

# J. Elisenda Grigsby

# Curriculum Vitae

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Math Dept, Boston College, 357 Carney Hall, Chestnut Hill, MA 02467-3806  
Phone: 650 814 4389 (cell), E-mail: egrigsby@post.harvard.edu

## Employment:

- 2009–pres **Boston College**  
Associate Professor, 2014 - pres  
Assistant Professor, 2009 - 2014
- 2006–2009 **Columbia University**  
National Science Foundation Postdoctoral Fellow

## Short-term Positions:

- Spr 2010 **Mathematical Sciences Research Institute**  
Viterbi Endowed Postdoctoral Scholar
- 2005–2006 **Columbia University**  
Visiting graduate student, Mathematics department

## Education:

- 2000–2005 **University of California, Berkeley**  
Ph.D., Mathematics, received May 2006  
*Knot Floer Homology in Cyclic Branched Covers*  
Thesis advisors: Robion Kirby, Peter Ozsváth
- 1994–1999 **Harvard University**  
A.B. Cum Laude, Mathematics, received Mar 1999

## Scientific Honors:

- 2014 **AWM-Birman Research prize**
- 2012–pres. **National Science Foundation CAREER grant DMS-1151671**
- 2012 **Boston College Faculty Fellowship**
- 2012 **Boston College Research Incentive Grant**
- 2009–2012 **National Science Foundation research grant DMS-0905848**
- 2006–2009 **National Science Foundation postdoctoral fellowship**
- 2006 **University of California Dissertation-Year Fellowship**

## Professional Service:

- Apr 2015 **AWM Research Symposium special session**, *Lead organizer*
- Aug 2014 **ICERM workshop: Combinatorial link homology theories, braids, and contact geometry**, *Lead organizer*
- Apr 2013 **AMS Sectional Meeting Special Session**, *Co-organizer*
- Jan 2010 **Connections for Women workshop: Knot homology theories**, *Lead organizer*
- Aug 2008 **Rob Kirby's 70th Birthday Conference**, *Co-organizer*
- National Science Foundation**, *Low-dimensional topology grant panel*

## Publications/Preprints:

- “An elementary fact about unlinked braid closures,”  
with Stephan Wehrli, arXiv:math.GT/1309.0759  
*Submitted*
- “Sutured Khovanov homology distinguishes braids from other tangles,”  
with Yi Ni, arXiv: math.GT/1305.2183  
*Submitted*
- “Sutured Khovanov homology, Hochschild homology, and the Ozsváth-Szabó spectral sequence,”  
with Denis Auroux and Stephan Wehrli, arXiv: math.GT/1303.1986  
*Transactions of the AMS*, in press
- “Categorified invariants and the braid group,”  
with John A. Baldwin, arXiv: math.GT/1212.2222  
*Proceedings of the AMS*, in press
- “Khovanov-Seidel quiver algebras and bordered Floer homology,”  
with Denis Auroux and Stephan Wehrli, math.GT/1107.2841  
*Selecta Mathematica*, (2012), 10.1007/s00029-012-0106-2
- “On gradings in Khovanov homology and sutured Floer homology,”  
with Stephan Wehrli, arXiv: math.GT/1010.3727  
*Topology and Geometry in Dimension Three: Triangulations, Invariants, and Geometric Structures*,  
(2011) Vol. 560, *Contemporary Mathematics*, 111-128, AMS.
- “On the naturality of the spectral sequence from Khovanov homology to Heegaard Floer homology,”  
with Stephan Wehrli, arXiv: math.GT/0907.4378  
*Int. Math. Res. Notices*, (2010); doi: 10.1093/imrn/rnq039
- “Khovanov homology, sutured Floer homology, and annular links,”  
with Stephan Wehrli, arXiv: math.GT/0907.4375  
*Algebraic & Geometric Topology* 10 (2010) 2009-2039
- “On the colored Jones polynomial, sutured Floer homology, and knot Floer homology,”  
with Stephan Wehrli, arXiv: math.GT/0807.1432  
*Advances in Mathematics*, (2009), doi:10.1016/j.aim.2009.11.002.

