

———— ( JOHN B. ETNYRE ) ————

School of Mathematics  
Georgia Institute of Technology  
Atlanta, GA 30332-0160  
<http://www.math.gatech.edu/~etnyre>

Office: 404.894.2700  
Fax: 404.894.4409  
[etnyre@math.gatech.edu](mailto:etnyre@math.gatech.edu)

## RESEARCH INTERESTS

**GEOMETRIC TOPOLOGY:** knot theory, three and four manifold theory

**DIFFERENTIAL GEOMETRY:** symplectic and contact geometry

**DYNAMICAL SYSTEMS:** fluid dynamics, non-holonomic dynamics

## ACADEMIC DEGREES

### PH.D MATHEMATICS

December 1996

*University of Texas, Austin, Texas*

Thesis: “*Symplectic constructions on 4-manifolds*”; Advisor: Robert E. Gompf

### B.S. MATHEMATICS *with honors*

May 1989

*University of Texas, Austin, Texas*

## PROFESSIONAL POSITIONS HELD

### PROFESSOR

2008–present

*Georgia Institute of Technology, Atlanta, Georgia*

### ASSOCIATE CHAIR FOR GRADUATE STUDIES

2012–2015

*Georgia Institute of Technology, Atlanta, Georgia*

### ASSOCIATE PROFESSOR

2005–2008

*Georgia Institute of Technology, Atlanta, Georgia*

### ASSOCIATE PROFESSOR

2005–2006

*University of Pennsylvania, Philadelphia Pennsylvania*

### ASSISTANT PROFESSOR

2001–2005

*University of Pennsylvania, Philadelphia Pennsylvania*

### ACTING ASSISTANT PROFESSOR/POSTDOC.

1997–2001

*Stanford University, Stanford, California*

### INSTRUCTOR

Spring 1997

*University of Texas, Austin, Texas*

### TEACHING ASSISTANT AND ASSISTANT INSTRUCTOR

1989-1996

*University of Texas, Austin, Texas*

## VISITING POSITIONS

|                                                                                                  |                        |
|--------------------------------------------------------------------------------------------------|------------------------|
| <b>MEMBER</b>                                                                                    | Winter 2022            |
| <i>Institute for Computational and Experimental Research in Math.</i> , Providence, Rhode Island |                        |
| <b>MEMBER</b>                                                                                    | Winter 2016            |
| <i>Institute for Advanced Study</i> , Princeton, New Jersey                                      |                        |
| <b>MEMBER</b>                                                                                    | October 2015           |
| <i>Mittag-Leffler Institute</i> , Djursholm, Sweden                                              |                        |
| <b>MEMBER</b>                                                                                    | May 12 - June 8 2013   |
| <i>Simons Center for Geometry and Physics</i> , Stony Brook, New York                            |                        |
| <b>MEMBER</b>                                                                                    | July 2012              |
| <i>Kavli Institute for Theoretical Physics</i> , Santa Barbara, California                       |                        |
| <b>VISITOR</b>                                                                                   | Spring 2012            |
| <i>University of Texas</i> , Austin, Texas                                                       |                        |
| <b>MEMBER</b>                                                                                    | Fall 2009– Spring 2010 |
| <i>Mathematical Sciences Research Institute</i> , Berkeley, California                           |                        |
| <b>VISITOR</b>                                                                                   | Winter 2005            |
| <i>University of California</i> , Santa Barbara, California                                      |                        |
| <b>RESEARCH ASSISTANT</b>                                                                        | Spring 1992            |
| <i>Max Planck Institute</i> , Bonn, Germany                                                      |                        |

## AWARDS AND HONORS

|                                                                           |             |
|---------------------------------------------------------------------------|-------------|
| <b>STUDENT RECOGNITION OF EXCELLENCE IN TEACHING: CLASS OF 1934 AWARD</b> | 2020        |
| <i>Georgia Institute of Technology</i> , Atlanta, GA                      |             |
| <b>14TH ANNUAL WOLFE LECTURE</b>                                          | 2019        |
| <i>Rice University</i> , Houston, TX                                      |             |
| <b>COLLEGE OF SCIENCES FACULTY MENTOR AWARD</b>                           | 2017        |
| <i>Georgia Institute of Technology</i> , Atlanta, GA                      |             |
| <b>41ST ANNUAL SPRING LECTURE SERIES</b>                                  | April 2016  |
| <i>University of Arkansas</i> , Fayetteville, Arkansas                    |             |
| <b>SIMONS FELLOWS IN MATHEMATICS</b>                                      | 2015-2016   |
| <i>Simons Foundation</i>                                                  |             |
| <b>FELLOW OF THE AMERICAN MATHEMATICAL SOCIETY</b>                        | Fall 2012   |
| <i>American Mathematical Society</i>                                      |             |
| <b>30TH WILLIAM J. SPENCER LECTURE</b>                                    | April 2008  |
| <i>Kansas State University</i> , Manhattan, Kansas                        |             |
| <b>CAREER GRANT</b>                                                       | 2003–2008   |
| <i>National Science Foundation</i>                                        |             |
| <b>INVITED ONE HOUR AMS ADDRESS</b>                                       | April 2003  |
| <i>Courant Institute</i> , New York, NY                                   |             |
| <b>NATIONAL SCIENCE FOUNDATION POSTDOC. FELLOWSHIP</b>                    | 1997–2001   |
| <b>REGENTS ENDOWED GRADUATE FELLOWSHIP</b>                                | August 1990 |
| <b>PHI BETA KAPPA</b>                                                     | April 1989  |

## GRANTS

|                                                                                                                                                |                  |
|------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>NATIONAL SCIENCE FOUNDATION GRANT</b>                                                                                                       | <b>2025–2026</b> |
| Title: “ <i>CBMS Conference: Legendrian Links and the Microlocal Theory of Sheaves</i> ”<br>(PI with Co-PI Casals, Ng, Tosun, Traynor)         |                  |
| <b>NATIONAL SCIENCE FOUNDATION GRANT</b>                                                                                                       | <b>2023–2025</b> |
| Title: “ <i>Tech Topology Conference at Georgia Tech</i> ”<br>(PI with Co-PI Hom)                                                              |                  |
| <b>NATIONAL SCIENCE FOUNDATION GRANT</b>                                                                                                       | <b>2023–2024</b> |
| Title: “ <i>Tech Topology Summer School 2023</i> ”<br>(PI with Co-PI Hom)                                                                      |                  |
| <b>NATIONAL SCIENCE FOUNDATION GRANT</b>                                                                                                       | <b>2022–2026</b> |
| Title: “ <i>Surgery in Contact Geometry</i> ”                                                                                                  |                  |
| <b>NATIONAL SCIENCE FOUNDATION GRANT</b>                                                                                                       | <b>2019–2022</b> |
| Title: “ <i>Submanifolds and Cobordisms in Contact and Symplectic Topology</i> ”                                                               |                  |
| <b>NATIONAL SCIENCE FOUNDATION GRANT</b>                                                                                                       | <b>2019–2022</b> |
| Title: “ <i>Tech Topology Conference IV</i> ” (Co-PI with Margalit and PI Hom)                                                                 |                  |
| <b>NATIONAL SCIENCE FOUNDATION GRANT</b>                                                                                                       | <b>2018–2023</b> |
| Title: “ <i>RTG: Research Training in Geometry and Topology</i> ”<br>(PI with Co-PI with Belegradek, Hom, Margalit, Wickelgren)                |                  |
| <b>NATIONAL SCIENCE FOUNDATION GRANT</b>                                                                                                       | <b>2018</b>      |
| Title: “ <i>The Topology and Geometry of Low-dimensional Manifolds</i> ”                                                                       |                  |
| <b>NATIONAL SCIENCE FOUNDATION GRANT</b>                                                                                                       | <b>2016–2019</b> |
| Title: “ <i>Submanifolds and metrics in contact geometry</i> ”                                                                                 |                  |
| <b>NATIONAL SCIENCE FOUNDATION GRANT</b>                                                                                                       | <b>2015–2018</b> |
| Title: “ <i>Tech Topology Conference III</i> ” (Co-PI with Margalit)                                                                           |                  |
| <b>NATIONAL SCIENCE FOUNDATION GRANT</b>                                                                                                       | <b>2014</b>      |
| Title: “ <i>Contact Topology in Dimension Three and Higher</i> ”                                                                               |                  |
| <b>AMERICAN INSTITUTE OF MATHEMATICS SQUARE GRANT</b>                                                                                          | <b>2014–2015</b> |
| Title: “ <i>Symplectic and Contact Geometry and Mapping Class Groups</i> ”                                                                     |                  |
| <b>NATIONAL SCIENCE FOUNDATION GRANT</b>                                                                                                       | <b>2013–2021</b> |
| Title: “ <i>EFRI-ODISSEI: Novel Perpetual Reconfigurable &amp; Multi-Band</i> ”<br>(co-PI with Tentzeris and Georgakopoulos)                   |                  |
| <b>NATIONAL SCIENCE FOUNDATION GRANT</b>                                                                                                       | <b>2013–2016</b> |
| Title: “ <i>Contact Geometry in dimensions high and low</i> ”                                                                                  |                  |
| <b>NATIONAL SCIENCE FOUNDATION GRANT</b>                                                                                                       | <b>2012–2015</b> |
| Title: “ <i>Tech Topology Conference II</i> ” (PI with Co-PI Margalit)                                                                         |                  |
| <b>NATIONAL SCIENCE FOUNDATION GRANT</b>                                                                                                       | <b>Fall 2011</b> |
| Title: “ <i>Tech Topology Conference</i> ” (Co-PI with Margalit)                                                                               |                  |
| <b>NATIONAL SCIENCE FOUNDATION GRANT</b>                                                                                                       | <b>2008–2013</b> |
| Title: “ <i>Contact Geometry, Contact Homology and Open Book Decompositions</i> ”                                                              |                  |
| <b>NATIONAL SCIENCE FOUNDATION CAREER GRANT</b>                                                                                                | <b>2003–2008</b> |
| Title: “ <i>Knot Theory and Dynamics in Contact Geometry</i> ”                                                                                 |                  |
| <b>NSF FOCUSED RESEARCH GROUP GRANT</b>                                                                                                        | <b>2003–2006</b> |
| Title: “ <i>Holomorphic Curves and Low Dimensional Topology</i> ”<br>(Co-PI with Eliashberg, Hsiang, Hutchings, Mrowka, Ozsvath, Stern, Szabo) |                  |

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| <b>NATIONAL SCIENCE FOUNDATION GRANT</b>                                                               | <b>2002–2005</b> |
| Title: “ <i>Knot Theory and Dynamics in Contact Geometry</i> ”<br>(replaced with CAREER grant in 2003) |                  |
| <b>NATIONAL SCIENCE FOUNDATION GRANT</b>                                                               | <b>Fall 2000</b> |
| for <i>contact geometry workshop</i> (Co-PI with Eliashberg and Cieliebak)                             |                  |
| <b>AMERICAN INSTITUTE ON MATHEMATICS GRANT</b>                                                         | <b>Fall 2000</b> |
| for <i>contact geometry workshop</i> (Co-PI with Eliashberg and Cieliebak)                             |                  |

