Curriculum Vitae

Inwon C. Kim

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Research Interest

Analysis of partial differential equations on models arising in physical applications such as wetting, tumor growth, and crowd motion. Particular topics: nonlinear diffusion, geometric flow, dynamic free boundaries and phase transition problems.

Professional Preparation

University of Texas at Austin	Ph.D. in Mathematics, 2002
University of Wisconsin at Madison	M. A. in Mathematics, 1999
Seoul National University	B.A. in Mathematics , 1997

Ph.D and M.A advisor: Takis P. Souganidis.

Appointments

Full professor, UCLA	2014-present
Associate Professor, UCLA	2009-2014
Assistant Professor, UCLA	2005-2009
C.L.E. Moore Instructor, MIT	2002-2005

Awards and Grants

NSF grant DMS-2153254	2022-2025
Simons Fellowship for Sabbatical leave	2020
NSF grant DMS-1900804	2019-2022
NSF grant DMS-1566578.	2016-2019
NSF grant DMS-1300445	2013-2016
NSF grant DMS-0970072	2010-2013
Sloan Fellowship	2008-2011
NSF grant DMS-0700732	2007-2010
NSF grant DMS-0401436	2004-2007

NSF grant DMS-0244991 (co-PI) 2003-2004
Frank III Dissertation Award, Dept. of Mathematics UT Austin 2002

Students and Postdocs

◦ Ph.D students with thesis topic and current positions:

- Eric Kim (2023-) Curvature flows.
- Carson Collins (2022-) Geometric analysis of free boundary problems.
- Raymond Chu (2020-), Density constrained transport and optimal stopping times.
- Ryan Wallace (Ph.D 2022), Long time behavior of the Muskat problem.
  Data Science Industry.
- Dohyun Kwon (Ph.D 2020), Geometric motions.
  Assistant Professor at University of Seoul.
- Yuming Zhang (Ph.D 2019), Regularity of free boundaries.
  Assistant Professor at Auburn University.
- Brent Woodhouse (Ph.D 2018), Density constrained transport.
  Data Science Industry.
- William Feldman (Ph.D 2015), Contact angle dynamics and Hysterisis.
  Assistant Professor (Warnock endowed Chair) at University of Utah.
- Damon Alexander (Ph.D 2014), Density constrained transport.
  Principal Research Scientist, Amazon.
- Yao Yao (Ph.D 2012), Diffusion-Aggregation equations, qualitative behavior.
  Associate professor (Dean's Chair) at National University of Singapore.
- Norbert Pozar (Ph.D 2011), Viscosity soluitons for phase transition problems.
  Associate professor at Kanezawa University, Japan.

◦ Postdoctoral fellows with current positions:

- Jeremy Wu (2022-, with Bertozzi and Gangbo), Hedrick Assistant professor, UCLA
- Matt Jacobs (2019-2021, with Stan Osher and Wilfrid Gangbo), Assistant professor, UC Santa Barbara.
- Jiajun Tong (2018-2021), Assistant professor at BICMR, Peking University.
- Hongwei Gao (2016-19), Lecturer, UC Irvine.
- Olga Turanova (2015-2018), Assistant professor, Michigan State Univ.
- Alpar Meszaros (2015-2019, with Wilfrid Gangbo), Associate professor, Durham University, UK.
- Nestor Guillen (2011-2014), Associate professor, Texas State University.

Recent Communications

◦ Mini-courses and Plenary lectures

Mini-course on Density-constrained transport, Hausdorff Center of Mathematics, Bonn. August 2022
Mini-course on Optimal transport/Interface motion, University of Washington, Seattle. June 2022
Colloquium, UC Berkeley, Apr 2021
Mini-course on minimizing movements, at PIMS-UBC, Vancouver. March 2020
Plenary speaker, SIAM Analysis of PDEs biennial meeting. La Quinta, CA. December 2019
Mini-course on Optimal Transport, Yonsei University, Korea. June 12-14, 2019
Plenary speaker, AMS eastern section meeting, Buffalo NY. 2017

◦ Seminar and Conference talks:

Workshop on liquid thin films, MPI Leipzig. August 2024
Optimal transport and Dynamics, CMO August 2024 (Organizer)
PDE Seminar, UCSD, May 2024
Women in OT, PIMS, Vancouver April 2024 (Organizer)
Applications of OT, Oberwolfach, Feb 2024
Analysis and beyond: in honor of Luigi Ambrosio's 60th Birthday, ETH Zurich, September 2023
Laplacian Growth, IMSI, Chicago. June 2023
Geometric PDEs, OIST, Okinawa, Japan January 2023
SAARC Colloquium, KAIST, June 2022
New Trends in Scientific Computing (Stan Osher's 80th birthday), IPAM, April 2022
Dynamics and Discretization, The Simons Center, October 2021
Symposium for young researchers, KAIST, October 2021
Participating Analysis seminar, UCLA, September 2021
CNA Seminar, CMU, September 2021
Geometric and Applied Analysis, HCM, Bonn, July 2021
Asymptotics, *Operators*, *and Functionals*, University of Bath, UK, April 2021
Optimal transportation in the natural sciences, Oberwolfach, Feb 2021
Connections workshop in Fluid Dynamics, MSRI , Jan 2021
Free boundary problems arising in applications, AMS Sectional meeting, Oct 2020.
Colloquium at UBC, Vancouver, February 2020
Reaction, *Diffusion*, *and Homogenization*, annual Southern California PDE meeting, UC Irvine, CA, June 1-2, 2019.
Workshop on Free boundary problems, Columbia University, NY, May 23-24, 2019
Hamiltonian systems, *from topology to applications*, a workshop at MSRI, November 27th, 2018
PDEs and Geometric Measure theory, a workshop at ETH, Switzerland, November 2018
LMS-EPRSC Durham Symposium, Durham UK, September 2018
Advanced Developments for Surface Dynamics, BIRS, Banff, June 2018

Professional Services

Graduate Vice Chair for UCLA math department (2021-2024)
Editorial board: Communications of the AMS (2021-) and J. Ecole Polytech. Math (2024-)
Panelist for US National Science Foundation.
Referee for mathematics journals.