

Matej Penciak

CONTACT INFORMATION	Department of Mathematics Northeastern University 360 Huntington Ave. Boston, MA 02115	<i>E-mail:</i> m.penciak@northeastern.edu <i>Office:</i> 536 Nightingale Hall
EMPLOYMENT	Northeastern University Boston, MA Zelevinsky Postdoctoral Fellow	Fall 2019 - Present
EDUCATION	University of Illinois at Urbana-Champaign, Urbana, IL Ph.D., Mathematics	Fall 2012 - Spring 2019
	University of Rochester, Rochester, NY B.A. Honors, Mathematics, B.S., Physics magna cum laude	Fall 2008 - Spring 2012
TEACHING EXPERIENCE	Northeastern University <i>Instructor of Record</i> <ul style="list-style-type: none">• Math 7363, Topics in Algebraic Geometry: Spring 2021• Math 3150, Real Analysis: Fall 2021• Math 2321, Calculus 3: Spring 2020, Fall 2020, Fall 2021• Math 2331, Linear Algebra: Fall 2019 University of Illinois at Urbana-Champaign <i>Teaching Assistant</i> <ul style="list-style-type: none">• Math 124, Finite Math: Spring 2018• Math 221, Calculus 1: Fall 2012, Head TA Fall 2014• Math 231, Calculus 2: Head TA Fall 2015, Spring 2016• Math 241, Calculus 3: Spring 2013 - Spring 2014, Spring 2015, Fall 2017, Spring 2019• Math 415, Linear Algebra: Fall 2018• Rated as excellent by students 7/11 semesters teaching University of Rochester, Rochester, New York USA <i>Teaching Assistant</i> <ul style="list-style-type: none">• Calculus 1, Algebra 1 Honors, Algebra 2• Quantum Mechanics Ross Mathematics Program, Columbus, Ohio USA <ul style="list-style-type: none">• <i>Junior Counselor</i>• <i>Counselor</i>	Fall 2019 - Present Fall 2012 - Spring 2019 Fall 2010 - Spring 2012 June - August 2008 June - August 2009/2010/2012
RESEARCH ASSISTANTSHIPS	Illinois Geometry Lab Graduate Mentor University of Illinois at Urbana-Champaign, Katelyn Leisman Simulating Multi-Soliton Solutions to Non-Linear Wave Equations Illinois Geometry Lab Graduate Mentor University of Illinois at Urbana-Champaign, Thomas Nevins Interactive Tools for Integrable Dynamic Systems	Spring and Fall 2018 Spring 2019

Northeastern Undergraduate Research Mentor**Spring 2020-Summer 2021**

Calculating examples of Quasi-Hamiltonian Reduction with Seth Berman

Leading Undergraduate Learning Lean Seminar**Spring 2022**

Leading undergraduates in mathematics and computer science to contributing to Leanproject's mathlib

**HONORS AND
AWARDS**

Kuo-Tsai Chen Prize for Geometry and Analysis, 2017

Arthur S. Gale Award for Achievement in Mathematics, 2012

PUBLICATIONSMartin T. Luu and Matej Penciak. Langlands Parameters of Quivers in the Sato Grassmannian. *Comm. Math. Phys.*, 357(2):775-789, 2018.Matej Penciak. Spectral Description of the Spin Ruijsenaars-Schneider System. arXiv:math/1909.08107 *submitted*.Martin T. Luu, and Matej Penciak. W-algebra Symmetry of Drinfeld-Sokolov τ -functions. *in preparation***CONFERENCE
PRESENTATIONS**

Poster "Bispectrality in Calogero Moser and Ruijsenaars Schneider Systems" at Summer School on Geometric Representation Theory. Jul 9-13, 2018. IST Austria.

"Spectral Description of the Ruijsenaars-Schneider System" at AMS Special Session on Modern Trends in Integrable Systems. Oct 20-21, 2018. University of Michigan.

"Spectral Description of the Ruijsenaars-Schneider System" at AMS Special Session on Geometric Methods in Representation Theory. Nov 9-10, 2019. UC Riverside.

"Spectral Description of the Ruijsenaars-Schneider System" at CMS Winter Meeting, session on Algebraic Geometry and Representation Theory. Dec 6-9, 2019.

INVITED TALKS

Joint CUHK-Harvard-YMSC Differential Geomtry Seminar, Fall 2020

Graduate Algebraic Geometry Seminar at UIUC, Fall 2020

Algebraic Geometry Seminar at UC Davis, Spring 2020.

RELEVANT SKILLS

Programming language proficiency - Python and Haskell

Scientific computing libraries - Scipy, Matplotlib, introductory NetworkX

Quantum computing and machine learning libraries - Qiskit, introductory Pytorch, and Pandas

Computer algebra software - Mathematica, Maple, MATLAB

Markup language proficiency - \LaTeX , HTML