## PAPERS

### Publications

1. **STEIN TRACES AND CHARACTERIZING SLOPES**  
Joint work with Roger Casals and Marc Kegel, *Math. Annalen* **389** (2024), 1053–1098
2. **LEGENDRIAN TORUS AND CABLE LINKS**  
Joint work with Jennifer Dalton and Lisa Traynor, *Journal of Symplectic Geometry* **22** (2024), 11–108
3. **CABLING LEGENDRIAN AND TRANSVERSE KNOTS**  
Joint work with Apratim Chakraborty and Hyunki Min, *Journal of Differential Geom* **126** (2024), 1–48
4. **GENERALIZATIONS OF PLANAR CONTACT MANIFOLDS TO HIGHER DIMENSIONS**  
Joint work with Bahar Acu and Burak Ozbagci, *Journal of Symplectic Geometry* **21** (2023), 683–721
5. **HOMOLOGY SPHERES BOUNDING ACYCLIC SMOOTH MANIFOLDS AND SYMPLECTIC FILLINGS**  
Joint work with Bulent Tosun, *Michigan Math. J* **73** (2023), 719–734
6. **CONTACT SURGERY NUMBERS**  
Joint work with Marc Kegel and Sinem Onaran, *Journal of Symplectic Geometry* **21** (2023), 1255–1333
7. **ON 3-MANIFOLDS THAT ARE BOUNDARIES OF EXOTIC 4-MANIFOLDS**  
Joint work with Hyunki Min and Anubhav Mukherjee, *Trans. Amer. Math. Soc* **375** (2022), 4307–4332
8. **SYMPLECTIC HATS**  
Joint work with Marco Golla, *Journal of Topology* **15** (2022), 2216–2269
9. **SYMPLECTIC FILLINGS AND COBORDISMS OF LENS SPACES**  
Joint work with Agniva Roy, *Trans. Amer. Math. Soc* **374** (2021), 8813–8867
10. **SYMPLECTIC FILLINGS, CONTACT SURGERIES, AND LAGRANGIAN DISKS**  
Joint work with James Conway and Bulent Tosun, *IMRN* **2021 no. 8** (2021), 6020–6050
11. **LEGENDRIAN CONTACT HOMOLOGY IN  $\mathbb{R}^3$**   
Joint work with Lenhard Ng, *Surveys in Differential Geometry* **25** (2020), 103–161
12. **NON-SIMPLICITY OF ISOCONTACT EMBEDDINGS IN ALL HIGHER DIMENSIONS**  
Joint work with Roger Casals, *GAF* **30** (2020), 1–33
13. **CONTACT SURGERY AND SYMPLECTIC CAPS**  
Joint work with James Conway, *Bulletin of the LMS* **52** (2020), 379–394

14. **TRANSVERSE UNIVERSAL LINKS**  
Joint work with Roger Casals, *Proc. Sympos. Pure Math* **102** (2019), 43–55
15. **EMBEDDING ALL CONTACT 3–MANIFOLDS IN A FIXED CONTACT 5–MANIFOLD**  
Joint work with Yanki Lekili, *Journal of the LMS (2)* **99** (2019), 52–68
16. **LEGENDRIAN SATELLITES**  
Joint work with Vera Vértési, *IMRN* **2018 no. 23** (2018), 7241–7304
17. **BRAIDED EMBEDDINGS OF CONTACT 3-MANIFOLDS IN THE STANDARD CONTACT 5-SPHERE**  
Joint work with Ryo Furukawa, *Journal of Topology* **10** (2017), 412–446
18. **SUTURED FLOER HOMOLOGY AND INVARIANTS OF LEGENDRIAN AND TRANSVERSE KNOTS**  
Joint work with David Shea Vela-Vick and Rumen Zarev, *Geometry and Topology* **21** (2017), 1469–1582
19. **CORRIGENDUM TO: “ON GENERALIZING LUTZ TWISTS”**  
Joint work with Dishant M Pancholi, *J. Lond. Math. Soc. (2)* **94** (2016), 662–665
20. **QUANTITATIVE DARBOUX THEOREMS IN CONTACT GEOMETRY**  
Joint work with Rafal Komendarczyk and Patrick Massot, *Trans. Amer. Math. Soc* **368** (2016), 7845–7881
21. **MONOIDS IN THE MAPPING CLASS GROUP**  
Joint work with Jeremy Van Horn-Morris, *Geometry and Topology Monographs* **19** (2015), 319–365
22. **THE ARC COMPLEX AND CONTACT GEOMETRY, NON-DESTABILIZABLE PLANAR OPEN BOOK DECOMPOSITIONS OF THE TIGHT CONTACT 3-SPHERE**  
Joint work with Youlin Li, *IMRN* **2015** (2015), 1401–1420
23. **ADMISSIBLE TRANSVERSE SURGERY DOES NOT PRESERVE TIGHTNESS**  
Joint work with John A Baldwin, *Math. Annalen* **357** (2013), 441–468
24. **KNOT CONTACT HOMOLOGY**  
Joint work with Tobias Ekholm, Lenhard Ng and Michael G. Sullivan, *Geometry and Topology* **17** (2013), 975–1112
25. **ON KNOTS IN OVERTWISTED CONTACT STRUCTURES**  
*Journal of Quantum Topology* **4** (2013), 229–264
26. **FILTRATIONS ON THE KNOT CONTACT HOMOLOGY OF TRANSVERSE KNOTS**  
Joint work with Tobias Ekholm, Lenhard Ng and Michael G. Sullivan, *Math. Annalen* **355** (2013), 1561–1591
27. **LEGENDRIAN AND TRANSVERSE TWIST KNOTS**  
Joint work with Lenhard Ng and Vera Vértési, *J. European Math. Soc* **15** (2013), 969–995
28. **LEGENDRIAN AND TRANSVERSE CABLES OF POSITIVE TORUS KNOTS**  
Joint work with Douglas J. LaFountain and Bulent Tosun, *Geometry and Topology* **16** (2012), 1639–1689
29. **TIGHTNESS IN CONTACT METRIC 3–MANIFOLDS**  
Joint work with Rafal Komendarczyk and Patrick Massot, *Invent. Math* **188** (2012), 621–657
30. **CABLING, CONTACT STRUCTURES AND MAPPING CLASS MONOIDS**  
Joint work with Kenneth L Baker and Jeremy Van Horn-Morris, *J. Differential Geom* **90** (2012), 1–80
31. **RATIONAL LINKING AND CONTACT GEOMETRY**  
Joint work with Kenneth L Baker, *Progr. Math* **296** (2012), 19–37

32. **FIBERED TRANSVERSE KNOTS AND THE BENNEQUIN BOUND**  
Joint work with Jeremy Van Horn-Morris, *IMRN* **2011** (2011), 1483–1509
33. **PRODUCT STRUCTURES FOR LEGENDRIAN CONTACT HOMOLOGY**  
Joint work with Gokhan Civan, Paul Koprowski, Joshua Sabloff and Alden Walker, *Math. Proc. Cambridge Philos. Soc* **150** (2011), 291–311
34. **ON GENERALIZED LUTZ TWISTS**  
Joint work with Dishant M Pancholi, *Proc. of the LMS* **84** (2011), 670–688
35. **TORSION AND OPEN BOOK DECOMPOSITIONS**  
Joint work with David Shea Vela-Vick, *IMRN* **2010** (2010), 4385–4398
36. **A NOTE ON THE SUPPORT NORM OF A CONTACT STRUCTURE**  
Joint work with John A Baldwin, *Proc. Sympos. Pure Math* **82** (2009), 79–88
37. **A DUALITY EXACT SEQUENCE FOR LEGENDRIAN CONTACT HOMOLOGY**  
Joint work with Tobias Ekholm and Joshua Sabloff, *Duke Math. J* **150** (2009), 1–75
38. **LECTURES ON CONTACT GEOMETRY IN LOW-DIMENSIONAL TOPOLOGY**  
Low dimensional topology (IAS/Park City Math. Ser., 15), (2009), 229–264
39. **A NOTE ON STEIN FILLINGS OF CONTACT MANIFOLDS**  
Joint work with Anar Akhmedov, Thomas E. Mark and Ivan Smith, *MRL* **15** (2008), 1127–1132
40. **ON CONTACT SURGERY**  
*Proc. Amer. Math. Soc* **136** (2008), 3355–3362
41. **INVARIANTS OF CONTACT STRUCTURES FROM OPEN BOOKS**  
Joint work with Burak Ozbagci, *Trans. Amer. Math. Soc* **260** (2008), 3133–3151
42. **CONTACT STRUCTURES ON 3-MANIFOLDS ARE DEFORMATIONS OF FOLIATIONS**  
*MRL* **14** (2007), 775–779
43. **LEGENDRIAN CONTACT HOMOLOGY IN  $P \times \mathbb{R}$**   
Joint work with Tobias Ekholm and Michael G. Sullivan, *Trans. Amer. Math. Soc* **359** (2007), 3301–3335
44. **OPEN BOOKS AND PLUMBINGS**  
Joint work with Burak Ozbagci, *IMRN* **2006** (2006), 1–17
45. **REALIZING 4-MANIFOLDS AS ACHIRAL LEFSCHETZ FIBRATIONS**  
Joint work with Terry Fuller, *IMRN* **2006** (2006), 1–21
46. **CONTACT MANIFOLDS**  
Encyclopedia of Mathematical Physics, eds. J.-P. Francoise, G.L. Naber and S.T. Tsou, Oxford: Elsevier, v. 1 (2006), 631–636
47. **LECTURES ON OPEN BOOK DECOMPOSITIONS AND CONTACT STRUCTURES**  
Clay Math. Proc. 5 (the proceedings of the “Floer Homology, Gauge Theory, and Low Dimensional Topology Workshop”), (2006), 103–141
48. **INVARIANTS OF KNOTS, EMBEDDINGS AND IMMERSIONS VIA CONTACT GEOMETRY**  
Joint work with Tobias Ekholm, *Fields Inst. Commun* **47** (2005), 77–96
49. **CABLING AND TRANSVERSE SIMPLICITY**  
Joint work with Ko Honda, *Annals of Math* **162** (2005), 1305–1333
50. **GENERIC HYDRODYNAMIC INSTABILITY OF CURL EIGENFIELDS**  
Joint work with Robert Ghrist, *SIAM J. Appl. Dyn. Syst* **4** (2005), no. 2, 377–390

