

Katherine C. Heller

North Central College
30 N. Brainard St.
Naperville, IL 60540

Phone: (630)637-5226 (office)
E-mail: kheller@noctrl.edu

Education

2010 Ph.D., Mathematics, University of Virginia
Thesis: “Composition Operators on $S^2(\mathbb{D})$ ”
Thesis Advisor: Barbara D. MacCluer
2006 M.S., Mathematics, University of Virginia
2004 B.S., Mathematics, University of South Carolina

Research Interests

Primary research interest is function-theoretic operator theory, specifically composition operators on spaces of analytic functions.

Teaching Experience

Assistant Professor, North Central College
September 2010-present
Graduate Student Instructor, University of Virginia
August 2004-May 2010

Awards

Clarence F. Dissinger Award for Distinguished Teaching and Mentoring by a Junior Faculty Member, North Central College
2014 Winner
Featured in an article for *A&S Online Magazine*, UVa
High Anxiety: Mathematics grad student Katherine Heller’s passion for teaching helps students overcome their fears, April 2009
All-University Graduate Teaching Assistant Award, UVa
2009 Winner
Mathematics Department Graduate Teaching Assistant Award, UVa
2009 Winner, 2008 Finalist

Publications

“Composition Operators with Monomial Symbols Acting on Weighted Hardy Spaces” With M. Pons, in progress
“Commutators of Composition Operators on $S^2(\mathbb{D})$ ” *Houston J. Math.*, to appear
“Multiplication Operators on $S^2(\mathbb{D})$ ” With R. Allen and M. Pons, *Acta. Sci. Math. (Szeged)*, to appear
“Isometric Composition Operators on the Analytic Besov Spaces” With R. Allen and M. Pons, *J. Math. Anal. Appl.* 414, No 1, 414-423, 2014
“Compact Differences of Composition Operators on Weighted Dirichlet Spaces” With R. Allen and M. Pons, *Cent. Eur. J. Math.*, 12, No 7, 1040-1051, 2014
“Adjoint of Linear Fractional Composition Operators on $S^2(\mathbb{D})$ ” *J. Math. Anal. Appl.* 394, No 2, 724-737, 2012
“Compact Differences of Composition Operators in Several Variables” With B.D. MacCluer and R. Weir, *Integral Equations and Operator Theory*, Vol 69, No 2, 247-268, 2011

Scholarly Presentations

Invited speaker, Central Michigan University Graduate Colloquium, March 2013
Invited speaker, Elmhurst College Undergraduate Colloquium April 2012
Presentation at the Southeastern Analysis Meetings University of Florida, March 2011
Invited speaker, University of Georgia Graduate Seminar, March 2011
Presentation at the AMS-MAA Joint National Meetings San Francisco, January 2010

Professional Activities

Co-organizer of a Special Session on Operator Theory in Analytic Function Spaces, AMS-MAA Joint National Meetings Boston, MA, January 2012
Project NExT Fellow, 2010-2011
Co-organizer of a Panel Discussion on Online Homework, Project NExT Workshop, Lexington, KY, August 2011
Funded participant at the Southeastern Analysis Meetings held at the University of Florida 2011, University of South Florida 2009, University of Richmond 2007, and University of Florida 2006

Academic Service

Faculty Personnel Committee, North Central, 2015-present
Academic Programs Assessment Committee, North Central, 2014-present
College Scholars Committee, North Central, 2012-2014
Cultural Events Committee, North Central, 2011-2013
Member of Tenure-Track Search Committee for Math (2012-2013) and Finance Departments (2014-2015)
Faculty Advisor of Pi Mu Epsilon/Math Club, North Central, 2011-present
Designed an Honors Seminar, *Math for Social Justice*, Spring 2013
Introduced and coordinate the online homework system, WeBWorK, North Central, 2010-present
Directed honors thesis project, North Central, 2015-2016
“The Application of Statistical Matrix Theory to the Prediction of the TONY Awards”
Directed honors thesis project, North Central, 2013-2014
“Effectiveness of Course Offerings Using Graph Theory”

Additional Outreach

Girls and Mathematics Summer Program
Co-Director at North Central College, Summer 2013, 2014, 2015
Assistant Director at Temple University, Summer 2012
Co-Director of E^2 North Central Math Circle, 2013-2015
Funded by a grant from MAA
Sonia Kovalevsky Grant Selection Committee for the Association for Women in Mathematics (AWM), 2011-2012
Co-organizer of the AWM Booth, USA Science and Engineering Festival Washington, D.C., April 2012
Co-director of Sonia Kovalevsky Day, North Central College, 2011
Funded by a grant from AWM and NSF
Judge for an Undergraduate Poster Session at the AMS-MAA Joint National Meeting held in New Orleans, LA, January 2011