Amin Ghafari

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EDUCATION

▷ **Ph.D.** in Mechanical Engineering, Minors: Mathematics & Physics, [GPA: 4.0/4.0]   **UC Berkeley**, CA
  Dissertation: *Development of a solver for thermal analysis of a nano-structure*   2014-Aug. 2019(exp)
▷ **M.Sc.** in Mechanical Engineering, [GPA: 4.0/4.0]   **UC Berkeley**, CA
  Thesis: *Numerical study of heat transfer across a nanoscale gap due to phonon tunneling*   2017
▷ **B.Sc.** in Mechanical Engineering, [GPA: 3.99/4.0]   Sharif University of Technology, Iran
  Thesis: *Simulation of dusty plasma in a micro-fabrication process*   2010-2014

RESEARCH INTERESTS

◇ Numerical Simulations and Modeling
◇ Photonics, Phononics and Thermal Physics

EXPERIENCE

▷ **Graduate Student Researcher**, UC Berkeley, Advisor: David B. Bogy   2014-Present
  Contributed to the development of the theory of heat transfer in nanoscale due to photons and phonons
  Developed a solver for the governing integral equations of the developed heat transfer theory in MATLAB
▷ **Internship,** Microfluidics and Cell Laboratory, Sharif University of Technology, Iran   Summer 2012
  Studied the feasibility of designing and manufacturing of a blood cell counter
▷ **Teaching Assistant,** Sharif University of Technology, Iran   Spring 2013
  Machine Elements Design, Fluid Mechanics
▷ **Leadership Experience,** UC Berkeley   2018-Present
  Lead Organizer at Iranian Student Association at America (a registered student organization)

HONORS AND AWARDS

◇ **The Graduate Division Nano Block Grant Award**, UC Berkeley   2018
◇ **Otto and Herta F. Kornei Endowment Fellowship**, UC Berkeley   2017
◇ **The Graduate Division Block Grant Award**, UC Berkeley   2015 & 2017
◇ **Merit-based Admission Offer to the M.Sc. program**   Jan. 2013
  Mechanical Engineering Department, Sharif University of Technology, Tehran, Iran.
◇ **Ranked 3rd**(120 students), ME Department, Sharif University of Technology, Iran   2014
◇ **Ranked 39th**, National University Entrance Exam (among 300,000+ participants), Iran   2010

RECENT PUBLICATIONS

▷ *Controlled heat flux measurement across a closing nanoscale gap*   Applied Physics Letters, 2016
  Ma, **Ghafari**, Budaev, Bogy
▷ *Intense radiative heat transport across a nano-scale gap*   Journal of Applied Physics, 2016
  Budaev, **Ghafari**, Bogy
▷ *Measurement and simulation of nanoscale HDI heat transfer using a PMR head*   IEEE , 2017
  Ma, **Ghafari**, Budaev, Bogy

SOFTWARE SKILLS

◇ **Programming**: C++, C#, Python, Fortran
◇ **Software**: MATLAB, ANSYS, COMSOL, Unity, Git, OpenCV
◇ **Deep Learning:** TensorFlow