51. **ORIENTATIONS IN LEGENDRIAN CONTACT HOMOLOGY AND EXACT LAGRANGIAN IMMERSIONS**  
Joint work with Tobias Ekholm and Michael G. Sullivan, *IJM* **16** (2005), no. 5, 453-532
52. **LEGENDRIAN AND TRANSVERSAL KNOTS**  
in the Handbook of Knot Theory (Elsevier B. V., Amsterdam), (2005), 105-185
53. **THE CONTACT HOMOLOGY OF LEGENDRIAN SUBMANIFOLDS IN  $\mathbb{R}^{2n+1}$**   
Joint work with Tobias Ekholm and Michael G. Sullivan, *J. Differential Geom* **71** (2005), no. 2, 177-305
54. **NON-ISOTOPIC LEGENDRIAN SUBMANIFOLDS IN  $\mathbb{R}^{2n+1}$**   
Joint work with Tobias Ekholm and Michael G. Sullivan, *J. Differential Geom* **71** (2005), no. 1, 85-128
55. **PLANAR OPEN BOOK DECOMPOSITIONS AND CONTACT STRUCTURES**  
*IMRN* **2004** (2004), no. 79, 4255-4267
56. **ON SYMPLECTIC FILLINGS**  
*Algebr. Geom. Topol* **4** (2004), 73-80
57. **ON CONNECTED SUMS AND LEGENDRIAN KNOTS**  
Joint work with Ko Honda, *Adv. Math* **179** (2003), 59-74
58. **INTRODUCTORY LECTURES ON CONTACT GEOMETRY**  
*Proc. Sympos. Pure Math* **71** (2003), 81-107
59. **PROBLEMS IN LOW DIMENSIONAL CONTACT TOPOLOGY**  
Joint work with Lenhard Ng, *Proc. Sympos. Pure Math* **71** (2003), 337-357
60. **TIGHT CONTACT STRUCTURES AND ANOSOV FLOWS**  
Joint work with Robert Ghrist, *Topol. and its Appl* **124** (2002), 211-219
61. **INVARIANTS OF LEGENDRIAN KNOTS AND COHERENT ORIENTATIONS**  
Joint work with Lenhard Ng and Joshua Sabloff, *J. Sympl. Geom* **1** (2002), no. 2, 321-368
62. **CONTACT TOPOLOGY AND HYDRODYNAMICS II: SOLID TORI**  
Joint work with Robert Ghrist, *Ergod. Th. & Dynam. Sys* **22** (2002), 819-833
63. **TIGHT CONTACT STRUCTURES WITH NO SYMPLECTIC FILLINGS**  
Joint work with Ko Honda, *Invent. Math* **148** (2002), no. 3, 609-626
64. **ON SYMPLECTIC COBORDISMS**  
Joint work with Ko Honda, *Math. Annalen* **323** (2002), no. 1, 31-39
65. **KNOTS AND CONTACT GEOMETRY I: TORUS KNOTS AND THE FIGURE EIGHT KNOT**  
Joint work with Ko Honda, *J. Sympl. Geom* **1** (2001), no. 1, 63-120
66. **AN INDEX FOR CLOSED ORBITS IN BELTRAMI FIELDS**  
Joint work with Robert Ghrist, *Phys. D* **159** (2001), no. 3-4, 180-189
67. **ERRATUM TO: TIGHT CONTACT STRUCTURES ON LENS SPACES**  
*Commun. Contemp. Math* **3** (2001), no. 4, 649-652
68. **ON THE NONEXISTENCE OF TIGHT CONTACT STRUCTURES**  
Joint work with Ko Honda, *Ann. of Math. (2)* **153** (2001), no. 3, 749-766
69. **TIGHT CONTACT STRUCTURES ON LENS SPACES**  
*Commun. in Contemp. Math* **2** (2000), no. 4, 559-577
70. **CONTACT TOPOLOGY AND HYDRODYNAMICS III: KNOTTED ORBITS**  
Joint work with Robert Ghrist, *Trans. Amer. Math. Soc* **352** (2000), 5781-5794

71. **CONTACT TOPOLOGY AND HYDRODYNAMICS I: BELTRAMI FIELDS AND THE SEIFERT CONJECTURE**  
Joint work with Robert Ghrist, *Nonlinearity* **13** (2000), 441-458
72. **STRATIFIED INTEGRALS AND UNKNOTS IN INVICID FLOWS**  
Joint work with Robert Ghrist, *Contemp. Math* **246** (1999), 99-111
73. **GRADIENT FLOWS WITHIN PLANE FIELDS**  
Joint work with Robert Ghrist, *Comm. Math. Helvetici* **74** (1999), 507-529
74. **TIGHT CONTACT STRUCTURES VIA DYNAMICS**  
Joint work with Robert Ghrist, *Proceedings of the AMS* **127** (1999), 3697-3706
75. **TRANSVERSAL TORUS KNOTS**  
*Geometry and Topology* **3** (1999), 253-268
76. **SYMPLECTIC CONVEXITY IN LOW-DIMENSIONAL TOPOLOGY**  
*Topol. and its Appl* **88** (1998), 3-25
77. **SMOOTH STRUCTURES ON COLLARABLE ENDS OF 4-MANIFOLDS**  
Joint work with Zarko Bizaka, *Topology* **37** (1998), 461-467
78. **SYMPLECTIC CONSTRUCTIONS ON 4-MANIFOLDS**  
*Dissertation, University of Texas* (December 1996), 1-92

## PREPRINTS

1. **COMPLEMENTARY LEGS AND SYMPLECTIC RATIONAL BALLS**  
Joint work with Burak Ozbagci and Bulent Tosun, Preprint 2025
2. **KNOTTED SOLID TORI IN CONTACT MANIFOLDS**  
Joint work with Youlin Li and Bulent Tosun, Preprint 2025
3. **ON CONTACT COSMETIC SURGERY**  
Joint work with Tanushree Shah, Preprint 2024
4. **LAGRANGIAN REALIZATIONS OF RIBBON COBORDISMS**  
Joint work with Caitlin Levenson, Preprint 2024
5. **SYMPLECTIC RATIONAL HOMOLOGY BALL FILLINGS OF SEIFERT FIBERED SPACES**  
Joint work with Burak Ozbagci and Bulent Tosun, Preprint 2024
6. **EXISTENCE AND CONSTRUCTION OF NON-LOOSE KNOTS**  
Joint work with Rima Chatterjee, Anubhav Mukherjee and Hyunki Min, Preprint 2023
7. **SURGERIES ON THE TREFOIL AND SYMPLECTIC FILLINGS**  
Joint work with Nur Sağlam, Preprint 2023
8. **SMALL SYMPLECTIC CAPS AND EMBEDDINGS OF HOMOLOGY BALLS IN THE COMPLEX PROJECTIVE PLANE**  
Joint work with Hyunki Min, Lisa Piccirillo and Agniva Roy, Preprint 2023
9. **NON-LOOSE TORUS KNOTS**  
Joint work with Hyunki Min and Anubhav Mukherjee, Preprint 2022
10. **CONTACT STRUCTURES ON 5-MANIFOLDS**  
Preprint 2012

## BOOKS

1. **GAUGE THEORY AND LOW-DIMENSIONAL TOPOLOGY: PROGRESS AND INTERACTION**  
John A. Baldwin, Hans U. Boden, John B. Etnyre and Liam Watson (editors). The Open Book Series Vol. 5, no. 1 (2022). Proceedings of the 2020 Banff International Research Station (BIRS) workshop “Interactions of gauge theory with contact and symplectic topology in dimensions 3 and 4”.
2. **INTERACTIONS BETWEEN LOW-DIMENSIONAL TOPOLOGY AND MAPPING CLASS GROUPS**  
R. Inanc Baykur, John Etnyre and Ursula Hamenstädt (editors). G&T Monographs Vol. 19 (2015). Proceedings of the conference with the same title, held at the Max Planck Institute in Bonn, Germany, in July 2013.

## OTHER PUBLICATIONS

1. **TIGHT AND OVERTWISTED CONTACT STRUCTURES**  
Celebratio Mathematica: Yakov M. Eliashberg.
2. **EARLY CAREER: APPLYING FOR GRANTS: WHY AND HOW?**  
Notices Amer. Math. Soc. **66** (2019) 860-861.
3. **EARLY CAREER: THE ART OF WRITING INTRODUCTIONS**  
Notices Amer. Math. Soc. **66** (2019) 361-362.
4. **BULLETIN OF THE AMS REVIEW: “SURGERY ON CONTACT 3-MANIFOLDS AND STEIN SURFACES” BY BURAK OZBAGCI AND ANDRÁS I. STIPSICZ**  
Bull. Amer. Math. Soc. **43** (2006) 429-434.

## PROFESSIONAL SERVICE

### Administrative

#### EDITOR

Contemporary Mathematics **2022–Present**

#### PRINCIPLE EDITOR

Algebraic and Geometric Topology **2007–Present**

#### PANELIST

International Award "Best Paper in Mathematical Sciences", City of Beijing **2022–2024**

#### EXTERNAL REVIEW COMMITTEE FOR GRADUATE PROGRAM

Department of Mathematics, University at Miami **2023**

#### EXTERNAL REVIEW COMMITTEE

Department of Mathematics, University at Buffalo **2016**

#### EDITOR

Algebraic and Geometric Topology **2000–2007**

#### BOARD OF DIRECTORS

Mathematical Sciences Publishers **2007–2011**

**AMS COMMITTEES**

|                                                           |                  |
|-----------------------------------------------------------|------------------|
| <b>Chair</b> of Centennial Fellowship Selection Committee | <b>2025–2026</b> |
| Centennial Fellowship Selection Committee                 | <b>2024–2025</b> |
| <b>Chair</b> of Southeastern Section Program Committee    | <b>2010–2011</b> |
| Southeastern Section Program Committee                    | <b>2009–2010</b> |

**NSF COMMITTEE**

|                                   |             |
|-----------------------------------|-------------|
| Committee of Visitors for the DMS | <b>2010</b> |
|-----------------------------------|-------------|

**PANELIST**

|                                         |                                             |
|-----------------------------------------|---------------------------------------------|
| Simons Foundation                       | <b>2012</b>                                 |
| National Science Foundation Grant Panel | <b>2004, 06, 07, 09, 14, 16, 20, 21, 23</b> |

### Organizational

**LONG TERM WORKSHOPS** (co-organizer) \_\_\_\_\_

- *ICERM Braids*  
ICERM, Providence RI **Spring 2022**
- *MSRI Contact and Symplectic Geometry and Topology*  
Mathematical Sciences Research Institute, Berkeley CA **2009–2010**
- *MSRI Summer Graduate Workshop*  
Mathematical Sciences Research Institute, Berkeley CA **August 2–14, 2009**
- *IAS Holomorphic Curves Workshop*  
Institute for Advanced Study, Princeton NJ **May–June 2005**
- *Low Dimensional Contact Geometry*  
Stanford University and the American Mathematical Institute **Fall 2000**

**CONFERENCES** (co-organizer) \_\_\_\_\_

- *CBMS Summer School*  
Georgia Tech, Atlanta, GA **June 9–13, 2025**
- *AMS Sectional Meeting: Invariants in Geometric Topology: Low Dimensions and Beyond*  
Clemson, SC **March 8–9, 2025**
- *Tech Topology Conference*  
Georgia Tech, Atlanta, GA **December 6–8, 2024**
- *Tech Topology Conference*  
Georgia Tech, Atlanta, GA **December 8–10, 2023**
- *Tech Topology Summer School*  
Georgia Tech, Atlanta, GA **July 24–28, 2023**
- *Tech Topology Conference*  
Georgia Tech, Atlanta, GA **December 9–11, 2022**
- *Braids in Low-Dimensional Topology*  
ICERM, Providence RI **April 25–29, 2022**
- *Interactions of Gauge Theory with Contact and Symplectic Topology in Dimensions 3 and 4*  
Banff International Research Station, Banff Canada **March 6–11, 2022**
- *Tech Topology Conference* (virtual)  
Georgia Tech, Atlanta, GA **December 10–12, 2021**
- *Tech Topology Summer School* (virtual)

