# **Blake Mellor**

Mailing Address:Loyola Marymount University<br/>University Hall<br/>1 LMU Drive, Suite 2700<br/>Los Angeles, CA 90045-2659

Phone: (310) 338-5775 E-mail: <u>blake.mellor@lmu.edu</u> URL: <u>http://blakemellor.lmu.build</u>

## **Positions Held**

2012-present: Professor of Mathematics, Loyola Marymount University

2007-2012: Associate Professor of Mathematics, Loyola Marymount University

2002-2007: Assistant Professor of Mathematics, Loyola Marymount University

1999-2002: Assistant Professor of Mathematics, Honors College, Florida Atlantic University

### Education

1999: Ph.D. Mathematics, University of California, Berkeley

Dissertation: "Finite Type Link Homotopy Invariants," under Professor Robion Kirby 1993: B.A. Mathematics, magna cum laude, Harvard University

Thesis: "Heegaard Splittings and Casson's Invariant," under Professor Clifford Taubes

## **Peer-reviewed Papers**

- 1. "N-quandles of spatial graphs," to appear in Kyungpook Mathematical Journal, 2022
- "Finite involutory quandles of two-bridge links with an axis," J. Knot Theory Ramif., vol. 31, no. 2, 2022
- 3. "N-quandles of links," with Riley Smith, Topology and its Applications, vol. 294, 2021
- 4. "Invariants of spatial graphs," in *Encyclopedia of Knot Theory*, ed. Adams et. al., Chapman and Hall/CRC, 2021
- 5. "Virtual Rational Tangles," with Sean Nevin, J. Knot Theory Ramif., vol. 29, no. 6, 2020
- "Graphs admitting only constant splines," with Katie Anders, Alissa Crans, Briana Foster-Greenwood and Julianna Tymoczko, *Pacific Journal of Mathematics*, vol. 304, no. 2, 2020, pp. 385-400
- 7. "Finite *n*-quandles of torus and two-bridge links," with Alissa Crans, Jim Hoste and Patrick Shanahan, *J. Knot Theory Ramif.*, vol. 28, no. 3, 2019
- 8. "Recent Developments in Spatial Graph Theory," with E. Flapan, T. Mattman, R. Naimi and R. Nikkuni, in *Knots, Links, Spatial Graphs and Algebraic Invariants*, ed. E. Flapan et. al., *Contemporary Mathematics*, vol. 689, 2017, pp. 81-102
- 9. "The Alexander polynomial for virtual twist knots," with I. Benioff, *J. Knot Theory Ramif.*, vol. 26, no. 1, 2017
- 10. "Alexander and writhe polynomials for virtual knots," *J. Knot Theory Ramif.*, vol. 25, no. 8, 2016
- 11. "Colorings, determinants and Alexander polynomials for spatial graphs," with T. Kong, A. Lewald and V. Pigrish, *J. Knot Theory Ramif.*, vol. 25, no. 4, 2016
- 12. "Topological symmetry groups of complete bipartite graphs," with K. Hake and M. Pittluck, *Tokyo J. Math*, vol. 39, 2016, pp. 133-156