## Publications/Preprints:

“Grid diagrams and Legendrian lens space links,”  
with Kenneth Baker, arXiv: math.GT/0804.3048

*Journal of Symplectic Geometry*, (2009) Vol.7, Issue 4, 415-448.

“Grid diagrams for lens spaces and combinatorial knot Floer homology,”  
with Kenneth Baker and Matthew Hedden, arXiv: math.GT/0710.0359

*Int. Math. Res. Notices*, (2008) Vol. 2008 : article ID rnn024

“Knot concordance and Heegaard Floer homology invariants in branched covers,”

with Daniel Ruberman and Sašo Strle, arXiv: math.GT/0701460

*Geometry & Topology*, 12 (2008) 2249-2275

“Combinatorial description of knot Floer homology of cyclic branched covers,”

arXiv: math.GT/0610238

“Knot Floer homology in cyclic branched covers,”

arXiv: math.GT/0507498

*Algebraic & Geometric Topology*, 6 (2006) 1355-1398

## Invited Conference/Colloquium Talks:

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| 2014 | Nov | Texas Geometry & Topology Conference  |
| 2013 | Oct | AMS Sectional Meeting, Washington University  |
|      | Jul | Low-dimensional topology after Floer, Centre de Recherches Mathématiques            |
|      | May | Low-dimensional topology workshop, Simons Center for Geometry and Physics           |
|      | Apr | Banff 5-day workshop, Banff International Research Station                          |
|      | Apr | Colloquium, Wellesley College   |
|      | Mar | AWM Research Symposium, Santa Clara University                                      |
|      | Jan | AMS Joint Mathematics meeting, San Diego  |
| 2012 | Apr | Graduate Student Topology Conference, Indiana University                            |
|      | Mar | Topology Workshop, Tokyo Institute of Technology                                    |
|      | Jan | AMS Joint Meeting, Boston   |
| 2011 | Sep | AMS Sectional Meeting, Cornell University   |
|      | Jun | Trimester on Contact and Symplectic Topology, Université de Nantes                  |
|      | Mar | Banff 5-day workshop, Banff International Research Station                          |
| 2010 | Sep | Hamilton Geometry & Topology workshop on Knots, Surfaces, and 3-manifolds, Dublin   |
|      | Jul | Mirror Symmetry Workshop, MIT   |
|      | Jun | Categorification and Low-dimensional Topology conference, SUNY, Stony Brook         |
|      | Jun | Jaco's 70th Birthday conference, Oklahoma State University                          |
|      | Mar | MSRI Research workshop: Homology theories of Knots and Links, Berkeley              |
|      | Feb | MSRI Academic Sponsors meeting, Berkeley  |
|      | Jan | MSRI Introductory workshop: Homology theories of Knots and Links, Berkeley          |
|      | Jan | MSRI Connections for Women workshop: Homology theories of Knots and Links, Berkeley |
|      | Jan | AMS Joint National meeting, San Francisco   |

**Invited Conference/Colloquium Talks:**

- 2009 Nov First National Forum of Young Topologists, Tulane
- Oct Math/Stats Colloquium, Colby College
- Jun Scharlemann's 60th Birthday conference, UC, Davis
- Apr AMS Sectional Meeting, North Carolina State University
- Mar Banff 5-day workshop, Banff International Research Station
- Feb Colloquium, University of Massachusetts, Amherst
- Jan Colloquium, Syracuse University
- Jan Colloquium, University of Iowa
- Jan Colloquium, University of California, Santa Cruz
- Jan Colloquium, Boston College
- Jan Colloquium, Tulane University
- Jan Colloquium, Rice University
- 2008 Dec Colloquium, University of Southern California
- Nov Colloquium, Wesleyan University
- Oct Modern Math Workshop, Salt Lake City
- Aug Holomorphic Curves Workshop, Stanford University
- Jun Jerry Levine Memorial Conference, Brandeis University
- Mar AMS Sectional Meeting, Louisiana State University
  
