

# Albert Kim

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## *Computational Environmental Physics*

### CONTACT INFORMATION

- Address: Civil and Environmental Engineering, University of Hawaii at Manoa, 2540 Dole Street Holmes 383, Honolulu, Hawaii 96822 USA
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### EDUCATION

- Doctor of Philosophy in Civil Engineering (1997–2000)
  - Civil and Environmental Engineering, University of California at Los Angeles, Los Angeles, CA, USA
  - Thesis Title: Dynamics of Particle Aggregation at Engineered and Natural Interfaces
  - Co-advisers: Dr. Keith D. Stolzenbach and Dr. Menachem Elimelech (currently at Yale)
- Master of Science in Civil Engineering (1996–1997)
  - Civil and Environmental Engineering, University of California at Los Angeles, Los Angeles, CA, USA
  - Emphasis in Environmental Engineering
- Master of Science in Physics (1992–1994)
  - Physics, Yonsei University, S. Korea (emphasis in Theoretical Condensed Matter and Statistical Physics)
  - Thesis Title: Monte Carlo Study of Magnetic Property in Polyacetylene
- Bachelor of Science in Physics (1987–1991)
  - Kyung Hee University, Global Campus, S. Korea (graduated with honors)

### ACADEMIC EXPERIENCE

- Department of Civil and Environmental Engineering, University of Hawaii at Manoa
  - Graduate Chair (August 2020–Present), Full Professor (August 2019–Present), Associate Professor (August 2006–July 2019), Assistant Professor (August 2001–July 2006)
- Water Resources Research Center, University of Hawaii at Manoa, Honolulu, Hawaii USA
  - Research Associate (August 2012–July 2015)
- Civil and Environmental Engineering, the University of California, Los Angeles, CA USA
  - Instructor (January 2001–April 2001)
- Institute of the Environment, the University of California, Los Angeles, CA USA
  - Postdoctoral Researcher (April 2000–June 2001)
- Civil and Environmental Engineering, the University of California, Los Angeles, CA USA
  - Graduate Research Assistant (July 1998–March 2000)
  - University of California Regent Scholar (July 1997–June 1998)

### AWARDS

- University of Hawaii Regents' Medal for Excellence in Teaching (2017)
- Researcher of the Month from High Performance Computing at University of Hawaii (March 2007)
- University of Hawaii Regents' Medal for Excellence in Research (2006)
- National Science Foundation Faculty Early Career (CAREER) Award (2005–2010)
- Certificate of Merit Award for Oral Presentation at the 228th American Chemical Society Meeting (2004)

- Outstanding Service Award, North American Membrane Society Annual Meeting (2004)
- Dissertation Year Fellowship from the Department of Civil and Environmental Engineering, University of California at Los Angeles (1999–2000)

## HONORS AND RECOGNITION

### Faculty

- 20 Years of Service Award, Department of Civil and Environmental Engineering, UH Manoa (2021)
- Invited Professor, Korea Research Insititute of Ships and Ocean Engineering, Fall, 2014
- University of Hawaii at Manoa Faculty Senate, Fall, 2012–Spring, 2014
- UH Mano Faculty Senate, Graduate Research and Education Committee, 2012–2014
- 10 Years of Service Award, Department of Civil and Environmental Engineering, UH Manoa (2011)
- 2000 Outstanding Intellectuals of the 21st Century, International Biographical Center, UK, 2010–Present
- International Scholar, Dept. of Chemical Engineering, Kyung Hee University, Korea, 2009–2011
- *Nature* Review Panelist (2008–2011)
- Visiting Professor, Rice University (2008)
- Editorial Board for *Journal of Membrane and Separation Technology*, 2016–Present
- Editorial Board for *Computer Applications in Engineering Education*, 2016–2018
- Editorial Board for *Journal of Environmental Engineering and Ecological Science*, 2011–2012
- Editorial Advisory Board for *Recent Patents on Chemical Engineering*, 2010–2012
- Editorial Board for *ASCE Journal of Energy Engineering*, 2007–2011
- Listed in Strathmore's WHO'S WHO, 2002–Present

### Student Awards

- Tyler Tsuchida, MS Plan A candidate, the 2019 American Council of Engineering Companies, Life Health Trust (LHT) Scholarship as one of 8 distinct awards
- Siu Fung Tang, the XE Bertram Tallamy Scholarship by Chi Epsilon National (2019)
- Lelemia Irvine, PhD candidate, first place poster award in the Pacific Water Conference, Feb. 7–8, 2018, Honolulu, Hawaii, Title: A CFD study: Performance estimation of transport phenomena in a biofiltration process using OpenFOAM
- Shelby Fillinger, MS CEE student, second place poster award, American Water Works Association, Hawaii Meeting, Feb. 7–8, 2018, Honolulu, Hawaii, Title: Can we model root water uptake phenomena in biofiltration swales?
- Lelemia Joshua Irvine, The Kohala Center awards for Hawaiian Scholars' Doctoral Fellowships (2017–2018). Ph.D. candidate in Fall 2018
- Lelemia Joshua Irvine, Graduate Poster Presentation Award, Honorable Mentions, American Indian Science and Engineering Society (AISES), 2017 National Conference, Denver, CO, Sep. 21–23, 2017
- Lelemia Joshua Irvine, Frances Davis Award for Excellence in Undergraduate Teaching for a Graduate Assistant (2013), Teaching Assistant of CEE 271 (Spring 2011 & Spring 2012)

## RESEARCH INTERESTS

- Computational fluid and statistical dynamics (CFSD) for renewable energy processes: seawater desalination, membrane separations, multi-scale particle dynamics
- Applied mathematics and high-performance computing: parallel computing, artificial intelligence, and machine learning
- Socio-economic-cultural analysis for global water scarcity mitigation: applied water economics and virtual water analysis