- 13. "The forbidden number of a knot," with A. Crans and S. Ganzell, *Kyungpook Mathematical Journal*, vol. 55, no. 2, 2015, pp. 485-506
- "The Mathematics of Symmetry and Attitudes towards Mathematics," in *Doing the Scholarship* of *Teaching and Learning in Mathematics*, ed. C. Bennett and J. Dewar, MAA Notes no. 83, 2015, pp. 157-169
- 15. "Complete bipartite graphs whose topological symmetry groups are polyhedral," *Tokyo J. Math*, vol. 37, no. 1, 2014, pp. 135-158
- 16. "Symmetries of embedded complete bipartite graphs," with E. Flapan, N. Lehle, M. Pittluck and X. Vongsathorn, *Fundamenta Mathematicae*, vol. 226, 2014, pp. 1-16
- 17. "Classification of topological symmetry groups of *K<sub>n</sub>*," with E. Flapan, R. Naimi, and M. Yoshizawa, *Topology Proceedings*, vol. 43, 2014, pp. 209-233
- 18. "Counting Links and Knots in Complete Graphs," with L. Abrams and L. Trott, *Tokyo J. Math*, vol. 36, no. 2, 2013, pp. 429-458
- 19. "Using tiling theory to generate angle weaves with beads," with G. Fisher, *Journal of Mathematics and the Arts*, vol. 6, no. 4, 2012, pp. 141-158
- 20. "Spatial Graphs with Local Knots," with E. Flapan and R. Naimi, *Revista Matemática Complutense*, vol. 25, no. 2, 2012, pp. 493-510 (DOI: 10.1007/s13163-011-0072-9)
- 21. "Student Surveys: What Do They Think?" with H. Zullo, K. Cline, et. al., in *Teaching Mathematics with Classroom Voting: With and Without Clickers*, ed. K. Cline and H. Zullo, Mathematical Association of America, 2011
- 22. "Complete graphs whose topological symmetry groups are polyhedral," with E. Flapan and R. Naimi, *Algebraic and Geometric Topology*, vol. 11, 2011, pp. 1405-1433
- 23. "Drawing a triangle on the Thurston model of hyperbolic space," with C. Bennett and P. Shanahan, *Math. Mag.*, vol. 83, 2010, pp. 83-99
- 24. "Counting Links in Complete Graphs," with T. Fleming, Osaka J. Math., vol. 46, 2009, pp. 1-29
- 25. "Intrinsic linking and knotting are arbitrarily complex," with E. Flapan and R. Naimi, *Fundamenta Mathematicae*, vol. 201, no. 2, 2008, pp. 131-148
- 26. "Tree Diagrams for String Links II: Determining Chord Diagrams," J. Knot Theory Ramif., vol. 17, no. 6, 2008, pp. 649-664
- "Weight Systems for Milnor Invariants," J. Knot Theory Ramif., vol. 17, no. 2, 2008, pp. 213-230
- 28. "Virtual Spatial Graphs," with T. Fleming, Kobe J. Math., vol. 24, no. 2, 2007, pp. 67-85
- 29. "An Introduction to Virtual Spatial Graph Theory," with T. Fleming, in *Proceedings of the International Workshop on Knot Theory for Scientific Objects*, OCAMI Studies, Vol. 1 (A. Kawauchi, editor), Osaka Municipal Universities Press, 2007
- 30. "Three dimensional finite point groups and the symmetries of beaded beads," with G. Fisher, *Journal of Mathematics and the Arts*, vol. 1, no. 2, 2007, pp. 85-96
- 31. "Intrinsic Linking and Knotting in Virtual Spatial Graphs," with T. Fleming, *Algebr. Geom. Topol.*, vol. 7, 2007, pp. 583-601
- 32. "Tree Diagrams for String Links," J. Knot Theory Ramif., vol. 15, no. 10, 2006, pp. 1303-1318
- 33. "Intrinsic linking and knotting of graphs in arbitrary 3-manifolds," with E. Flapan, H. Howards and D. Lawrence, *Algebr. Geom. Topol.*, vol. 6, 2006, pp. 1025-1035
- 34. "Intersection Graphs for String Links," J. Knot Theory Ramif., vol. 15, no. 1, 2006, pp. 53-72
- 35. "On the Topology of Celtic Knot Designs," with G. Fisher, *Proceedings of the 7<sup>th</sup> Annual BRIDGES Conference*, 2004 (also in *Visual Mathematics*, vol. 7, no. 1, 2005)

- 36. "A few weight systems arising from intersection graphs," *Michigan Math. J.*, vol. 51, no. 3, 2003, pp. 509-536
- 37. "A geometric interpretation of Milnor's triple invariants," with P. Melvin, *Algebr. Geom. Topol.*, vol. 3, 2003, pp. 557-568
- 38. "On the existence of finite type link homotopy invariants," with D. Thurston, *J. Knot Theory Ramif.*, vol. 10, no. 7, 2001, pp. 1025-1040
- 39. "Finite Type Link Homotopy Invariants II: Milnor's invariants," *J. Knot Theory Ramif.*, vol. 9, no. 6, 2000, pp. 735-758
- 40. "Finite Type Link Concordance Invariants," J. Knot Theory Ramif., vol. 9, no. 3, 2000, pp. 367-385
- 41. "The Intersection Graph Conjecture for Loop Diagrams," *J. Knot Theory Ramif.*, vol. 9, no. 2, 2000, pp. 187-211
- 42. "Finite Type Link Homotopy Invariants," J. Knot Theory Ramif., vol. 8, no. 6, 1999, pp. 773-787