- 2007 Oct Colloquium, University of Nevada, Reno
- Sep Colloquium, Bryn Mawr University
- May Georgia Topology Conference, University of Georgia
- Mar Banff 5-day Workshop, Banff International Research Station
- 2006 Nov Ron Fintushel's 60th Birthday Conference, Tulane University
- Oct Texas Geometry and Topology Conference, Rice University
- 2005 Nov Colloquium, Bryn Mawr University

**Invited Seminar Talks:**

- 2013 Dec Geometry/Topology seminar, University at Buffalo, SUNY
- Nov Symplectic Geometry and Categorification seminar, Columbia University
- Nov Gauge theory and Topology seminar, Harvard University
- Oct Geometry/Topology seminar, University of Southern California
- Sep Topology seminar, Michigan State University
- May Topology seminar, Northwestern University
- Apr Mathematics seminar, Smith College
- Mar Topology seminar, Caltech
- 2012 Sep Topology seminar, Simons Center for Geometry & Physics
- Apr Symplectic geometry seminar, Columbia University
- Mar Philadelphia area Geometry-Topology seminar, University of Pennsylvania
- Jan Topology seminar, UC San Diego
- 2011 Oct Topology seminar, Dartmouth University
- Oct Topology seminar, Wesleyan University
- 2010 Nov Research seminar in mathematics, Northeastern University
- Oct Topology seminar, Brandeis University
- Sep Gauge Theory and Topology seminar, Harvard University
- Jan Algebra-Geometry-Combinatorics seminar, San Francisco State University

### Invited Seminar Talks:

- 2009 Oct Topology seminar, University of California, Berkeley  
Oct Geometry seminar, Boston University  
Sep Geometry seminar, Massachusetts Institute of Technology  
Sep Topology seminar, Tufts University  
Sep Topology seminar, Boston College  
Apr Topology seminar, University of Virginia
- 2008 Dec Topology seminar, Princeton University  
Nov Topology seminar, University of Texas, Austin  
Apr Topology seminar, Michigan State University  
Apr RTG Lecture, Michigan State University  
Mar Topology seminar, University of Georgia
- 2007 Oct Topology seminar, University of California, Berkeley  
Feb Symplectic Geometry Seminar, Columbia University  
Feb Geometry/Topology Seminar, Université du Québec à Montréal  
Jan Topology Seminar, Georgia Institute of Technology
- 2006 Nov Geometry Seminar, Massachusetts Institute of Technology  
Oct Topology Seminar, University of Texas, Austin  
Oct Topology Seminar, Lafayette College  
Jun Topology Seminar, Rice University  
May Topology Seminar, University of California, Santa Barbara  
Mar Topology Seminar, Princeton University  
Mar Topology Seminar, University of Pennsylvania
- 2005 Aug Topology Seminar, Indiana University

### Teaching:

#### **Boston College**

- MT 831, *Graduate Geometry/Topology III*, Instructor, Fall 2014
- MT 855, *Applications of homology-type invariants in low-dimensional topology*, Spring 2014
- MT 216, *Introduction to Abstract Mathematics*, Instructor, Fall 2013, Spring 2013, Spring 2012
- MT 808, *Graduate Geometry/Topology I*, Instructor, Fall 2011
- MT 210, *Upper-Division Linear Algebra*, Instructor, Fall 2010
- MT 105, *Honors Single-variable Integral Calculus*, Instructor, Fall 2009

#### **Columbia University**

- Calculus IV, *Multivariable Calculus*, Instructor, Spring 2009
- Undergraduate Topics in Geometry, *Knot Theory*, Instructor, Fall 2008
- REU, *Tower of Hanoi*, Co-Instructor (with J. Behrstock), Summer 2008
- Calculus IV, *Multivariable Calculus*, Instructor, Spring 2007

#### **UC, Berkeley**

- Math 55, *Discrete Mathematics*, Graduate Student Instructor, Fall 2004
- Math 110, *Upper-Division Linear Algebra*, GSI, Spring 2004
- Math 113, *Upper-Division Abstract Algebra*, GSI, Spring 2003
- Math 32, *Precalculus*, GSI, Fall 2002
- Math 54, *Lower-Division Linear Algebra*, GSI, Spring 2002
- Math 1A, *Calculus*, GSI, Fall 2001