- |                                                                                                            |                                  |
|------------------------------------------------------------------------------------------------------------|----------------------------------|
| Georgia Tech, Atlanta, GA                                                                                  | <b>July 26-30, 2021</b>          |
| • <i>Tech Topology Conference</i> (virtual)                                                                |                                  |
| Georgia Tech, Atlanta, GA                                                                                  | <b>December 4-6, 2020</b>        |
| • <i>Interactions of gauge theory with contact and symplectic topology in dimensions 3 and 4</i> (virtual) |                                  |
| Banff International Research Station, Banff Canada                                                         | <b>June 8-12, 2020</b>           |
| • <i>Tech Topology Conference</i>                                                                          |                                  |
| Georgia Tech, Atlanta, GA                                                                                  | <b>December 6-8, 2019</b>        |
| • <i>AMS Sectional Meeting: Geometry and Topology of Low Dimensional Manifolds</i>                         |                                  |
| Auburn, AL                                                                                                 | <b>March 15-17, 2019</b>         |
| • <i>Tech Topology Conference</i>                                                                          |                                  |
| Georgia Tech, Atlanta, GA                                                                                  | <b>December 7-9, 2018</b>        |
| • <i>The topology and geometry of low dimensional manifolds</i>                                            |                                  |
| University of Texas, Austin, TX                                                                            | <b>July 12-15, 2018</b>          |
| • <i>Tech Topology Conference</i>                                                                          |                                  |
| Georgia Tech, Atlanta, GA                                                                                  | <b>December 8-10, 2017</b>       |
| • <i>Tech Topology Conference</i>                                                                          |                                  |
| Georgia Tech, Atlanta, GA                                                                                  | <b>December 9-11, 2016</b>       |
| • <i>Interactions of Gauge Theory with Contact and Symplectic Topology in Dimensions 3 and 4</i>           |                                  |
| Banff International Research Station, Banff Canada                                                         | <b>March 20-25, 2016</b>         |
| • <i>Workshop on Flows, Foliations and Contact Structures</i>                                              |                                  |
| Institute for Advanced Study, Princeton, NJ                                                                | <b>December 7-11, 2015</b>       |
| • <i>Tech Topology Conference</i>                                                                          |                                  |
| Georgia Tech, Atlanta, GA                                                                                  | <b>December 4-6, 2015</b>        |
| • <i>Tech Topology Conference</i>                                                                          |                                  |
| Georgia Tech, Atlanta, GA                                                                                  | <b>December 5-7, 2014</b>        |
| • <i>Workshop on Contact Geometry in Dimension Three and Higher</i>                                        |                                  |
| University College London, London UK                                                                       | <b>July 28 to August 1, 2014</b> |
| • <i>Tech Topology Conference</i>                                                                          |                                  |
| Georgia Tech, Atlanta, GA                                                                                  | <b>December 6-8, 2013</b>        |
| • <i>Interactions between low dimensional topology and mapping class groups</i>                            |                                  |
| Max Planck Institute for Mathematics, Bonn Germany                                                         | <b>July 1-5, 2013</b>            |
| • <i>Interactions of gauge theory with contact and symplectic topology in dimensions 3 and 4</i>           |                                  |
| Banff International Research Station, Banff Canada                                                         | <b>March 24-29, 2013</b>         |
| • <i>Tech Topology Conference</i>                                                                          |                                  |
| Georgia Tech, Atlanta, GA                                                                                  | <b>December 7-9, 2012</b>        |
| • <i>AMS Sectional Meeting: Interactions of Geometry and Topology in Low Dimensions</i>                    |                                  |
| New Orleans, LA                                                                                            | <b>October 13-14, 2012</b>       |
| • <i>Contact topology in higher dimensions</i>                                                             |                                  |
| American Institute of Mathematics, Palo Alto, CA                                                           | <b>May 21-25, 2012</b>           |
| • <i>Tech Topology Conference</i>                                                                          |                                  |
| Georgia Tech, Atlanta, GA                                                                                  | <b>December 9-11, 2011</b>       |
| • <i>AMS Sectional Meeting: Low-Dimensional Topology and Geometry</i>                                      |                                  |
| Winston-Salem NC                                                                                           | <b>September 24-25, 2011</b>     |
| • <i>Interactions between contact symplectic topology and gauge theory in dimensions 3 and 4</i>           |                                  |
| Banff International Research Station, Banff Canada                                                         | <b>March 20-25, 2011</b>         |
| • <i>AMS Sectional Meeting: Low Dimensional Topology and Contact and Symplectic Geometry</i>               |                                  |
| Statesboro, GA                                                                                             | <b>March 12-13, 2011</b>         |

- *Symplectic and Contact Topology and Dynamics: Puzzles and Horizons*  
Mathematical Sciences Research Institute, Berkeley, CA March 22-26, 2010
- *Introductory Workshop: Symplectic and Contact Geometry*  
Mathematical Sciences Research Institute, Berkeley, CA August 17-21, 2009
- *AMS Sectional Meeting: Low-dimensional topology and geometry*  
Raleigh, NC April 2009
- *Interactions of Geometry and Topology in dimensions 3 and 4*  
Banff International Research Station, Banff Canada March 2009
- *Holomorphic curves: algebraic structures and geometric application*  
Stanford University, Stanford CA August 2008
- *Interactions of geometry and topology in low dimensions*  
Banff International Research Station, Banff Canada March 2007
- *21st Annual Geometry Festival*  
University of Pennsylvania, Philadelphia PA March 2006
- *Holomorphic Curves*  
Institute for Advanced Study, Princeton NJ June 2005
- *Holomorphic Curves in Contact Geometry*  
American Institute of Mathematics, Palo Alto CA August 2003
- *Frontiers of PDEs and Dynamical Systems*  
Rutgers University, New Brunswick NJ May 2003
- *AMS Sectional Meeting Contact and Symplectic Geometry*  
Courant Institute, New York NY April 2003
- *Symplectic and Contact Geometry*  
Stanford University, Stanford CA May 2001
- *Low Dimensional Contact Geometry*  
Stanford University, Stanford CA May 2000

#### SEMINARS (organizer) \_\_\_\_\_

- Mini-course series  
Georgia Tech, Atlanta GA Spring 2009
- Contact homology (mini-course)  
Georgia Tech, Atlanta GA Fall 2008
- 3-manifold Topology (mini-course)  
Georgia Tech, Atlanta GA Fall 2008
- Convex Surfaces in Contact Geometry (mini-course)  
Georgia Tech, Atlanta GA Spring 2008
- Analysis in Topology and Geometry (mini-course)  
Georgia Tech, Atlanta GA Spring 2008
- Morse/Floer Theory (mini-course)  
Georgia Tech, Atlanta GA Spring 2007
- Symplectic Geometry (mini-course)  
Georgia Tech, Atlanta GA Fall 2006
- Kirby Calculus and 3-manifolds (mini-course)  
University of Pennsylvania, Philadelphia PA Summer 2005
- Heegaard-Floer Seminar (mini-course)  
University of Pennsylvania, Philadelphia PA Fall 2004
- Graduate Student Geometry Seminar

|                                                                                                                          |              |
|--------------------------------------------------------------------------------------------------------------------------|--------------|
| University of Pennsylvania, Philadelphia PA                                                                              | 2001–2003    |
| • Contact Geometry Seminar<br>Stanford University, Stanford CA                                                           | Fall 2000    |
| • Sheaf Theory Seminar (mini-course)<br>University of Texas, Austin TX                                                   | Summer 1994  |
| <b>SEMINARS</b> (co-organizer) _____                                                                                     |              |
| • Working Geometry-Topology Seminar<br>Georgia Tech, Atlanta GA                                                          | 2006–Present |
| • Topology-Geometry Seminar<br>Georgia Tech, Atlanta GA                                                                  | 2005–Present |
| • Joint Emory-UGA-Ga Tech Topology Seminar<br>Georgia Tech, Atlanta GA                                                   | 2005–2011    |
| • Symplectic and Contact Geometry and Topology Research Seminar<br>Mathematical Sciences Research Institute, Berkeley CA | Spring 2010  |
| • Quantitative Symplectic Topology<br>Mathematical Sciences Research Institute, Berkeley CA                              | Spring 2010  |
| • Algebraic Geometry and Topology Learning Seminar<br>Georgia Tech, Atlanta GA                                           | Fall 2009    |
| • Colloquium<br>Georgia Tech, Atlanta GA                                                                                 | 2005–2006    |
| • Geometry and Topology Seminar<br>University of Pennsylvania, Philadelphia PA                                           | 2003–2004    |
| • Symplectic Field Theory Seminar<br>Stanford University, Stanford CA                                                    | Fall 2000    |
| • Low-dimensional Topology and Geometry Seminar<br>Stanford University, Stanford CA                                      | 1999–2000    |
| • Foliations, Fibrations and Slitherings Seminar<br>Stanford University, Stanford CA                                     | 1998–99      |
| • Seminar on Some Results of Taubes and Kotschick<br>University of Texas, Austin TX                                      | Summer 1995  |
| • Contact Geometry Seminar<br>University of Texas, Austin TX                                                             | Fall 1994    |

### Reviewer and Referee

|                                           |           |
|-------------------------------------------|-----------|
| <b>REVIEWER</b> _____                     |           |
| • <i>Math Reviews</i> (94 papers to date) | 1997–2008 |
| • <i>Bulletin of the AMS</i>              | 2006      |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>REVIEWER OF GRANT PROPOSALS FOR</b> _____                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |
| • National Science Foundation • Simons Foundation • Central European University • Czech Science Foundation • Deutsche Forschungsgemeinschaft (German Research Foundation) • Deutscher Akademischer Austauschdienst (German Academic Exchange Service) • Engineering and Physical Sciences Research Council (UK grant agency) • European Union's European Research Council • Fonds de la Recherche Scientifique • L'Agence Nationale de la Recherche (French Research Agency) |  |

• National Science Center, Poland • Israel Science Foundation • National Research, Development and Innovation Office of Hungary • Netherlands Organization for Scientific Research • Portuguese Foundation for Science and Technology (FCT) • Swiss National Science Foundation • Scientific and Technological Research Council of Turkey • National Research Foundation South Africa • Natural Sciences and Engineering Research Council (Canada) • National Science Foundation, Georgia • University of Strasbourg Institute for Advanced Study

#### REVIEWER OF BOOK PROPOSALS FOR

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• American Mathematical Society • Birkhäuser • Cambridge University Press • CRC Press • Taylor & Francis Group • Springer-Verlag

#### REFeree

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• Acta Mathematica • Acta Mathematica Sinica • Advances in Mathematics • AIMS Mathematics • Algebraic and Geometric Topology • American Journal of Mathematics • Analysis and Mathematical Physics • Annali della Scuola Normale Superiore di Pisa • Annals of Mathematics • Annales de l'Institut Fourier • Annales Polonici Mathematici • Annales Scientifiques de l'Ecole Normale Supérieure • Archiv der Mathematik • Arkiv för Matematik • Arnold Mathematical Journal • Asian Journal of Mathematics • Bulletin of the London Mathematical Society • Canadian Journal of Mathematics • Canadian Mathematical Bulletin • Combinatorial Theory • Commentarii Mathematici Helvetic • Communications in Analysis and Geometry • Communications in Contemporary Mathematics • Communications in Mathematical Physics • Compositio Mathematica • Comptes Rendus Mathématique • Constructive Approximation • Differential Geometry and its Application • Duke Mathematics Journal • Ergodic Theory and Dynamical Systems • Experimental Mathematics • Expositiones Mathematicae • Forum of Mathematics, Sigma • Fundamenta Mathematicae • Geometriae Dedicata • Geometric and Functional Analysis • Geometry & Topology • Houston Journal of Mathematics • International Journal of Mathematics and Mathematical Sciences • International Journal of Mathematics • International Mathematics Research Notes • Inventiones mathematicae • Involve, a Journal of Mathematics • Israel Journal of Mathematics • Journal für die reine und angewandte Mathematik • Journal of Differential Equations • Journal of Differential Geometry • Journal of Geometry • Journal of Geometry and Physics • Journal of Graph Theory • Journal of Knot Theory and its Ramifications • Journal of Mathematical Physics • Journal of Symplectic Geometry • Journal of the American Mathematical Society • Journal of the European Mathematical Society • Journal of the London Mathematical Society • Journal of the Ramanujan Mathematical Society • Journal of Mathematical Sciences (the University of Tokyo) • Journal of Topology and Analysis • Journal of Topology • Journal of Topology and its Applications • Mathematica Japonica • Mathematical Proceedings of the Cambridge Philosophical Society • Mathematical Research Letters • Mathematische Annalen • Memoirs of the American Mathematical Society • Michigan Journal of Mathematics • New York Journal of Mathematics • Nagoya Mathematical Journal • Nonlinearity • Notices of the American Mathematical Society • Pacific Journal of Mathematics • Proceedings A of the Royal Society • Proceedings of the American Mathematical Society • Proceedings of the London Mathematical Society • Proceedings – Mathematical Sciences (Indian Academy of Sciences) • Quantum Topology • Quarterly Journal of Mathematics • Revista Matemática Iberoamericana • Rocky Mountain Journal of Mathematics • Topology • Topology and its application • Transactions of the American Mathematical Society • Transactions of the London Mathematical Society • various conference proceedings