#### **Other Papers and Articles**

- 1. Review of *Viewpoints: Mathematical Perspective and Fractal Geometry in Art*, by Marc Frantz and Annalisa Crannell, *Journal of Mathematics and the Arts*, vol. 5, no. 4, 2011, pp. 221-222
- 2. "The Exhibition of Mathematical Art at the 2008 Joint Mathematics Meetings," *Journal of Mathematics and the Arts*, vol. 2, no. 1, 2008, pp. 39-45

#### Preprints

1. "Classifying links and spatial graphs with finite N-quandles," preprint April 2023

#### **Grants and Awards**

LMU Rains Award for Excellence in Service, 2020 LMU Continuing Faculty Grant, 2019 Math Circle Mentorship and Partnership Continuing Math Circle Grant, 2018-19 Honorary Service Award, La Ballona Elementary School PTA, 2018 Research Experience for Undergraduate Faculty Continuing Activity Grant, American Institute of Mathematics, 2018 Math Circle Mentorship and Partnership Continuing Math Circle Grant, 2017-18 Math Circle Mentorship and Partnership Novice Math Circle Grant, 2016-17 LMU Continuing Faculty Grant, 2014 LMU Course Development Grant, 2013 LMU Academic Technology Grant, 2012 Carl B. Allendoerfer Award, Mathematical Association of America, 2011 Recognizes articles of expository excellence published in Mathematics Magazine. Awarded for "Drawing a triangle on the Thurston model of hyperbolic space," with C. Bennett and P. Shanahan. NSF Grant DMS-0905687, 2009-2012, PI, \$164,293 "Topological symmetries and intrinsic properties of graphs embedded in 3-space" LMU Continuing Faculty Grant, 2009 LMU Continuing Faculty Grant, 2007 LMU Center for Teaching Excellence Faculty Development Grant, 2005 CASTL Institute Scholar, 2005

LMU Summer Research Grant, 2004

LMU Summer Research Grant, 2003

NSF Grant DUE-0088211, 2001-2004, Co-PI, \$187,054

"Discovery Based Science and Math in an Environmental Context" Florida Atlantic University Research Initiation Award, #RIA-19, 2000

Project NExT Fellow, 1999-2000

Department of Education National Needs Fellowship, 1993-1994

## **Conference Presentations and Panels and Seminar/Colloquium Talks**

- 1. "Classifying links and graphs with finite *N*-quandles," Special Session on Algebraic Structures in Knot Theory, AMS Western Section Meeting, CSU Fresno, May 2023
- 2. "Finite *N*-quandles of spatial graphs," Special Session on Spatial Graphs, AMS Southeastern Section Meeting, November 2021
- 3. "Finite quandles of knots, links and graphs," Joint Mathematics Meetings, online, January 2021
- 4. "Virtual Rational Tangles," Joint Mathematics Meetings, Denver, January 2020
- 5. "Finite quandles of knots, links and graphs," AMS Western Sectional Meeting, UC Riverside, November 2019
- 6. "Alexander polynomials of Spatial Graphs and Virtual Knots," MathFest, Chicago, July 2017 (Invited Talk)
- 7. "Using a Livescribe smartpen to flip Precalculus," Teaching with Technology Day, Loyola Marymount University, April 10, 2015
- 8. "Coloring Spatial Graphs," International Workshop on Spatial Graphs 2013, Tokyo Christian Women's University, Tokyo, Japan, August 14, 2013
- 9. "Coloring Spatial Graphs," Spatial Graphs Conference, Loyola Marymount University, June 9, 2013
- 10. "Flipping Precalculus," Teaching with Technology Day, Loyola Marymount University, January 18, 2013
- 11. "Intrinsic Properties of Spatial Graphs," The Undergraduate Knot Theory Conference, Denison University, July 16, 2012 (Invited Talk)
- 12. "Topological Symmetry Groups of Complete Graphs," Joint Mathematics Meetings, Boston, January 4, 2012
- 13. "Topological Symmetry Groups of Complete Graphs," USC Mathematics Colloquium, January 19, 2011 (Invited Talk)
- 14. "Topological Symmetry Groups of Complete Graphs," International Workshop on Spatial Graphs 2010, Waseda University, Tokyo, August 17-21, 2010
- 15. "Intrinsic linking and knotting are arbitrarily complex," 1039<sup>th</sup> meeting of the AMS, Claremont McKenna College, May 4-5, 2008 (Invited Talk)
- 16. "How Does a Course in the Mathematics of Symmetry Affect Students in the Liberal Arts?," MAA MathFest, San Jose, August 2007
- 17. "Mathematics of Symmetry, an Experimental Core Mathematics Course," BIRS Workshop on Innovations in Mathematics Education via the Arts, Banff, Canada, January 22, 2007
- "Multiple Facets of Quantitative Literacy," International Society for the Scholarship of Teaching and Learning, November 9, 2006 (panel presentation with Jacqueline Dewar, Curtis Bennett, Suzanne Larson and Thomas Zachariah)

