

Curriculum Vitae

**Dana D. Clahane**

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**EDUCATION**

**Ph.D. in Mathematics**, University of California, Irvine (UCI), 1994-2000

Bernard Russo, Advisor.

Thesis: *Composition Operators on Holomorphic Function Spaces in Several Complex Variables.*

**M.A. in Mathematics**, California State University, Long Beach (CSULB), 1987-1989.

**B.S. in Mathematics**, Cum Laude (135 semester units), Biola University, La Mirada, 1983-1987.

**AREAS OF PUBLISHED RESEARCH**

Modern and classical functional, real, and complex analysis in one and several real or complex variables, operator theory

**OTHER AREAS OF INTEREST**

Operator algebras, analytic number theory, free probability, mathematical physics and dynamical systems, Clifford analysis and algebra, cancer modeling, potential theory, image/signal processing, combinatorics, and space science.

**POSTDOCTORAL ACADEMIC POSITIONS HELD**

**UCI**  
Irvine, CA

*Visiting Professor*  
Winter and Spring, 2013

**California State University, Fullerton (CSUF)**  
Fullerton, CA

*Visiting Professor*  
Fall 2012

**University of California at Riverside (UCR)**  
Riverside, CA

*Visiting Assistant Professor*  
Spring 2005-Spring 2008

Michel Lapidus, Research mentor

**Institute for Mathematics and its Applications (IMA), University of Minnesota**  
Minneapolis, MN

*Member*  
9-11/2005

**Indiana University (IU)**  
Bloomington, IN

*NSF VIGRE Postdoctoral Fellow*  
2001-2004

Hari Bercovici, Research mentor

**California State University, San Marcos**  
San Marcos, CA

*Visiting Assistant Professor*  
2000-2001

**CURRENT REGULAR APPOINTMENT**

**FC**  
Fullerton, CA

*Professor of Mathematics*  
1992-Present

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## PUBLICATION LIST

8. *Composition operators from logarithmic Bloch spaces to weighted Bloch spaces* (with R. Castillo, J. Fariás Lopez, and J. Ramos Fernandez), *Appl. Math. Comput.* **219** (2013), 6692-6706, arxiv:1203.2693.
7. "Environmentally sound math", *Fullerton College Weekly Hornet*, Special Earth Day Issue, invited student newspaper article, April 2010.
6. *Compact weighted composition operators and fixed points in convex domains*, *Fixed Point Theory and Applications*, 2007, Art. ID 28750, 8pp.
5. *Norm equivalence and composition operators between Bloch/Lipschitz spaces of the unit ball* (with S. Stević), *Journal of Inequalities and Applications*, 2006, Art. ID 61018, 11pp.
4. *Composition operators on generalized Bloch and Lipschitz spaces of the polydisk*, joint with S. Stević and Z. Zhou, preprint, 37 pages, 2005, <http://arxiv.org/mathFA/0507339>.
3. *Spectra of compact composition operators over bounded symmetric domains*, *Integral Equations and Operator Theory*, **51** (2005), 41-56.
2. *Bounded composition operators on Lipschitz and Bloch spaces of the polydisk*, preprint, 7 pages, 2002.
1. *Compact composition operators on weighted Bergman spaces of the unit ball*, *Journal of Operator Theory*, **45** (2001), no. 2, 335-355.