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#### Departmental Committees

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|                                                            |                      |
|------------------------------------------------------------|----------------------|
| Postdoctoral Committee (Chair 2022-2023)                   | 2022-2026            |
| Staff Telework/On Campus Work Schedule Taskforce           | Spring 2025          |
| Salary and Awards Committee (Chair 2022-2023)              | 2022-2023            |
| Undergraduate Committee (Secretary 2021-2022)              | 2021-2023            |
| School Chair Search Committee                              | 2021                 |
| Equity, Diversity, & Inclusion Taskforce                   | 2020                 |
| Graduate Faculty Council (Institute)                       | 2019-2022            |
| Graduate Committee                                         | 2019-2021            |
| Hiring Committee                                           | 2019-2020            |
| Salary and Awards Committee (Chair 2017-2019)              | 2017-2019            |
| External Awards Committee (College of Sciences)            | 2016-2018            |
| Hiring Committee                                           | 2016-2017            |
| Space Task Force                                           | 2016-2017            |
| Comprehensive Exam Committee: Topology                     | 2014-2018            |
| Graduate Committee (ex officio)                            | 2012-2015            |
| Chair 5 Year Review/Reappointment Committee                | 2014                 |
| Faculty Advisory Committee                                 | 2011-2013            |
| Salary and Awards Committee                                | 2010-2012            |
| Senior Promotion and Tenure Committee                      | 2010-2011            |
| Strategic Hiring Plan Committee (Chair)                    | 2009-2010            |
| Teaching Load Committee                                    | 2009                 |
| Hiring Committee (Chair 2007-09)                           | 2007-09              |
| Comprehensive Exam Committee: Algebra                      | 2006-2007, 2009-2010 |
| Junior Promotion and Tenure (Chair 2008-10)                | 2006-10              |
| Computer Committee                                         | 2006-08              |
| Research Subcommittee for promotion of Mohammad Ghomi      | 2006                 |
| Colloquium Committee                                       | 2005-06              |
| Research Subcommittee for reappointment of Igor Belagradek | 2005                 |

### **FACULTY TEACHING MENTOR (Ga Tech)**\_\_\_\_\_

|                   |           |
|-------------------|-----------|
| Abdoul Karim Sane | 2022-2023 |
| Daniel Irvine     | 2022-2023 |
| Morag Burke       | 2020-2021 |
| JungHwan Park     | 2019-2021 |
| Balazs Strenner   | 2017-2019 |
| Greg Blekherman   | 2011-2013 |

### **U PENN**\_\_\_\_\_

|                     |         |
|---------------------|---------|
| TA Training         | 2001-05 |
| Math Major Advising | 2001-05 |
| Masters Advising    | 2003-05 |
| Graduate Admissions | 2002-03 |
| Graduate Advising   | 2001-02 |

## STUDENT SUPERVISION

### PHD STUDENTS

|                                                                                        |                    |
|----------------------------------------------------------------------------------------|--------------------|
| <b>SEAN ELI</b> (Ga Tech)                                                              | <b>Current</b>     |
| <b>SIERRA KNAVEL</b> (Ga Tech)                                                         | <b>Current</b>     |
| <b>THOMAS RODEWALD</b> (Ga Tech)                                                       | <b>Current</b>     |
| <b>AGNIVA ROY</b> (Ga Tech)                                                            | <b>Summer 2023</b> |
| Thesis: Constructions and invariants of high-dimensional Legendrian submanifolds       |                    |
| Placement: Postdoctoral fellow, LSU, LA and Boston College, MA                         |                    |
| <b>SURENA HOZOORI</b> (Ga Tech)                                                        | <b>Summer 2022</b> |
| Thesis: Contact Geometric Theory of Anosov Flows in Dimension Three and Related Topics |                    |
| Placement: Postdoctoral fellow, University of Rochester, NY                            |                    |
| <b>ANUBHAV MUKHERJEE</b> (Ga Tech)                                                     | <b>Summer 2022</b> |
| Thesis: On Embedding 3-Manifolds into Symplectic 4-manifold                            |                    |
| Placement: Postdoctoral fellow, MSRI and Princeton, NJ                                 |                    |
| <b>ECE GÜLŞAH ÇOLAK</b> (Bulent Ecevit University, co-advisor Kaya)                    | <b>Fall 2021</b>   |
| Thesis: Legendrian Whitehead Links                                                     |                    |
| Placement: Bulent Ecevit University, Turkey                                            |                    |
| <b>HYUNKI MIN</b> (Ga Tech)                                                            | <b>Summer 2021</b> |
| Thesis: Tight contact structures on a family of hyperbolic $L$ -spaces                 |                    |
| Placement: Postdoc MIT, Cambridge, MA                                                  |                    |
| <b>SUDIPTA KOLAY</b> (Ga Tech)                                                         | <b>Summer 2021</b> |
| Thesis: Branched covers and braided embeddings                                         |                    |
| Placement: Postdoc ICERM, Providence, RI                                               |                    |
| <b>ANDREW MCCULLOUGH</b> (Ga Tech)                                                     | <b>Summer 2018</b> |
| Thesis: Legendrian large cables and new phenomena for non-uniform thick knots          |                    |
| Placement: Georgia Tech Research Institute, Smyrna, GA                                 |                    |
| <b>JAMES CONWAY</b> (Ga Tech)                                                          | <b>Summer 2016</b> |
| Thesis: Transverse surgery on knots in contact three-manifolds                         |                    |
| Placement: Postdoctoral fellow, University of California, Berkeley, Berkeley, CA       |                    |
| <b>AMEY KALOTI</b> (Ga Tech)                                                           | <b>Summer 2014</b> |
| Thesis: Stein fillings of contact structures supported by planar open books            |                    |
| Placement: Instructor, University of Iowa, Iowa City, IA                               |                    |
| <b>MEREDITH CASEY</b> (Ga Tech)                                                        | <b>Fall 2013</b>   |
| Thesis: Branched Covers of Contact Manifolds                                           |                    |
| Placement: Instructor, University of Colorado, Colorado Springs, CO                    |                    |
| <b>BULENT TOSUN</b> (Ga Tech)                                                          | <b>Summer 2012</b> |
| Thesis: Legendrian and transverse knots and their invariants                           |                    |
| Placement: CIRGET, Montreal, Canada and Postdoc, Max Plank Institute, Bonn, Germany    |                    |
| <b>DAVID SHEA VICK</b> (U. Penn)                                                       | <b>Spring 2009</b> |
| Thesis: Applications of Ozsváth-Szabó invariants to contact geometry                   |                    |
| Placement: NSF Postdoctoral Fellowship, Columbia University, New York, NY              |                    |
| <b>SINEM ONARAN (CELIK)</b> (METU, co-advisor Korkmaz)                                 | <b>Spring 2009</b> |
| Thesis: Invariants of Legendrian knots from open book decompositions                   |                    |
| Placement: Leibniz Fellowship at Oberwolfach, Germany                                  |                    |
| <b>ELENA PAVELESCU (BOGDAN)</b> (U. Penn)                                              | <b>Spring 2008</b> |

Thesis: Braids and open book decomposition

Placement: Postdoctoral fellow, Rice University, Houston, TX

**STEPHAN SCHÖNENBERGER** (U. Penn)

**Summer 2005**

Thesis: Planar open books and symplectic fillings

Placement: Winterthur Insurance, Zurich, Switzerland

**JAMES TRIPP** (U. Penn)

**Spring 2005**

Thesis: Contact structures on open 3-manifolds

Placement: NSA

## MASTERS STUDENTS

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**GÖKHAN ELMAS** (Ga Tech)

**Spring 2016**

**AMEY KALOTI** (Ga Tech)

**Spring 2008**

## MASTERS THESIS COMMITTEES

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**BAUYRZHAN YERZHIGIT** (Nazarbayev University, Kazakhstan)

**Spring 2019**

## PHD DEFENSE COMMITTEES

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• Prerak Deep (Indian Institute of Science Education and Research Bhopal) Summer 2025 • Willi Kepplinger (University of Vienna) Summer 2025 • Weizhe Shen (Ga Tech) Spring 2025 • Katherine Booth (Ga Tech) Spring 2025 • Chase Leibenguth (Ga Tech, Aerospace Engineering) Spring 2024 • Daniel Minahan (Ga Tech) Spring 2024 • Roberta Shapiro (Ga Tech) Spring 2024 • Monika Yadav (Indian Institute of Science Education and Research Bhopal) Fall 2023 • Agniva Roy (Ga Tech) Summer 2023 • Hugo Zhou (Ga Tech) Summer 2023 • Sally Collins (Ga Tech) Spring 2023 • Tao Yu (Ga Tech) Spring 2023 • Tanushree Shah (University of Glasgow) Spring 2023 • Anubhav Mukherjee (Ga Tech) Summer 2022 • Surena Hozoori (Ga Tech) Summer 2022 • Xingyu Zhu, (Ga Tech) Spring 2022 • Ece Gülşah Çolak PhD, (Bulent Ecevit University) Fall 2021 • Fabio Sozio PhD, (Ga Tech, Civil and Environmental Engineering) Fall 2021 • Abhijeet Atmaram Ghanwat PhD, (Chennai Mathematical Institute) Summer 2021 • Hyunki Min PhD, (Ga Tech) Summer 2021 • Sudipta Kolay PhD, (Ga Tech) Summer 2021 • Moses Koppendrayar PhD, (University of Miami) Summer 2019 • Andrew McCullough PhD, (Ga Tech) Summer 2019 • Shane Scott PhD, (Ga Tech) Summer 2018 • Alberto Cavallo (PhD, Central European University) May 2018 • James Conway (PhD, Ga Tech) Summer 2016 • Julia Bennett (PhD, University of Texas) September 2015 • Thomas Guyard (PhD Rapporteurs, Université de Nantes) September 2015 • Jing Hu (PhD, Ga Tech) May 2015 • Laura Starkston (PhD, University of Texas) March 2015 • Amey Kaloti (PhD, Ga Tech) Summer 2014 • Meredith Casey (PhD, Ga Tech) Fall 2013 • Farbod Shokrieh (PhD, Ga Tech) June 2013 • Bulent Tosun (PhD, Ga Tech) Summer 2012 • Anh Tran (PhD, Ga Tech) April 2012 • Jonathan Williams (PhD, University of Texas) April 2010 • David Shea Vela-Vick (PhD, U Penn) Spring 2009 • Senim Onaran (PhD, METU) Spring 2009 • Baptiste Chantraine (PhD, Université du Québec à Montréal) November 2009 • Elena Pavelescu (PhD, U Penn) Spring 2008 • Michael Kettner (PhD, Ga Tech) August 2007 • Jeremy Van Horn-Morris (PhD, University of Texas) July 2007 • Rafal Komendarczyk (PhD, Ga Tech) November 2005 • Stephan Schönenberger (PhD, U Penn) Summer 2005 • James Trip (PhD, U Penn) Spring 2005 • Yongzhong Xu (PhD, Rutgers) April 2005 • Madeeha Khalid (PhD, U Penn) May 2003