- 19. "Mathematics of Symmetry, an Experimental Core Mathematics Course," LMU Center for Teaching Excellence, October 26, 2006
- 20. "Intrinsic linking and knotting in virtual spatial graphs," USC Geometry and Topology Seminar, April 17, 2006 (Invited Talk)
- 21. "Intrinsically linked and knotted graphs," Claremont Mathematics Colloquium, February 22, 2006 (Invited Talk)
- 22. "Weight systems for Milnor invariants," Joint Mathematics Meetings, San Antonio, January 11-15, 2006
- 23. "Intrinsic Linking and Knotting in Virtual Spatial Graphs," Claremont Topology Seminar, November 29, 2005 (Invited Talk)
- 24. "Surviving the First Few Years in an Academic Job," Panel discussion, Southern California section meeting of the MAA, October 8, 2005 (Invited Participant)
- 25. "Effects of Core Classes on Attitudes and Beliefs towards Mathematics," CASTL Institute, Columbia College, Chicago, June 9-11, 2005 (Institute Scholar)
- 26. "Knots and Graphs," Guest Lecture at UCLA, February 2005
- 27. "Knots and Graphs," LMU Math Dept. Seminar, February 2005
- 28. "On the Topology of Celtic Knot Designs," 7<sup>th</sup> Annual BRIDGES Conference, Southwestern College, Winfield, KS, July 30-August 1, 2004 (with Gwen Fisher, Cal Poly San Luis Obispo)
- 29. "An Overview of Robertson-Seymour-Thomas," International Workshop on Knots and Links in a Spatial Graph, Waseda University, Tokyo, July 20-28, 2004
- 30. "Collaborative Learning in Calculus I," PMET Workshop, SUNY Oswego, NY, June 2004
- 31. "The Topology of Celtic Knot Designs," MAA Session on Math and the Arts, Joint Mathematics Meetings, Phoenix, January 7-10, 2004 (with Gwen Fisher, Cal Poly San Luis Obispo)
- 32. "Discovery-based Science and Mathematics in an Environmental Context," MAA Poster Session on Projects supported by the NSF DUE, Joint Mathematics Meetings, Phoenix, January 7-10, 2004 (with Stephanie Fitchett, Honors College, Florida Atlantic University)
- 33. "Intersection Graphs for String Links," 991<sup>st</sup> meeting of the AMS, University of North Carolina, Chapel Hill, October 24-25, 2003 (Invited Talk)
- 34. "Discovery-based Science and Mathematics in an Environmental Context," MAA Poster Session on Projects supported by the NSF DUE, Joint Mathematics Meetings, Baltimore, January 17, 2003 (with Stephanie Fitchett, Honors College, Florida Atlantic University)
- 35. "To Have or Have Knot," Mathematics Colloquium, California Polytechnic University, San Luis Obispo, November 8, 2002 (Invited Talk)
- 36. "Finite type invariants and intersection graphs," Claremont Colleges Topology Seminar, October 29, 2002 (Invited Talk)
- 37. "Seifert Surfaces and Milnor's Invariants," 965<sup>th</sup> meeting of the AMS, UNLV, Las Vegas, April 21-22, 2001 (Invited Talk)
- 38. "On the existence of finite type link homotopy invariants," Joint Mathematics Meetings, New Orleans, January 10-13, 2001
- 39. "A geometric interpretation of  $\bar{\mu}_{ijk}$ ," 959<sup>th</sup> meeting of the AMS, Columbia University, New York, November 3-5, 2000
- 40. "Three weight systems arising from intersection graphs," AMS Mathematical Challenges of the 21st Century, UCLA, August 7-12, 2000
- 41. "Topological Psychology," MAA Mathfest, UCLA, August 3-5, 2000
- 42. "Intersection graphs and finite type invariants," Workshop on Low-Dimensional Topology, University of Warwick (UK), July 10-21, 2000

