering Equation Solver
- Microsoft Office
- Wolfram Mathematica
- Mat Lab
- Quattro Data Acquisition System
- 01 dB Symphonie & dBFA Suite
- Unigraphics (UGNX)
- Datastick Vibration Analyzer
- Windows Operating System
- Linux Operating System

Achievements:

- 2010 USC Viterbi Doctoral Fellowship Recipient
- 2009 USC Dean's Masters Fellowship Recipient
- 2009 Vice President of Student Affairs Award for Service Recipient
- 2009 President's Award for Leadership Nominee
- 2009 Phi Kappa Phi Honor Society Inductee
- 2008 Percy Julian Leadership Award Recipient
- James & Alma Van Camp Scholarship Recipient
- Michigan Tech Class of 1957 Scholarship
- 2008 Michigan Tech Blue Key Member of The Year
- MTU Academic Excellence Award
- MTU Dean's List (Fall 2005-May 2009)
- MTU Department of Mathematics Certificate of Merit

Affiliations:

- Kosher Pig Acapella
- USC Thornton Concert Choir
- USC Thornton Concert Orchestra
- Keewenaw Symphony Orchestra
- Keewenaw Youth Symphony Orchestra
- Bosconian Youth Orchestra
- Conventus Discessio Band
- Nostalgia String Quartet
- Michigan Tech Concert Choir
- Huskies Pep Band (Lead Strings)
- St. Albert The Great Music Ministry
- St. Brendan Catholic Church Music Ministry
- MTU International Program and Services Volunteer