## ORAL EXAM COMMITTEE (Ga Tech)

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• Sean Eli (2025) • Jacob Guynee (2024) • Sierra Knavel (2023) • Thomas Rodewald (2023) • Weizhe Shen (2022) • Daniel Minahan (2021) • Roberta Shapiro (2021) • Sally Collins (2020) • Anubhav

Mukherjee (2020) • Xingyu Zhu (2020) • Agniva Roy (2020) • Tao Yu (2020) • Surena Hozoori (2018) • Hyunki Min (2018) • Chase Michael Leibenguth (2017, Aerospace) • Andrew McCullough (2016) • Bharath Hebbe Madhusudhana (2016, Physics) • Shane Scott (2015) • Jing Hu (2013) • Ye Luo (2013) • Alan Diaz (2013) • Jamie Conway (2013) • Bulent Tosun (2012) • Hyunshik Shin (2011) • Farbod Shokrieh (2011) • Rebecca Winarski (2011) • Thao Vuong (2011) • Meredith Casey (2010) • Amey Kolati (2010) • Anh Tran (2009) • James Krysiak (2009) • Michael Burkhardt (2006) • Ian Palmer (2006)

### ORAL EXAM COMMITTEE (U. Penn)

• David Shea Vick (2006) • Andrei Pavelescu (2005) • Armin Holschbach (2005) • Michael McDuffee (2005) • Elena Bogdan (2005) • David Fithian (2005) • Corey Hoelscher (2004) • Stephan Schöenberger (2003) • James Tripp (2003)

### GRADUATE TEACHING MENTOR (Ga Tech)

• Ashley Bentley (Spring 2013) • Jing Hu (Spring 2013) • Donald Sampson (Spring 2013) • Rebecca Winarski (Spring 2013) • Anh Tran (Summer 2011) • Anh Tran (Summer 2010) • Ian Palmer (Spring 2009)

### RESEARCH EXPERIENCES FOR UNDERGRADUATE PROJECTS

ANGELA CAI, NINA CHAFEE, BROOKE LYTLE, Summer 2024  
AND ALEXANDRA VORONTSOVA

Project: Lefschetz fibrations and fundamental groups

BRANDON COSGROVE AND ANDREW SACK Summer 2018

Project: Knot colorings and braided embeddings

GOKHAN CIVAN Summer 2006

Project: Invariants derived from the contact homology differential graded algebra

## TEACHING

### AWARDS

Georgia Institute of Technology, Center for Teaching and Learning

Student Recognition of Excellence in Teaching: Class of 1934 Award Fall 2019

Georgia Institute of Technology, Center for the Enhancement of Teaching and Learning

"Thank a teacher" certificate Fall 2007, Spring 2008, Spring 2009, Fall 2010,  
Spring 2011, Fall 2020, Spring 2021, Spring 2021,  
2 X Fall 2021, 2 X Spring 2025

University of Pennsylvania, Department of Mathematics

Good Teaching Award Spring 2004, Fall 2004

### GRADUATE CLASSES

**2025:** • *Algebraic Topology* • *Reading Course:* Khovanov homology - Sean Eli, Alex Eldridge, Caifei Fan, Owen Huang, Luis Kim, Akash Narayanan, and Weizhe Shen

**2024:** • *Three dimensional contact topology* • *Differential Topology* • *Reading Course:* Building homology theories - Alex Eldridge, Sean Eli, Caifei Fan, Owen Huang, Luis Kim, Sierra Knavel, Gian

Marin, Akash Narayanan, Tom Rodewald, Randy Van Why, Shunyu Wan, and Xiaoming Yu

**2023:** • *Algebraic Topology* • *Reading Course:* Handlebodies - Alex Eldridge, Sean Eli, Sierra Knavel, Tom Rodewald • *Reading Course:* Handlebodies - Alex Eldridge, Sean Eli, Sierra Knavel

**2022:** • *Topics in Algebraic Topology*

**2021:** • *Differential Topology* • *3-Manifold Topology* • *Algebraic Topology* • *Reading Course:* 4-manifolds — Sierra Knavel, Sean McNally, Thomas Rodewald

**2020:** • *Differential Topology* • *Reading Course:* 3-manifolds — Monica Flamann, Yaghouh Rahimi, Thomas Rodewald, Weizhe Shen • *Algebraic Topology* • *Reading Course:* Mores theory and handlebodies — Sally Collins, Monica Flamann, Caleb Partin, Yaghouh Rahimi, Sidhanth Raman, and Thomas Rodewald

**2019:** • *Reading Course:* Seiberg-Witten Theory — Monica Flamann • *Reading Course:* 3-manifold topology — Thomas Rodewald • *Reading Course:* Hodge theory and holomorphic curves — Monica Flamann, Surena Hozoori, Sudipta Kolay, Hyunki Min, Anubhav Mukherjee, Sidhanth Raman, Xingyu Zhu

**2018:** • *Symplectic Geometry* • *Differential Topology* • *Algebraic Topology* • *Reading Course:* Surgery and handlebodies — Surena Hozoori, Hyunki Min, Anubhav Mukherjee • *Reading Course:* Convex surface theory — Surena Hozoori, Anubhav Mukherjee, Agniva Roy, Tao Yu, and Hongyi Zhou

**2017:** • *Differential Topology* • *Reading Course:* Surgery theory — Katz Ian, Shiyu Liang, Thomas Rodewald, Hunter Vallejos | Hyperbolic Geometry — Surena Hozoori, Sudipta Kolay, Andrew McCullough, Hyunki Min, Anubhav Mukherjee

**2016:** • *Reading Course:* Convex Surfaces — Surena Hozoori, Sudipta Kolay, Andrew McCullough, Hyunki Min

**2015:** • *Algebraic Topology* • *Reading Courses:* Morse Theory and Handlebody Decompositions — Sudipta Kolay, Andrew McCullough | Heegaard Floer Theory and Contact Geometry — Benjamin Ide, Sudipta Kolay, Andrew McCullough, Eric Sabo | Contact Geometry — Sudipta Kolay, Andrew McCullough

**2014:** • *Differential Topology* • *Differential Geometry*

**2013:** • *Reading Courses:* Open book decompositions — Jamie Conway | Knot contact homology — Amey Kaloti, Jamie Conway

**2012:** • *Reading Course:* Contact Geometry — Jamie Conway

**2011:** • *Functional Analysis* • *Reading Courses:* Morse Theory and Handlebodies — Jamie Conway | Open book decompositions — Alan Diaz | Open books, Heegaard diagrams and knot homology — Bulent Tosun

**2010:** • *Reading Courses:* Spectral Sequences and Characteristic Classes — Alan Diaz, Yi Huang, and Kangkang Wang | Khovanov homology — Alan Diaz | Heegaard Floer homology — Bulent Tosun

**2009:** • *Algebraic Topology I* • *Introduction to Geometry and Topology II* • *Reading Courses:* Contact Geometry — Alan Diaz and Amey Kaloti | Algebraic topology — Hyunshik Shin | Heegaard-Floer theory — Amey Kaloti | Legendrian Knots — Anh Tran | Ng knot invariants — Anh Tran | 3-manifold topology — Meredith Casey | Contact structures on Seifert fibered spaces — Amey Kaloti | Khovanov homology — Alan Diaz | Legendrian knots — Bulent Tosun

**2008:** • *Introduction to Geometry and Topology I* • *Algebraic Topology II* • *Reading Course:* Hodge Theory — Alan Diaz and Amey Kaloti

**2007:** • *Algebra II* • *4-manifold topology* • *Algebraic Topology I* • *Reading Course:* Differential Topology — James Krysiak and Anh Tran

**2006:** • *Algebra I* • *Reading Course:* Riemannian and Contact geometry — Rafal Komendarczyk

**2004:** • *Algebraic Topology I* • *Contact Geometry II* • *Reading Courses:* Confoliations — James Tripp | Knot Theory — Michael McDuff

**2003:** • *Contact Geometry I* • *3-manifold topology II* • *Reading Course:* Holomorphic Curves I and II — Stephan Schönenberger

**2002:** • *3-manifold topology I* • *Geometry of Curves and Surfaces* • *Topology* • *Reading Course: Symplectic topology* — Sang Seon Kim

### UNDERGRADUATE CLASSES

**2022:** • *Reading course: Differential Geometry* — Sidney Williams

**2021:** • *Algebraic Topology*

**2019:** • *Differential Geometry*

**2019:** • *Algebraic Topology* • *Analysis II* • *Differential Geometry*

**2018:** • *Reading course: 4-manifold topology* — DeVon Ingram

**2017:** • *Algebraic Topology* • *Analysis II*

**2016:** • *Introduction to Topology* • *Differential Geometry*

**2013:** • *Differential Geometry*

**2012:** • *Introduction to Topology* • *Calculus III*

**2011:** • *Analysis II*

**2010:** • *Analysis I* • *Topology*

**2009:** • *Topology*

**2008:** • *Calculus III (Vector Calculus)*

**2007:** • *Reading course: Introduction to Topology* — Nicole Larsen and AJ Friend

**2006:** • *Calculus III (Vector Calculus)* • *Algebraic Topology* • *Reading courses: Topics in point set topology* — Justin Michael | *Riemannian geometry* — Ehsan Najafabadi

**2005:** • *Honors Differential Equations*

**2004:** • *Calculus IV* (Spring and Fall)

**2002:** • *Calculus I*

**2001:** • *Calculus IV* • *Differential Equations*

**2000:** • *Differential Equations* • *Multi-Variable Calculus*

**1998:** • *Multi-Variable Calculus* • *Calculus* • *Linear Algebra*

**Prior to 1998:** • *Calculus* • *Elementary Mathematics Education Course* • *Pre-Calculus*

## PROFESSIONAL DEVELOPMENT ACTIVITIES

### Talks

|                                                                       |             |
|-----------------------------------------------------------------------|-------------|
| <b>The Job Process, SEC Geometry and Topology Workshop, U Alabama</b> | May 2025    |
| <b>Applying to Graduate School, REU, Georgia Tech</b>                 | June 2024   |
| <b>The Job Process, Louisiana State University</b>                    | August 2023 |
| <b>Applying to Graduate School, REU, Georgia Tech</b>                 | June 2023   |
| <b>The Job Process, SEC Geometry and Topology Workshop, U Alabama</b> | June 2023   |
| <b>Applying to Graduate School, DRP, Georgia Tech</b>                 | Fall 2023   |
| <b>The Tenure Track Process, AWM, Georgia Tech</b>                    | April 2022  |
| <b>Applying to Graduate School, REU, Georgia Tech</b>                 | June 2021   |
| <b>Applying to Graduate School, REU, Georgia Tech</b>                 | June 2019   |
| <b>Applying to Graduate School, REU, Georgia Tech</b>                 | June 2018   |