43. "Finite Type Link Homotopy Invariants," 949<sup>th</sup> meeting of the AMS, UNC Charlotte, October 15-17, 1999

## **Conferences Organized**

- 1. International Workshop on Spatial Graphs 2013, Tokyo Christian Women's University, Tokyo, Japan, August 2013 (Co-organizer)
- 2. Conference on Spatial Graphs, Loyola Marymount University, June 2013 (Co-organizer)
- 3. International Workshop on Spatial Graphs 2010, Waseda University, Tokyo, Japan, August 2010 (Co-organizer)
- 4. Southern California Student Conference on Spatial Graphs, Caltech, April 2009 (Co-organizer)
- 5. Building a Community Partnership: Collaborations in Environmental Science, Education and Conservation, Honors College, FAU, Jupiter, FL, July 2001 (Co-organizer)

# **Conference Sessions Organized**

- 1. Special Session on Invariants of Knots and Spatial Graphs, AMS Western Sectional Meeting, UC Riverside, November 9-10, 2019 (Co-organizer)
- 2. Special Session on Spatial Graphs, AMS Western Sectional Meeting, CSU Fullerton, October 24-25, 2015 (Co-organizer)
- 3. "Linking Mathematics with Other Disciplines," MAA Session, Joint Mathematics Meetings, Baltimore, January 18, 2003 (Co-organizer)
- 4. Panel on "Strategies for Mathematics for Liberal Arts," Project NExT, UCLA, August 3, 2000

# **Other Conferences and Workshops Attended**

- 1. Joint Mathematics Meetings, San Diego, CA, January 2018
- 2. ICERM Research Experiences for Undergraduate Faculty (REUF), Providence, RI, June 2017
- 3. Math Circle Mentorship and Partnership Workshop, Denver, CO, September 2016
- 4. Joint Mathematics Meetings, San Diego, CA, January 2013
- 5. Joint Mathematics Meetings, San Francisco, CA, January 2010
- 6. Joint Mathematics Meetings, San Diego, CA, January 2008
- 7. Park City Mathematics Institute, Park City, UT, June 2006
- 8. MAA PMET workshop, Asilomar, CA, June 2006
- 9. Southern California Topology Conference, Caltech, May 2004
- 10. ISAMA-BRIDGES, Granada, Spain, July 23-26 2003
- 11. MAA PMET workshop, SUNY Potsdam, June 8-19 2003
- 12. Southern California Topology Conference, Caltech, May 2003
- 13. Joint Mathematics Meetings, San Diego, January 2002
- 14. Project Intermath Curriculum Workshop, Carroll College, Helena, MT, June 2001
- 15. Georgia International Topology Conference, University of Georgia, Athens, GA, May 2001
- 16. 31<sup>st</sup> Southeastern International Conference on Combinatorics, Graph Theory and Computing, Florida Atlantic University, March 2000
- 17. Joint AMS/MAA/SIAM Meeting, Washington, D.C., January 2000
- 18. MAA Mathfest, Providence, R.I., July 1999
- 19. Joint AMS/MAA/SIAM Meeting, San Antonio, TX, January 1999
- 20. Kirbyfest, MSRI, UC Berkeley, June 1998
- 21. Joint AMS/MAA/SIAM Meeting, San Diego, CA, January 1998

**Teaching Experience** ((IS) indicates independent study)

#### **Theses Directed**

- Veronica Backer Peral, "Finite *N*-Quandles of Twisted Double Handcuff and Complete Graph," Senior Thesis, May 2022
- Riley Smith, "Finite quandles for knots, links and spatial graphs," Senior Thesis, May 2020
- Alec Lewald, "Colorings and Alexander Polynomials for Spatial Graphs," Senior Thesis, May 2014
- Kate Hake, "Topological Symmetry Groups of Complete Bipartite Graphs," Senior Thesis, May 2012
- Katrina Freitag, "Cycling through Crystals: A Spatial Analysis of Human Body Movement," Senior Thesis, May 2012
- Lowell Trott, "Gordian: A Mathematical Tool for Spatial Graph Characterization," Senior Thesis, May 2008
- Katie Williams, "Constructivist Perspectives on Problem Solving," MAT Thesis, July 2006