## JOURNAL ARTICLE REVIEWS AUTHORED FOR AMS MATHEMATICAL REVIEWS

- Budzyński, Piotr, Jabłoński, Zenon, Jan, Jung, Il Bong, and Stochel, Jan. *On unbounded composition operators in  $L^2$ -spaces*, *Ann. Mat. Pura Appl.* (4) **193**, (2014), no. 3, 663-688.
- A. Jiménez/J. M. Sepulcre. *Weighted composition operators on the dual and predual Banach spaces of Beurling algebras of  $\mathbf{Z}$* , *J. Math. Anal. App.* **319** (2013), 394-402.
- J. Appell/Z. Jesús/O. Mejía. *Some remarks on non-linear composition operators in spaces of differentiable functions*, *Boll. Unione Mat. Ital.* (9) **4** (2011), no. 3, 321-336.
- J. C. Ramos Fernandez. *Composition operators on Bloch-Orlicz type spaces*, *Appl. Math. Comput.* **217** (2010), no. 7, 3392-3402.
- S. Stević. *On an integral operator between Bloch-type spaces on the unit ball*, *Bull. Sci. Math.* **134** (2010), 329-339.
- Nguyen Quang Dieu/Shûichi Ohno. *Complete continuity of linear combinations of composition operators*, *Arch. Math. (Basel)* **94** (2010), no. 1, 67-72.
- P. Bourdon/B. MacCluer. *Selfcommutators of automorphic composition operators*, *Complex Variables and Elliptical Equations*, **52** (2007), no. 1, 85-104.
- B. MacCluer/M. Pons. *Automorphic composition operators on Hardy and Bergman spaces of the unit ball*, *Houston Journal of Mathematics*, **32**, (2006), no. 4, 1121-1132.
- Z. Zhou/M.Zhu/J. Shi. *Composition operators on the little Bloch space in polydiscs*, *Acta Mathematica Scientarium. Ser. B, Engl. Ed.*, **25** (2005), no. 4, 629-638 (MR #2175928.)
- S. Li. *Composition operators on  $Q_p$  spaces*, *Georgian Mathematics Journal*, **12** (2005), no. 3, 505-514 (MR #2174952).

## NATIONAL SERVICE

Member/Mentor, National Alliance for Doctoral Studies in Mathematics, 2016 - Present.

Proposal Reviewer, National Science Foundation (NSF), 2015-16.

## EDITORIAL EXPERIENCE

M. Lapidus. *In Search of the Riemann Zeros. Strings, Fractal Membranes and Noncommutative Spacetimes*. American Mathematical Society, Providence, RI, 2008, 558 pages. (I provided thorough editorial assistance for the entire book except the last Appendix.)

## JOURNAL REFEREE SERVICE

- Complex Analysis and Operator Theory, 2016.
- Applied Mathematics and Computation, 2014.
- Annales Polonci Mathematici, 2014.
- Banach Journal of Mathematical Analysis, 2013.
- Complex Analysis and Operator Theory, 2013.
- Referee, Acta Universitatis Szegediensis, 2007.
- Referee, International Journal of Mathematics and Mathematical Sciences, 2004.