| Panels                                                                                                 |               |
|--------------------------------------------------------------------------------------------------------|---------------|
| <b>Applying to Graduate School</b> , REU, Georgia Tech                                                 | June 2025     |
| <b>Mathematical Communication</b> , CBMS Summer School, Georgia Tech                                   | June 20205    |
| <b>The Job Process</b> , CBMS Summer School, Georgia Tech                                              | June 20205    |
| <b>The Academic Job Process</b> , Topology Students Workshop, Vanderbilt                               | June 2024     |
| <b>Mentoring Q&amp;A</b> , Panel discussion, Rice University                                           | November 2023 |
| <b>Mentoring postdocs</b> , Panel discussion, Rice University                                          | November 2023 |
| <b>Your first PhD student</b> , Panel discussion, Rice University                                      | November 2023 |
| <b>Applying for academic jobs</b> , Panel discussion, Georgia Tech                                     | October 2023  |
| <b>Applying for the NSF Graduate Fellowship</b> , Intro Grad Class, Georgia Tech                       | August 2023   |
| <b>Teaching at Tech</b> , New Faculty Orientation, Georgia Tech                                        | August 2022   |
| <b>The Publishing Process</b> , Topology Students Workshop, Georgia Tech                               | June 2022     |
| <b>The Academic Job Process</b> , Topology Students Workshop, Georgia Tech                             | June 2022     |
| <b>Academic Job Documents</b> , Topology Students Workshop, Georgia Tech                               | June 2022     |
| <b>Applying for the NSF Graduate Fellowship</b> , Intro Grad Class, Georgia Tech                       | August 2020   |
| <b>CVs, Web pages, Research/teaching/diversity statements</b> ,<br>Topology Students Workshop, on-line | June 2020     |
| <b>Applying for the Grants and Fellowship</b> , Intro Grad Class, Georgia Tech                         | August 2019   |
| <b>The Job Process</b> , Topology Students Workshop, Georgia Tech                                      | June 2018     |
| <b>The Publishing Process</b> , Topology Students Workshop, Georgia Tech                               | June 2018     |
| <b>Grants and Research Statements</b> , Topology Students Workshop, Georgia Tech                       | June 2018     |
| <b>The Publishing Process</b> , Topology Students Workshop, Georgia Tech                               | June 2016     |
| <b>Grants and Research Statements</b> , Topology Students Workshop, Georgia Tech                       | June 2016     |
| Mentor                                                                                                 |               |
| <b>Topology Students Workshop</b> , Vanderbilt                                                         | June 2024     |
| <b>Mentoring Graduate Students Workshop</b> , Rice University                                          | November 2023 |
| <b>Topology Students Workshop</b> , Georgia Tech                                                       | June 2022     |
| <b>Topology Students Workshop</b> , Georgia Tech                                                       | June 2020     |
| <b>Topology Students Workshop</b> , Georgia Tech                                                       | June 2018     |
| <b>Topology Students Workshop</b> , Georgia Tech                                                       | June 2016     |
| <b>Topology Students Workshop</b> , Georgia Tech                                                       | June 2014     |
| <b>Topology Students Workshop</b> , Georgia Tech                                                       | June 2012     |

| TALKS                                                                          |             |
|--------------------------------------------------------------------------------|-------------|
| Lecture Series/Mini Courses                                                    |             |
| <b>Handlebody theory</b> , Park City Mathematics Institutes                    | July, 2019  |
| <b>Submanifolds in contact topology</b> , University of Arkansas               | April, 2016 |
| <b>Contact structures and Legendrian submanifolds</b> , University of Arkansas | Mar, 2013   |
| <b>Braids and Contact Geometry</b> , University of Seville                     | June, 2011  |
| <b>Introduction to Contact Topology</b> , MSRI                                 | Aug, 2009   |

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|------------------------------------------------------------------------------------------|-------------|
| <b>Contact geometry and low-dimensional topology</b> , Park City Mathematics Institute   | July, 2006  |
| <b>Open Books and Contact Geometry</b> , Alfred Renyi Institute                          | June, 2004  |
| <b>Legendrian Knots</b> , University of Munich                                           | Feb, 2003   |
| <b>Introduction To Contact Geometry</b> , Rutgers University                             | Fall, 2002  |
| <b>Invited Conference Talks</b>                                                          |             |
| <b>Midwest Panorama of Geometry and Topology</b> , University of Iowa                    | June, 2025  |
| <b>Georgia International Topology Conference</b> , University of Georgia                 | May, 2025   |
| <b>SEC Conference</b> , University of Alabama                                            | May, 2025   |
| <b>Yamabe Symposium</b> , University of Minnesota                                        | Oct, 2024   |
| <b>Higher dimensional contact topology</b> , American Institute of Mathematics           | April, 2024 |
| <b>AMS Regional Meeting Special Session</b> , Florida State University                   | Mar, 2024   |
| <b>AMS Regional Meeting Special Session</b> , Florida State University                   | Mar, 2024   |
| <b>RTG Summer School Conference</b> , Princeton University                               | July, 2023  |
| <b>SEC Workshop on Low Dimensional Geometry and Topology</b> , University of Alabama     | July, 2023  |
| <b>AMS Regional Meeting Special Session</b> , On-line                                    | Apr, 2023   |
| <b>AMS Regional Meeting Special Session</b> , Georgia Institute of Technology            | Mar, 2023   |
| <b>AMS Regional Meeting Special Session</b> , University of Tennessee at Chattanooga     | Oct, 2022   |
| <b>AMS Regional Meeting Special Session</b> , University of Massachusetts-Amherst        | Oct, 2022   |
| <b>AMS Regional Meeting Special Session</b> , On-line (Tufts University)                 | Mar, 2022   |
| <b>Prep talks for the workshop "Braids in Symplectic and Algebraic Geometry"</b> , ICERM | Mar, 2022   |
| <b>Texas Geometry and Topology Conference</b> , University of Texas at Dallas            | Feb, 2022   |
| <b>AMS Regional Meeting Special Session</b> , On-line (University of Southern Alabama)   | Nov, 2021   |
| <b>AMS Regional Meeting Special Session</b> , On-line (University of Cincinnati)         | May, 2021   |
| <b>AMS Regional Meeting Special Session</b> , On-line (Brown University)                 | Mar, 2021   |
| <b>Frontiers in Floer homology</b> , Boston College                                      | Jul, 2019   |
| <b>Moab Topology Conference</b> , Utah State University                                  | May, 2019   |
| <b>Moab Topology Conference II</b> , Utah State University                               | May, 2019   |
| <b>AMS Regional Meeting Special Session</b> , University of Arkansas                     | Oct, 2018   |
| <b>UCLA Topology workshop 2018</b> , UCLA                                                | Jan, 2018   |
| <b>Georgia International Topology Conference</b> , University of Georgia                 | May, 2017   |
| <b>AMS Regional Meeting Special Session</b> , North Carolina State University            | Nov, 2016   |
| <b>Georgia Topology Conference (lightning talk)</b> , University of Georgia              | May, 2016   |
| <b>AMS Regional Meeting Special Session</b> , University of Georgia                      | Mar, 2016   |
| <b>AMS Regional Meeting Special Session</b> , University of Georgia                      | Mar, 2016   |
| <b>Augmentations and Legendrians at the IAS</b> , Institute for Advanced Study           | Feb, 2016   |
| <b>Princeton Low-Dimensional Topology Workshop</b> , Princeton University                | June, 2015  |
| <b>AMS Regional Meeting Special Session</b> , University of Nevada, Las Vegas            | Apr, 2015   |
| <b>Spring 2015 Redbud conference</b> , Oklahoma State University                         | April, 2015 |
| <b>Spring 2015 Redbud conference</b> , Oklahoma State University                         | April, 2015 |
| <b>AMS Regional Meeting Special Session</b> , Georgetown University                      | Mar, 2015   |
| <b>Joint Mathematics Meetings Special Session</b> , San Antonio Convention Center        | Jan, 2015   |
| <b>Combinatorial Link Homology Theories, Braids, and Contact Geometry</b> , ICERM        | Aug, 2014   |
| <b>Combinatorial Link Homology Theories, Braids, and Contact Geometry</b> , ICERM        | Aug, 2014   |
| <b>AMS Regional Meeting Special Session</b> , Washington University                      | Oct, 2013   |

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|------------------------------------------------------------------------------------------------------|-------------|
| <b>AMS Regional Meeting Special Session</b> , Temple University                                      | Oct, 2013   |
| <b>Higher-dimensional contact topology</b> , Nantes University                                       | Sept, 2013  |
| <b>Low-dimensional Topology after Floer</b> , Centre de recherches mathématiques                     | July, 2013  |
| <b>Interactions between low dimensional topology and mapping class groups</b> , Max Planck Institute | July, 2013  |
| <b>Spring Redbud Geometry and Topology Conference</b> , University of Arkansas                       | Mar, 2013   |
| <b>Symplectic and Low Dimensional Topologies in Interaction</b> , Simons Center                      | Dec, 2012   |
| <b>AMS Regional Meeting Special Session</b> , Tulane University                                      | Oct, 2012   |
| <b>Knotted Fields</b> , Kavli Institute for Theoretical Physics                                      | July, 2012  |
| <b>Knotted Fields</b> , Kavli Institute for Theoretical Physics                                      | July, 2012  |
| <b>Georgia Topology Conference</b> , University of Georgia                                           | May, 2012   |
| <b>Geometry Festival</b> , Duke University                                                           | April, 2012 |
| <b>Clifford Lectures</b> , Tulane University                                                         | Mar, 2012   |
| <b>Trimester on Contact and Symplectic Topology Conference</b> , Nantes University                   | June, 2011  |
| <b>Ninth Annual Graduate Student Topology and Geometry Conference</b> , Michigan State University    | Apr, 2011   |
| <b>AMS Regional Meeting Special Session</b> , Georgia Southern U.                                    | Mar, 2011   |
| <b>AMS Regional Meeting Special Session</b> , Joint Math. Meetings                                   | Jan, 2011   |
| <b>AMS Regional Meeting Special Session</b> , UCLA                                                   | Oct, 2010   |
| <b>Knots, Contact Geometry and Floer Homology</b> , University of Tokyo                              | May, 2010   |
| <b>Pacific NW Geometry Seminar/Bay Area Differential Geometry Seminar</b> , Stanford University      | Feb, 2010   |
| <b>Introductory Workshop: SCGT Program</b> , MSRI                                                    | Aug, 2009   |
| <b>Georgia International Topology Conference (Introductory talks)</b> , University of Georgia        | May, 2009   |
| <b>AMS Regional Meeting Special Session</b> , NC State University                                    | Apr, 2009   |
| <b>Conference on Topology and Geometry of Knots</b> , OK State University                            | Mar, 2009   |
| <b>Holomorphic curves: algebraic structures and geometric application</b> , Stanford University      | Aug, 2008   |
| <b>Prospectives in Analysis, Geometry and Topology</b> , Stockholm University                        | May, 2008   |
| <b>Illinois-Indiana Symplectic Geometry Conference</b> , Purdue University at Indianapolis           | Mar, 2008   |
| <b>Knotting mathematics and art</b> , U of South Florida                                             | Nov, 2007   |
| <b>Workshop on Symplectic Field Theory</b> , University of Colima                                    | Jan, 2007   |
| <b>34th Texas Topology and Geometry Conference</b> , University of Texas                             | Oct, 2005   |
| <b>Great Lakes Geometry Conference</b> , Perimeter Institute for Theoretical Physics                 | April, 2005 |
| <b>Georgia Topology Conference</b> , University of Georgia                                           | June, 2004  |
| <b>Floer Homology, Gauge Theory, and Low Dimensional Topology</b> , Alfred Renyi Institute           | June, 2004  |
| <b>Geometry and Topology of Manifolds</b> , McMaster University                                      | May, 2004   |
| <b>Cornell Topology Festival(also Colloquium)</b> , Cornell University                               | May, 2004   |
| <b>Topology in and around dimension three</b> , BIRS                                                 | Sep, 2003   |
| <b>Georgia Topology Conference</b> , University of Georgia                                           | June, 2003  |
| <b>Contact Topology in Montreal</b> , University of Quebec                                           | Apr, 2003   |
| <b>AMS Invited Address</b> , Courant Institute                                                       | Apr, 2003   |
| <b>XVIIIth Annual Geometry Festival: in Honor of P. Griffiths</b> , Duke University                  | Mar, 2003   |
| <b>Asymptotic Topology, Foliations, and Dynamical Systems Conference</b> , University of Munich      | Jul, 2002   |
| <b>AMS Regional Meeting Special Session</b> , Georgia Tech                                           | Mar, 2002   |
| <b>Oberwolfach 4-manifolds Conference</b> , Oberwolfach                                              | Jul, 2001   |
| <b>Georgia International Topology Conference</b> , University of Georgia                             | May, 2001   |
| <b>Bay Area Joint Symplectic Geometry Seminar</b> , Stanford University                              | Mar, 2001   |
| <b>Bay Area Joint Symplectic Geometry Seminar</b> , Stanford University                              | Dec, 2000   |
| <b>Georgia Topology Conference</b> , University of Georgia                                           | Jul, 2000   |
| <b>AMS Regional Meeting Special Session</b> , UC, Santa Barbara                                      | Mar, 2000   |

