

Seonguk Kim

University of Alabama at Birmingham
Birmingham, Alabama, USA

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Education

- **University of Alabama at Birmingham** Birmingham, AL
Ph.D. Mathematics 2011 – present
 - Advisor: Yulia Karpechina
 - Research Area: Mathematical physics, Spectral theory
- **Pusan National University** Pusan, South Korea
Combined Master's and Ph.D. Degree Program 2007 – 2011
 - Advisor: Yong Hoon Lee
 - Relevant courses: Elliptic Ordinary Differential Equations with Singular weight
- **Pusan National University** Pusan, South Korea
Bachelor of Science. Mathematics 2000 – 2007
 - Graduated with a Major in Mathematics
 - Graduated with Honours, a 94.0% cumulative average
 - Relevant courses: real and complex analysis, probability, general and algebraic topology, differential geometry, algebra, linear algebra, and set theory functional Analysis, ordinary differential equations, partial differential equations

Awards, Grants & Honours

Graduate Teaching Assistantship (University of Alabama at Birmingham) 2011-2016
Brain Korea, Korea Graduate Scholarship (Pusan National University) 2007-2011
Graduate Research Assistantship (Pusan National University) 2007-2011
Academic Excellence Scholarship (Pusan National University) 2000-2007

Teaching Experience

- **Calculus I** University of Alabama at Birmingham
Instructor Fall. 2015
 - Preparation and presentation of lectures, supervision of group work, writing and grading tests and quizzes, grading projects and papers, grading the final exam for the course
- **Calculus I** University of Alabama at Birmingham
Instructor Fall. 2014
 - Preparation and presentation of lectures, supervision of group work, writing and grading tests and quizzes, grading projects and papers, grading the final exam for the course
- **Pre-calculus** University of Alabama at Birmingham
Instructor Fall. 2013
 - Preparation and presentation of lectures

- **Tutoring** University of Alabama at Birmingham
Teaching Assistant Sept. 2011 – present
 – Provided one-on-one and group tutoring to students in first and second year math courses.
- **Elementary Ordinary Differential Equations** Pusan National University
Sessional Lecturer From Spring 2009, to Fall 2010
 – Created assignments, examinations, and taught the course.
- **Calculus** Pusan National University
Sessional Lecturer From Spring 2008, to Fall 2008
 – Created assignments, examinations, and taught the course.
- **Middle School Math** Sila Middle School
Supplementary Math Lessons From July to August. 2008
 – Helped students to prepare math lessons in the next semester and recall math lessons in the last semester.
- **Calculus** Pusan National University
Teaching Assistant From Spring 2007, to Fall 2007
 – Led seminars guiding students through difficult problems and reviewing course material.
 – Marked assignments for the course.

Presentations

- *Perturbation Formulas for Gross-Pitaevskii Equation with Periodic Potential*
 – The Probability and Mathematical Physics seminar, UAB (October 2015).
- *Perturbation of Gross-Pitaevskii equation*
 – The 35th SARC on Differential Equations – The University of North Carolina at Greensboro, Greensboro (October 2015).
- *Introduction to the second order differential equation with singular weight*
 – 2010 Junior Math Colloquium Program – Pusan National University, Pusan (September 2010).
- *An extremal problem on a non-compact set*
 – 2009 Junior Math Colloquium Program – Pusan National University, Pusan (November 2009).
- *Minimization of eigenvalues for an elliptic boundary value problem*
 – Workshop joint with PNU, KNU and CNU – Chonnam National University, Kwangju (October 2009).
- *Criterion of singular weights for discrete and continuous spectrums*
 – The 3rd OCU-PNU-KNU Joint Graduate Student Workshop – Osaka City University, Osaka (April 2009).

Participation in Workshops and Conferences

- **The 35th SARC on Differential Equations** Greensboro, NC, USA
The University of North Carolina at Greensboro October 10-11, 2015
- **10th MSU Conference on Differential Equations** Mississippi State, MS, USA
Mississippi State University October, 23-25 2014
- **2014 NSF/CBMS Conference** Birmingham, AL, USA
University of Alabama at Birmingham June 16-20, 2014
- **GAP XI Pittsburgh** Pittsburgh, PA, USA
University of Pittsburgh August 19-23, 2013
- **PARC February Monthly Seminar** Seoul, Republic of Korea
Seoul National University February, 2010
- **First Joint Meeting of KMS and AMS** Seoul, Republic of Korea
Ihwa University December 16, 2009
- **International workshop on nonlinear PDE and application** Seoul, Republic of Korea
Seoul National University June 18, 2009
- **Intensive lecture program on nonlinear PDE and application** Busan, Republic of Korea
Pusan National University June 9, 2008
- **The 9th International Workshop on Differential Equations** Kwangju, Republic of Korea
Chonnam National University May 29-31, 2008
- **International workshop on nonlinear analysis** Busan, Republic of Korea
Pusan National University July 23, 2007
- **2005 KMS Fall Meeting** Seoul, Republic of Korea
Seoul National University October 16, 2005

Publications

- 1) Yong-Hoon Lee, Seong-Uk Kim, and Eun Kyoung Lee, *Three Solutions Theorem for p -Laplacian Problems with a Singular Weight and Its Application*. Abstract and Applied Analysis, 502756, (2014).