## INVITED PRESENTATIONS

26. "Student involvement in mathematics competitions and research at Fullerton College," (15-minutes), Mathematics and Sciences Division Meeting, Orange Coast College, 2/15.
25. "Clifford and Hurwitz integer moat problems and analogues of totient functions and RSA encryption," CECHA 2014, Chapman University, 10/14.
24. "The Riemann Hypothesis' equivalence to the existence of certain solutions of a family of differential equations (after I. Knowles)," (50-minute talk), Mathematics Colloquium, Azusa Pacific University, 4/14.
23. "Composition operators from the logarithmic Bloch spaces to weighted Bloch spaces," (50-minute talk), Analysis Seminar, UCR, 4/12.
22. "Composition operators from  $(k, \theta)$ -logarithmic Bloch spaces to weighted Bloch spaces," (50-minute talk), Analysis Seminar, CSUF, 3/12.
21. "Multicomplex spectral and geometric zeta functions and dimensions of fractal strings" (50-minute talk), Fractal Research Group, UCR, 12/10.
20. "Mathematical mystery," (two 75-minute workshop presentations for 7th-11th grade students), STEM Youth Conference, FC, 12/10.
19. "Prime membranes" (50-minute talk), Fractal Research Group, UCR, 5/10.
18. "Fractal membranes" (45-minute talk), Fractal Research Group, UCR, 3/10.
17. "An Introduction to the Riemann Hypothesis" (30-minute talk), Math Club, Cypress College, 4/09.
16. "A proof of of the boundedness of holomorphic composition operators on the Hardy space of the unit disk" (75-minute talk), Functional Analysis Seminar, UCR, 2/08.
15. "Hilbert spaces of Dirichlet series" (60-minute talk), Mathematical Physics/Dynamical Systems Seminar, UCR, 2/07.
14. "Bloch's constant" (75-minute talk), Functional Analysis Seminar, UCR, 10/06.
13. "Fixed points and compact weighted composition operators on convex domains" (50-minute talk), Department Colloquium, CSU San Bernadino, 9/06.
12. "An introduction to composition operators" (50-minute talk), Colloquium, Hanover College, 3/06.
11. "Fixed points and compact weighted composition operators on convex domains" (50-minute talk), Colloquium, U. of Mississippi, 2/06.
10. "An introduction to vector spaces" (50-minute talk), Teaching Colloquium, U. of Mississippi, 2/06.
9. "Fixed points of holomorphic maps and compact weighted composition operators" (50-minute talk), Analysis Seminar, UCI, 3/06.
8. "Fixed points of maps and compact weighted composition operators on convex domains" (50-minute talk), Mathematical Physics/Dynamical Systems Seminar, UCR, 11/17/05.
7. "Composition operators on Bloch-type and Lipschitz spaces of the ball and disk" (75-minute talk), Functional Analysis Seminar, UCR (two 50-minute lectures), 10/05.
6. "Bounded composition operators on Bloch-type and Lipschitz spaces of the polydisk" (50-minute talk), Wabash Modern Analysis Seminar, Crawfordsville, 4/03.
5. "Bounded composition operators on holomorphic Lipschitz spaces of the polydisk" (50-minute talk), Analysis Seminar, UCI, 3/03.
4. "Compact composition operators on Hardy and weighted Bergman spaces of the ball" (50-minute talk), Harmonic Analysis Seminar, IU Bloomington, 4/02.
3. "Spectra of composition operators on bounded symmetric domains" (20-minute talk), AMS Special

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Session on Banach Algebras and Operator Theory, CSU San Francisco, 9/00.

2. "Spectra of compact composition operators on Hardy and weighted Bergman spaces of bounded symmetric domains" (50-minute talk), Department Colloquium, Cal Poly San Luis Obispo, 4/00.
1. "An introduction to composition operators" (50-minute talk), Mount St. Mary's College, 3/99.

