

Kendrick Mensink, EIT

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1854 S Lilac Ct
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Education

University of California Riverside, PhD in **Mechanical Engineering**, GPA 3.7 (estimated) early 2018
Optical Characterization Lab Research Student, Adventist Christian Fellowship, Graduate Student
Association Representative, Lab Safety Monitor, ABET accreditation coordinator

- Skilled in optical setup, various microscopies, various spectroscopies, surface profilometry
- Ultrafast laser processed waveguide-like structures in transparent ceramic for cranial implants
- Ultrafast laser damage and micromachining in multiple material classes
- Laser treatments of materials for increased absorption, hydrophobicity, biocompatibility and colors
- Laser peening of metal alloys to achieve surface nanocrystallization and higher strengths
- UCR Graduate Mentorship Program, 1% graduate school dropout rate vs. 50% national average
- International collaboration on ultrafast laser research with CICESE institute in Ensenada, Mexico

Walla Walla University, Bachelor of Science in Engineering, GPA 3.75 June 2012

Major: **Mechanical Engineering**, Minor: Mathematics, General Studies Honors

ASME, Varsity Soccer, Junior Class VP, Village Club President & Social VP

- Modeled hertzian stresses for ball and roller bearings to study load capabilities using MATLAB
- Characterized cam/follower pressure angle design using MATLAB and AutoCAD
- Modeled 3D temperature distribution in a fin-cooled electronic component using ANSYS
- Wrote program to find Bisection method and Newton's method solutions using C++
- Made drawings of, modeled, redesigned, and did FEA of train chock using Pro ENGINEER
- Assembled and animated a 5-joint robot arm using Pro ENGINEER
- Manufactured a steam cannon with welded steel parts as group lab project

Teaching Experience

- Once a week English as a Second Language class in rural Ethiopia
- UCR Teaching Assistant Development Program, improved teaching methods in undergraduate courses
- Teaching Assistant for UCR Mechanical Engineering Department classes
Experimental Techniques Laboratory
Introduction to Material Science and Engineering
Fluid Mechanics
- High school, Personal Law course grader and history classroom display creator

Work Experience

Gratias Thermal Systems 6/2012 - 9/2012

- Thermodynamics/fluid mechanics consultant for innovative solid fuel combined Brayton cycle engine

Daimler Trucks North America 2/2012 - 6/2012

- Student Project Engineer, developed and prototyped lightweight system to automatically adjust truck/trailer aerodynamics thereby decreasing drag and increasing fleet fuel efficiency

Gimble Adventist Hospital (Ethiopia) 8/2010 - 3/2011

- Operations Officer, managed and coordinated all non-medical departments and projects including maintenance, water filtration, road construction, drainage, laundry, housekeeping, security, garden, IT, landscaping, troubleshoot huge variety of problems

Walla Walla University School years 2007 - 2012

- Fitness Center Facilitator, regulated and supervised patrons and equipment, answered phone
- PC Lab Attendant, assisted students in and maintained academic computer labs and printers

- Sunset Lake Youth Camp Summers 2008 - 2012
- Boat Driver (WA state certified), Lifeguard (Red Cross certified), Counselor of 5 to 10 campers ages 8-17, taught lego robotics and wakeboarding, maintained boat, participated in drama, role-model

- Auburn Adventist Academy June 2003 - June 2007
- Associated Student Body Social Vice President—planned and executed school events

Awards and Honors

- UC MEXUS Graduate Student Research and Training Fellowship, Jan-Apr 2015, \$5000
- UCR Chancellor's Distinguished Fellowship, 3 years support 2012-2015, \$125,000
- National Science Foundation's Graduate Student Fellowship Program 2013 Honorable Mention, \$1000
- Dean's List of Distinguished Students, Walla Walla University
- Walla Walla University General Studies Honors Program Graduate, \$8,000
- Walla Walla University Alumni Awards in Engineering and Honors Program, \$1000 each

Presentations

- "*Femtosecond Ablation Studies*" K. Mensink, Mechanical Engineering Department Seminar, Riverside, CA, February 27, 2015
- "*Laser Processing and Applications*" K. Mensink, Mechanical Engineering Graduate Student Association Symposium, Riverside CA, May 29, 2014
- "*Ablation threshold and surface roughness in femtosecond laser processing of steels, silicon carbide and tungsten carbide*" K. Mensink, International Materials Research Congress, Cancún, Mexico, August 17-21, 2014
- "*Laser peening case study*" K. Mensink, Mechanical Engineering Department Seminar, Riverside, CA, February 19, 2016

Publications Planned

- Curved Waveguides and Photoluminescence in 8YSZ and Ruby, not yet submitted
- Ultrafast laser damage thresholds and micro machining of Steels, Carbides, Yttria Stabilized Zirconia and Silicon, not yet submitted
- Laser induced patterned surface structures on Magnesium for absorption, hydrophobicity and biocompatibility, not yet submitted
- Laser alloying and peening of ultra-lightweight alloys, not yet submitted

Volunteer Experience

- Be The Match, Engineers Without Borders, Service Days, ESL program, Lego Robotics League Judge, Science Fair Judge
- International Missionary and Operations Officer at Gimbie Adventist Hospital August 2010 - March 2011
- High School Assistant Soccer Coach August 2007 - September 2007
- Short Term Mission Trips:
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| Philippines— Prepared and poured concrete for new school | March 2007 |
| Sri Lanka— Built walls of future school/church | March 2006 |
| Puerto Rico— Painted and cleaned up a run-down youth camp | March 2004 |

Interests and Activities

Biomechanical engineering, energy, lasers, soccer, alternative transportation, personal development

Patents

Spoiler with adjustment dependent on trailer dimensions, GB1223133.8, issued June 5, 2013, with Jonathan Schreven, Don Riley, Qin Ma, Dawn Rinehart, and Thomas Leslie