## Community/University Service:

- Jun 2013 **Association for Women in Science**, *Resume round table reviewer*  
Reviewed CVs and offered advice during a 4-hour resume round table event
- May 2013 **BC Math Department Awards Ceremony**, *Speaker*  
Gave 20 minute math presentation at departmental awards ceremony
- 2011–pres **Boston College Mathematics Society**, *Faculty advisor*  
Organized information sessions on *Careers in mathematics*, *Research Experience for Undergraduates (REUs)* and *Applying to graduate school*,  
Organized undergraduate lectures by local professionals on data science and information security
- 2008–pres **Girls' Angle**, *Board of directors*  
Developed web content and provided operational advice for growing non-profit that encourages young women's interest in mathematics through mentorship and outreach:  
*www.girlsangle.org*
- Sep 2011 **Math Prize for Girls**, *Panel discussion moderator*  
Led a panel discussion showcasing nationally recognized math enrichment programs
- Aug 2010 **Hampshire College Summer Studies in Mathematics**, *Guest lecturer*  
Lectured on elementary topology to talented high-school students
- May 2010 **Girls Inc**, *Guest instructor*  
Led an hour-long discussion on topology with elementary schoolers in after-school program

## Postdoctoral Mentorship:

- Sum 2014 **Hoel Queffelec**, Visting exchange scholar, Boston College  
2010 - 2012 **Daniel Mathews**, Postdoctoral scholar, Boston College

## Graduate Mentorship:

- 2014 - 2015 **Merve Cengiz**, *Sponsoring scientist, Boston College*  
Spr 2014 **Joshua Batson**, *Dissertation defense committee, MIT*  
Spr 2013 **Diana Hubbard**, *Candidacy exam, Boston College*  
Sum 2012 **Adam Saltz**, *Reading course, Boston College*  
Sum 2012 **Beth Romano**, *Reading course, Boston College*  
Jul 2012 **Candice Price**, *Dissertation defense committee, University of Iowa*  
Fall 2011 **Ian Banfield**, *Reading course, Boston College*  
Sum 2011 **Diana Hubbard**, *Reading course, Boston College*  
May 2011 **Allison Gilmore**, *Dissertation defense committee, Columbia*  
May 2010 **Thomas Peters**, *Dissertation defense committee, Columbia*  
Apr 2010 **Audry Ayivor**, *MSc thesis committee, University of Cape Town*

**Undergraduate Mentorship:**

- 2014 - 2015 **Zachary Skarka**, *Undergraduate thesis advisor*, Boston College
- Sum 2013 **Ga Yee Park**, *Undergraduate research fellowship mentor*, Boston College
- Sum 2013 **Filip Piasevoli**, *Summer research project mentor*, Boston College
- Sum 2013 **Zachary Skarka**, *Summer research project mentor*, Boston College
- Spr 2013 **Octavio Freitas**, *Readings & research course*, Boston College
- Sum 2011 **Lisa Piccirillo**, *Undergraduate research fellowship mentor*, Boston College  
Invited with full financial support to present results at *Young Mathematician's Conference 2011* at Ohio State University  
Awarded NSF graduate research fellowship, 2013
- Spr 2009 **So Eun Park**, *Honors thesis advisor*, Columbia  
*The Group of Symmetries of the Tower of Hanoi Graph*  
Published in *American Mathematical Monthly*, (2010) Vol. 117, No. 4
- Spr 2009 **Michael Rand**, *Honors thesis advisor*, Columbia  
*On the Frame-Stewart Algorithm for the Tower of Hanoi*

**Referee/Reviewer:**

Algebraic & Geometric Topology (2008, 2010, 2013)  
American Journal of Mathematics (2009)  
Communications in Contemporary Mathematics (2010)  
Duke Mathematical Journal (2012)  
Geometry & Topology (2008, 2013)  
Geometry & Topology Monographs (2014)  
International Mathematics Research Notices (2011)  
Journal of Differential Geometry (2010)  
Mathematical Research Letters (2012)  
Michigan Journal of Mathematics (2008)  
Quantum Topology (2013)  
Topology & its Applications (2012)  
Zentralblatt MATH (2012, 2013)