

# Albert Kim

## Computational Environmental Physics

### CONTACT INFORMATION

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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: Prof. Keith D. Stolzenbach and Prof. 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
  - Yonsei University, 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, Korea
  - Graduated with honor

### ACADEMIC EXPERIENCE

- Department of Civil and Environmental Engineering, University of Hawaii at Manoa
  - *Associate Professor* August 2006 – Present
  - *Assistant Professor* August 2001 – July 2006
- Water Resources Research Center, University of Hawaii at Manoa, Honolulu, Hawaii USA
  - *Research Associate* August 2012 – Present
- Civil and Environmental Engineering, the University of California, Los Angeles, CA USA
  - *Instructor* Winter Quarter, 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
- Natural Science Research Institute, Yonsei University, South Korea
  - *Researcher* March 1994 – July 1995

### AWARDS

- After Tenure
  - **University of Hawaii Regents' Medal for Excellence in Teaching (2017)**
  - 10 Years of Service Award, Department of Civil and Environmental Engineering, UH Manoa (2011)
  - Researcher of the Month from High Performance Computing at University of Hawaii (March 2007)

- Before Tenure
  - **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 National 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)
  - Graduate Student Fellowship from the Department of Civil and Environmental Engineering, University of California at Los Angeles (1998 – 2000)
  - University of California Regent Scholarship (1997 – 1998)

## HONORS AND RECOGNITION

### Faculty

- Invited Professor, Korea Research Institute of Ships and Ocean Engineering, Fall, 2014.
- University of Hawaii at Manoa Faculty Senate, Fall, 2012 – Spring, 2014.
- UH Manoa Faculty Senate Member of Committee of Graduate Research and Education, 2012 – 2014.
- 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*.
- Editorial Board for *Journal of Environmental Engineering and Ecological Science*
- Editorial Advisory Board for *Recent Patents on Chemical Engineering*
- Editorial Board for *ASCE Journal of Energy Engineering* (2007 – 2011)
- Listed in Strathmore's WHO'S WHO (2002 – Present)

### Student Awards

- 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 (2011 Spring and 2012 Spring)

## RESEARCH INTERESTS

- Membrane-based, thermodynamically renewable desalination and energy production
- Dissipative hydrodynamics (DHD) for confined granules, suspended colloids, and settling aggregates
- Parallel computational fluid dynamics (CFD) for membrane separation and wastewater treatment