

Curriculum Vitae

Yun-Su Kim

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Education

- **Ph.D. in Mathematics**, Indiana University, Bloomington, Indiana, 2006
Advisor : Dr. Hari Bercovici
Thesis : *Linear Algebraic Properties of C_0 -operators*
- **M.S. in Mathematics**, Seoul National University, Korea, 1998
- **B.S. in Mathematics**, Sungshin Women's University,

Professional Experience

- **Visiting Faculty** : Department of Mathematics,
University of Toledo, Toledo, OH,
Fall 2007 - Present
- **Summer Visitor** : Department of Mathematics,
Texas A&M University
June 21 - August 12, 2008,
July 14 - August 10, 2007
- **Mathematics Tutor** : Academic Support Centers,
Indiana University, Bloomington, IN,
Fall 2006, Spring 2007
- **Associate Instructor** : Department of Mathematics,
Indiana University, Bloomington, IN,
Spring 2000, Fall/Spring 2001-2005, Spring 2006

Research Interests

- **A Generalization of Beurling's Theorem**
- **Banach Spaces**
- **C_0 -operators**
- **Hilbert modules**
- **Invariant Subspaces**
- **Operator Spaces**

Publications

- (with Ronald G. Douglas) *Reducing Subspaces on the Annulus* :
to appear in Integral Equations and Operator Theory.
- *Quasi-Inner Functions of a Generalized Beurling's Theorem* :
To appear in Bulletin of the Korean Mathematical Society.
- *Modular Lattice for C_0 -Operators* :
Integral Equations and Operator Theory, Vol. **62**(4) (2008),
591-594.
- *Linear algebraic properties for Jordan models of C_0 -operators
relative to multiply connected domains* :
J. Operator Theory, Vol. **57**(2) (2007), 375-389.
- *Linear Algebraic Properties of C_0 -Operators* : Ph.D. Thesis,
Indiana University, July 2006.
Note : I granted permission to the IU library website to make my thesis
available for download (July 2009).
- *Hilbert Spaces with respect to Operator-Valued Norms* :
will be submitted.
- *Algebraic Elements and Invariant Subspaces* :
submitted.
- *N^p -Spaces* : submitted.
- *C_0 -Hilbert Modules* : submitted.
- *A Shift Operator on $L(H^2)$* : preprint.
- *Every Transcendental Operator has a Non-trivial Invariant Subspace* : preprint.
- *The relationships between Invertible Module Maps X and X_z* : preprint.

Invited talks

- **IWOTA 2009**
"Hilbert Spaces with respect to Operator-valued Norms" ,
CIMAT (Center for Research in Mathematics), Mexico, Sep 21-Sep 25, 2009.
- **Workshop in Analysis and Probability**
"Hilbert Spaces with respect to Operator-valued Norms" ,
Texas A&M University, July 17, 2009.
- **KOTAC 2009**
"Every transcendental operator has a non-trivial invariant subspace"
kyungpook national university, June 18, 2009.
- **AMS Meeting**
"Every transcendental operator has a non-trivial invariant subspace"
University of Illinois at Urbana Champaign, March 29, 2009.
- **Operator Theory Seminar**
" N^p -Spaces" ,
University of Toledo, Oct 2, 2008.
- **Workshop in Analysis and Probability**
" N^p -Spaces" ,

Texas A&M University, July 8, 2008.

- **Southeastern Analysis Meeting**
 “A Generalization of Beurling’s Theorem” ,
 Vanderbilt University, 2008.
- **Operator Theory Seminar**
 “A Generalization of Beurling’s Theorem and C_0 -operators” ,
 University of Toledo, Oct 24, 2007.
- **Workshop in Analysis and Probability**
 “A Generalization of Beurling’s Theorem and C_0 -operators” ,
 Texas A&M University, Aug 1, 2007.
- **Operator Algebras Seminar**
 “A Generalization of Beurling’s Theorem and C_0 -operators” ,
 Purdue University, Feb 22, 2007.
- **Great Plains Operator Theory Symposium**
 “A Generalization of Beurling’s Theorem” ,
 University of Nebraska - Lincoln May 15 - 20, 2007.
- **Great Plains Operator Theory Symposium**
 “Modular Lattice” , University of Iowa, May 24-May 28, 2006.

Honors and Awards

- **NSF Travel Grants:**
 IWOTA 2009,
 CIMAT (Center for Research in Mathematics), Mexico,
 Sep 21-Sep 25, 2009.
- **NSF Travel Grants:**
 Workshop in Analysis and Probability,
 Department of Mathematics, Texas A&M University,
 July 14 - Aug 10, 2007, June 21 - Aug 12, 2008, and
 July 15 - Aug 15, 2009.
- **NSF Travel Grants:**
 Southeastern Analysis Meeting,
 Department of Mathematics, Vanderbilt University,
 March 5 - 9, 2008
- **Glenn Schober Travel Award:**
 Department of Mathematics, Indiana University, Bloomington
 2003, 2004, 2006.
- **Research Assistantship:**
 Research assistant for Professor H. Bercovici ;
 6 summer sessions

Teaching

- Instructor, UT, M 1860, Calculus II (Fall 2008).
- Instructor, UT, M 2890, Linear Algebra (Fall 2008).
- Instructor, UT, M 1320, College Algebra (Spring 2008, Fall 2009).
- Instructor, UT, M 1850, Calculus I (Spring 2008).

- Instructor, UT, M 1830, Calculus I (Fall 2007).
- Instructor, UT, M 1750, Calculus-Life Sci with App I (Fall 2007, Spring 2009, Fall 2009).
- Teaching Assistant, IU, Math 025, Pre-Calculus (Fall 2005).
- Teaching Assistant, IU, T 103, Math For Elementary Teachers (Spring 2004).
- Instructor, IU, M 026, Trigonometric Functions (Spring 2003).