#### Loyola Marymount University

- Honors 250 Mathematics of Symmetry (Spring 2015)
- Math 102 Quantitative Skills for the Modern World (Fall 2005; Fall 2008; Spring 2016)
- Math 106 Mathematics for Elementary Teachers I (Fall 2017)
- Math 112 Math Analysis for Business II (Spring 2004; Spring 2005)
- Math 120 Precalculus (Fall 2008; Fall 2010; Fall 2011; Fall 2012; Spring 2013; Fall 2014; Fall 2017)
- Math 190 Workshop in Mathematics I (Fall 2014)
- Math 131 Calculus I (Fall 2002; Fall, 2003; Fall 2006; Fall 2016)
- Math 132 Calculus II (Fall 2018)
- Math 198 Mathematics of Symmetry (Spring 2006; Spring 2010; Spring 2013)
- Math 204 Applied Statistics (Spring 2022)
- Math 207 Mathematics for Elementary Teachers II (Spring 2017)
- Math 234 Multivariable Calculus (Spring 2008; Fall 2013; Fall 2019; Fall 2020; Fall 2022)
- Math 245 Differential Equations (Spring 2003)
- Math 248/249 Introduction to Proofs (Spring 2004; Fall 2007; Spring 2022; Fall 2022)
- Math 250 Linear Algebra (Spring 2005; Spring 2006; Spring 2012; Spring 2014; Spring 2015; Fall 2021)
- Math 285 Discrete Mathematics for Engineering (Spring 2007)
- Math 302 Mathematical Ideas for Future Teachers II (Spring 2005; Spring 2006)
- Math 321 Real Analysis (Fall 2010; Fall 2011; Fall 2019)
- Math 357 Complex Analysis (Spring 2016)
- Math 366 Discrete Methods (Spring 2003; Spring 2012; Spring 2018; Fall 2018 (IS); Spring 2019)
- Math 397 Putnam Preparation (co-taught) (Fall 2002-present)
- Math 398 Elements of Group Theory (Spring 2017)
- Math 471/472 Topology (Spring 2007; Spring 2008 (IS); Spring 2011; Fall 2016 (IS); Fall 2017 (IS); Fall 2020 (IS); Spring 2021; Fall 2022 (IS); Fall 2023)
- Math 473 Differential Geometry (Fall 2003; Fall 2005; Spring 2018 (IS); Fall 2023 (IS))
- Math 491 Senior Seminar (Spring 2020)

Math 493 Senior Capstone for Future Teachers (Fall 2005; Fall 2006; Fall 2013)
Math 550 Fundamental Concepts of Geometry (Fall 2007; Fall 2009; Fall 2012; Fall 2017 (IS); Fall 2021)
Math 598 Transformational Geometry (Spring 2014)
Math 599 Algebraic Topology (Spring 2018 (IS))
Math 650 Geometry for Teachers (Fall 2023)

#### Honors College, Florida Atlantic University

Symmetry (Spring, 2002) Statistics (Fall, 2001) Precalculus (Fall, 2000; Fall, 2001) Calculus I (Spring, 2000; Spring, 2001) Calculus II (Fall, 2000; Spring, 2002) Calculus II for Physics (Spring, 2001) Matrix Theory (Fall, 1999) Discrete Mathematics (Spring, 2001) Mathematical Reasoning (Spring, 2000 (IS)) Topology and Psychology (Spring, 2000; co-taught with Kevin Lanning) Introduction to Programming in C (Fall, 1999) Scientific Writing (Fall, 1999)

## University of California, Berkeley

Multivariable Calculus (Summer 1997) Co-Instructor for undergraduate seminar on low-dimensional topology (Spring 1997) Teaching Assistant for Calculus, Linear Algebra, Discrete Mathematics, Differentiable Manifolds (graduate course)

## **Professional Service**

Graded AP Calculus Exams, 2008 Referee for various journals Proposal reviewer for the National Science Foundation Reviewer for Mathematical Reviews