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|----------------------------------------------------------|------------|
| Bay Area Topology Seminar, UC, Berkeley                  | Feb, 2000  |
| West Coast Topology Conference, Stanford University      | Apr, 1999  |
| AMS/MAA Joint National Meeting, San Antonio              | Jan, 1999  |
| AMS Regional Meeting Special Session, Kansas State       | Mar, 1998  |
| Bay Area Joint Symplectic Geometry Seminar, UC, Berkeley | Dec, 1997  |
| AMS Regional Meeting Special Session, Georgia Tech       | Oct, 1997  |
| Dehn Surgery Conference, University of Arkansas          | Mar, 1997  |
| 4-Manifold Workshop, MSRI                                | Jan, 1997  |
| Georgia Topology Conference, University of Georgia       | June, 1996 |

### Colloquia

|                                                         |             |
|---------------------------------------------------------|-------------|
| Louisiana State University, Baton Rouge, LA             | Aug, 2023   |
| University of Texas, Dallas, Richardson, TX             | Feb, 2020   |
| Rice University, Houston, TX                            | Feb, 2019   |
| University of Oregon, Eugene, OR                        | May, 2018   |
| Rutgers University, New Brunswick, NJ                   | Apr, 2018   |
| University of Alabama, Tuscaloosa, AL                   | Jan, 2018   |
| Louisiana State University, Baton Rouge, LA             | Sept, 2017  |
| University of Massachusetts, Amherst, Amherst, MA       | Mar, 2017   |
| Georgia Southern University, Statesboro, GA             | Jan, 2017   |
| Columbia University, New York City, NY                  | Feb, 2016   |
| University of Iowa, Iowa City, IA                       | May, 2015   |
| University of Rochester, Rochester, NY                  | Mar, 2015   |
| Georgia Southern University, Statesboro, GA             | Feb, 2015   |
| University of Pittsburgh, Pittsburgh, PA                | Jan, 2015   |
| Rice University, Houston, TX                            | Oct, 2014   |
| Princeton University, Princeton, NJ                     | Mar, 2014   |
| Columbus State University, Columbus, GA                 | Mar, 2014   |
| Washington University, St. Louis, St. Louis, MO         | May, 2013   |
| Boston College, Boston MA                               | May, 2012   |
| University of Virginia, Charlottesville, VA             | Sept, 2011  |
| Brandeis University, Boston, MA                         | April, 2011 |
| Columbia University, New York, NY                       | April, 2011 |
| University of Minnesota, Minneapolis, MN                | Nov, 2010   |
| Tulane University, New Orleans, LA                      | Oct, 2010   |
| University of Arkansas, Fayetteville, AR                | April, 2009 |
| Kansas State University, Manhattan, KS                  | April, 2008 |
| Louisiana State University, Baton Rouge, LA             | Oct, 2007   |
| Rice University, Houston, TX                            | Mar, 2007   |
| University of Massachusetts, Amherst, MA                | Mar, 2006   |
| California State University, Northridge, Northridge, CA | Mar, 2005   |
| University of California, Riverside, Riverside, CA      | Mar, 2005   |
| Georgia Institute of Technology, Atlanta, GA            | Feb, 2005   |
| Rice University, Houston, TX                            | Oct, 2004   |
| Cornell University (also Conference Talk), Ithaca, NY   | May, 2004   |

|                                                    |           |
|----------------------------------------------------|-----------|
| University of California, San Diego, La Jolla, CA  | Feb, 2004 |
| University of Southern California, Los Angeles, CA | Jan, 2004 |
| George Washington University, Washington D.C.      | Oct, 2003 |
| Dartmouth University, Hanover, NH                  | Oct, 2003 |
| SUNY Buffalo, Buffalo, NY                          | Mar, 2003 |
| Rice University, Houston, TX                       | Oct, 2002 |
| Osaka University, Osaka, Japan                     | May, 2002 |
| George Washington University, Washington D.C.      | Mar, 2002 |
| University of Georgia, Athens, GA                  | Mar, 2002 |
| Bryn Mawr, Philadelphia, PA                        | Oct, 2001 |
| Emory University, Atlanta, GA                      | Feb, 2001 |
| University of Pennsylvania, Philadelphia, PA       | Oct, 2000 |
| Washington University, St. Louis, MO               | Feb, 2000 |
| Santa Clara University, Santa Clara, CA            | Oct, 1999 |
| Tulane University, New Orleans, LA                 | Jan, 1999 |
| Auburn University, Auburn, AL                      | Jan, 1999 |
| University of Nevada, Reno, NV                     | Feb, 1998 |
| Emory University, Atlanta, GA                      | Oct, 1997 |

### Seminar Talks

|                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>2024</b> _____                                                                                                                                  |
| •University of Georgia, Athens, GA                                                                                                                 |
| <b>2024</b> _____                                                                                                                                  |
| •University of Alabama, Tuscaloosa, AL                                                                                                             |
| <b>2023</b> _____                                                                                                                                  |
| •Symplectic Zoominar (on-line), (CRM-Montréal, Princeton/IAS, Tel Aviv, and Paris) •Louisiana State University, Baton Rouge, LA                    |
| <b>2022</b> _____                                                                                                                                  |
| •Fico González-Acuña Low Dimensional Topology Seminar (on-line), Mexico •University of Alabama, Tuscaloosa, AL                                     |
| <b>2021</b> _____                                                                                                                                  |
| •University of Illinois, Urbana, IL                                                                                                                |
| <b>2020</b> _____                                                                                                                                  |
| •Alfred Rényi Institute of Mathematics, Budapest, Hungary •University of California, Davis, Davis, CA •University of Texas, Dallas, Richardson, TX |
| <b>2019</b> _____                                                                                                                                  |
| •University of Georgia, Athens, GA •Miami University, Miami, FL                                                                                    |
| <b>2018</b> _____                                                                                                                                  |
| •University of Oregon, Eugene, OR •Columbia University, New York City, NY •University of Alabama, Tuscaloosa, AL                                   |
| <b>2017</b> _____                                                                                                                                  |
| •Louisiana State University, Baton Rouge, LA •University of Massachusetts, Amherst, Amherst, MA                                                    |
| •University of Los Angeles, Los Angeles, CA •University of Georgia, Athens, GA                                                                     |

**2016**

•Bryn Mawr College, Bryn Mawr, PA •Bryn Mawr College, Bryn Mawr, PA •CUNY, New York City, NY •Columbia University, New York City, NY •State University of New York, Stony Brook, NY

**2015**

•Mittag-Leffler Institut, Djursholm, Sweden •King's College London, London, UK •University of Iowa, Iowa City, IA •University of Rochester, Rochester, NY

**2014**

•Princeton University, Princeton, NJ •MIT, Boston, MA

**2013**

•Simons Center, Stony Brook, NY

**2012**

•Boston College, Boston MA •Louisiana State University, Baton Rouge, LA •Rice University, Houston, TX •University of Texas, Austin, TX

**2011**

•Duke University, Durham, NC •University of Virginia, Charlottesville, VA •Imperial College London, London, UK •Cambridge University, Cambridge, UK •Michigan State University, East Lansing, MI •Columbia University, New York, NY •University of Pennsylvania, Philadelphia, PA

**2010**

•University of Minnesota, Minneapolis, MN •MSRI, Berkeley, CA •MSRI, Berkeley, CA •University of California, Davis, Davis, CA

**2009**

•University of Arkansas, Fayetteville, AR •Emory University, Atlanta, GA •University of Pennsylvania, Philadelphia, PA •Columbia University, New York, NY •Columbia University, New York, NY

**2008**

•Rice University, Houston, TX •University of Munich, Munich, Germany •Kansas State University, Manhattan, KS •California Institute of Technology, Pasadena, CA

**2007**

•Louisiana State University, Baton Rouge, LA •Louisiana State University, Baton Rouge, LA •Michigan State University, East Lansing, MI •Michigan State University, East Lansing, MI •Michigan State University, East Lansing, MI •University of Texas, Austin, TX •Columbia University, New York City, NY •Rice University, Houston, TX •University of Virginia, Charlottesville, VA

**2006**

•Emory University, Atlanta, GA •University of Georgia, Athens, GA

**2005**

•University of Georgia, Athens, GA •University of Georgia, Athens, GA •Rutgers University Analysis Seminar, New Brunswick, NJ •California Institute of Technology, Pasadena, CA •University of California, Santa Barbara, Santa Barbara, CA •University of California, Berkeley, Berkeley, CA •Stanford University, Palo Alto, CA •Columbia University, New York, NY •University of California, Santa Barbara, Santa Barbara, CA

**2004**

•Courant Institute, NYC, NY •Columbia University, NYC, NY

**2003**

•University of Virginia, Charlottesville, VA •Dartmouth University, Hanover, NH •Courant Institute,

NYC, NY •University of California, Berkeley, CA •SUNY Buffalo, Buffalo, NY •Georgia Technical Institute, Atlanta, GA •Princeton University, Princeton, NJ

**2002** \_\_\_\_\_

•Columbia University, NYC, NY •Columbia University, NYC, NY •Rutgers University, New Brunswick, NJ •Tokyo Institute of Technology, Tokyo, Japan •University of Tokyo, Tokyo, Japan •University of Tokyo, Tokyo, Japan •Johns Hopkins University, Baltimore, MD •University of Georgia, Athens, GA •Princeton University, Princeton, NJ

**2001** \_\_\_\_\_

•University of California, Santa Barbara, CA •Rutgers University, New Brunswick, NJ •University of California, Berkeley, CA

**2000** \_\_\_\_\_

•U Penn, Philadelphia, PA •U Penn, Philadelphia, PA •State University of New York, Stony Brook, NY •University of California, Riverside, CA •Columbia University, NYC, NY •New York University, NYC, NY •Massachusetts Institute of Technology, Cambridge, MA •University of Illinois, Urbana, IL

**1999** \_\_\_\_\_

•University of California, Berkeley, CA •University of California, Berkeley, CA •University of Texas, Austin, TX •University of Texas, Austin, TX •Rice University, Houston, TX •Tulane University, New Orleans, LA •University of Georgia, Athens, GA •Duke University, Durham, NC •Duke University, Durham, NC

**1998** \_\_\_\_\_

•University of California, Berkeley, CA •University of California, Santa Barbara, CA

**1997** \_\_\_\_\_

•University of California, Irvine, CA •University of California, Berkeley, CA •University of Georgia, Athens, GA •State University of New York, Stony Brook, NY

**1996** \_\_\_\_\_

•Rice University, Houston, TX