#### **Community Service**

La Ballona Elementary Math Circle, 2016-2020 Assisted with 8<sup>th</sup> grade Science Fair projects at Whaley Middle School, Compton, January-February 2005

#### **University Service: Loyola Marymount University**

#### **University Service**

Faculty Senate, 2005-2008, 2020-2021, 2023-2025

- Vice President, 2023-2024
- Committee on Rank and Tenure, 2017-2022; Chair 2018-2020
  - Academic Affairs Policy Committee, 2019-2020
- EEO Hearing Panelist, 2017-present

University Teacher Education Committee, 2008-2015, 2019-present Core Curriculum Committee

- Approval Subcommittee for FYS/Rhetorical Arts and Information Literacy, 2016-2017
- University Core Curriculum Committee, 2006-2015, 2021-2024; Chair 2009-2011, 2013-2015, Fall 2022
- Core-4 Advisory Group, 2014-2015
- Academic Affairs Policy Committee, 2014-2015
- Core Implementation Task Force, 2011-2013
- Chair of Quantitative Reasoning Course Criteria Working Group, 2011-2012
- Chair of Foundations Course Approval Subcommittee, 2012-2015
- Member of Core Curriculum Steering Group, 2012-2013

MaSTeP Committee, 2006-2015

Trustee Committee (Student Life), 2008-2011 Academic Leadership Workshop Planning Committee, 2007 Organizer of Junior Faculty Seminar (aka Cub Club), 2004-2007 Valedictorian Committee, 2002-2006

## **College Service**

Merit Normalization Task Force, 2017

Continuing Faculty Grant Committee, 2015 (Chair)

- Seaver College Faculty Development Committee (a.k.a. Third-Year Review Committee), 2012-2015; Chair 2014-2015
- Seaver College representative to Advisory Board for Undergraduate Teacher Preparation Program, 2008-2015

Internal Grants Committee, 2012

Secondary Science Education Task Force, 2011 (Chair)

Science and Engineering Community Outreach Program (SECOP), 2007 and 2008

## **Department Service**

Putnam Team Advisor, 2002-present Teacher Education Committee, 2005-present; Chair 2005-2011, 2012-2014, 2019-present Secondary Teacher Preparation Program Director for Mathematics, 2007-2015, 2019-present Library Representative, 2022-2023 Sophomore Scholarship Committee, 2014-2019, 2022-2023 Curriculum/Scheduling Committee, 2019-2021 Scheduling Committee, 2012-2013, 2018-2019 Hiring Committee, 2012-2013, 2017-2018 (Chair) Curriculum Committee, 2002-2004, 2005-2007, 2007-2008, 2016-2017 (Chair) Assessment Committee, 2010-2014 Task Force Beta (revising math major), 2014 Peer Review Committee, 2011-2012 (Chair) Clinical Faculty Hiring Committee, 2010-2011 (Chair) Program at Large Committee (revising math major), 2010 **Teaching Assistants Committee**, 2008 Math Dept. Education Liaison Committee, 2005

### **Advising Student Groups**

Faculty Advisor for LMU Mixed Martial Arts Club, 2012-present Faculty Advisor for LMU Swing and Ballroom Club, 2004-2006 Math Club Advisor, 2002-2005

## University Service: Honors College, Florida Atlantic University

Bylaws Committee (Chair), 2001-2002 Presiding Officer, Honors College Faculty Assembly, 2000-01 Screening Committee for Undergraduate Teaching Award (Chair), 2000-01 FAU Committee for Undergraduate Teaching Award, 2000-01 Faculty Committee (Chair), Fall 1999 Admissions Committee (Chair), 1999-2000 Promotions and Tenure Guidelines Committee, 1999-2002 Academic Affairs and Student Life Committee, 1999-2001 Search Committee for Mathematics, 1999-2000 (Chair), 2000-01 Search Committee for Physics (Chair), 1999-2000 Search Committee for French, 1999-2000 FAU Faculty Council (alternate), 1999-2000

Languages: French, German.

Computer Languages: BASIC, Pascal, LISP, C, C++, Java, Unix

#### **Professional Memberships**

American Mathematical Society Mathematical Association of America National Council of Teachers of Mathematics

Last Updated: 5/8/2023