## CONTRIBUTED PRESENTATIONS

94. "A rigorous development of the Riemann Hypothesis," (several talks, ongoing), Research and Problem Solving Seminar/Pacific Summer Open Mathematics Seminar (PSOMS), Fullerton College, 2/16 - Present.
93. "Ulam's Packing Conjecture," (three 50-minute talks), Math Colloquium, FC, 3-4/16.
92. "The Skolem Problem," (50 minutes), Math Colloquium, FC, 2/16.
91. "Are there infinitely many Lucas primes, and who is Lucas?," (20 minutes), Math Colloquium, FC, 11/15.
90. "Binary operations, scalar multiplications and algebras," (30 minutes), Math Colloquium, FC, 11/15.
89. "From the power set to a topological space," (30 minutes), Math Colloquium, FC, 11/15.
88. "Bunyakovsky's conjecture and the generalized Dickson conjecture," (45 minutes), Math Colloquium, FC, 8/15.
87. "Are there any primes  $p$  whose square is a factor of both the difference between the  $(p-1)$ 'st power of 2 and 1, and the difference between the  $(p-1)$ 'st power of 3 and 1?," (20 minutes), Math Colloquium, FC, 5/15.
86. "Is every Mersenne number with prime index necessarily square-free?," (20 minutes), Math Colloquium, FC, 4/15.
85. "Is the Mandelbrot set locally connected?," Math Colloquium, FC, 3/15.
84. "Is every prime in the Euclid-Mullins sequence?," Math Colloquium, FC, 2/15.
83. "The congruent number problem," Math Colloquium, FC, 1/15.
82. "Can we solve the Happy Ending Problem for all positive integers?," (50 minutes), Math Colloquium, FC, 11/14.
82. "Moser's worm problem," (fourteen 75 minute lectures, to be continued), Math Colloquium/Research and Problem Solving Seminar, FC, 8/14-11/14.
81. "Is the Lebesgue measure/Hausdorff measure of the set of initial conditions leading to non-collision singularities in the  $N$ -body problem necessarily 0?" (fourteen 50-minute talks, to be continued), Math Colloquium and Pacific Summer Unsolved Mathematics Seminar (PSUMS), FC, 3/14-7/14.
80. "Lehmer's totient function problem and an introduction to cryptography via the RSA algorithm," (five 50-minute talks), Math Colloquium, FC, 1/14-3/14.
79. "Kaplansky's conjecture on group rings (50-minute talk), Math Colloquium, FC, 2/14.
78. "The Lenstra-Pomerance-Wagstaff conjecture," (50-minute talk), Math Colloquium, FC, 10/13.
77. "The Goormaghtigh conjecture," (50-minute talk), Math Colloquium, FC, 10/13.
76. "The Gaussian moat conjecture," (45-minute talk), Math Colloquium, FC, 9/13.
75. "The Lander-Parkin-Selfridge conjecture," (30-minute talk), Math Colloquium, FC, 8/13.
74. "Strong compactness of algebras of operators including composition, after J. H. Shapiro," (nine 50-minute lectures), PSUMS, FC, 7-8/13.
73. "Can we find all real functions  $g$  on  $[a, b]$  whose superposition operator maps differences of convex functions to differences of convex functions? (after J. Appell *et al*), PSUMS, FC, 6/13
72. "If a real-valued function  $g$  on the reals has derivative in  $RBV_p^1[a, b]$ , then is its superposition operator bounded on  $RBV_p^1[a, b]$ ?," (after J. Appell *et al*), (50-minute talk), Math Colloquium, FC, 5/13.
71. "If a real-valued function  $g$  on  $[a, b]$  has absolutely continuous derivative, then is  $g$ 's superposition operator continuous on the set of functions that are of the same type as  $g$ ?," (after J. Appell *et al*), (50 minute talk), Math Colloquium, FC, 4/13.
70. "Toeplitz' conjecture," (30-minute talk), Math Colloquium, FC, 4/13.
69. "The Erdős-Burr conjecture," (50-minute talk), Math Colloquium, FC, 3/13.
68. "Barnette's conjecture," (20-minute talk), Math Colloquium, FC, 2/13.

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67. "The lonely runner conjecture," (15-minute talk), Math Colloquium, FC, 12/12.
  66. "Let's prove something about the Riemann-zeta function," (25-minute talk), California Community College Math Conference, FC, 11/12.
  65. "Are there any quasiperfect or odd superperfect numbers, and if so, how many are there?," (30-minute talk), Math Colloquium, FC, 11/12.
  64. "The Elliot-Halberstam conjecture," (45-minute talk), Math Colloquium, FC, 10/12.
  63. "What is the largest power of 2 that divides the number of Latin squares of a given order  $n$ ?," (10-minute talk), Math Colloquium, FC, 10/12.
  62. "The Feit-Thompson conjecture," (10-minute talk), Math Colloquium, FC, 5/12.
  61. "Angular mass distribution of Bergman space functions," (50-minute talk), Math Colloquium, FC, 4/12.
  60. "The Frankl union-closed sets conjecture," (45-minute talk), Math Colloquium, FC, 3/12.
  59. "Cramér's conjecture," (15-minute talk), Math Colloquium, FC, 3/12.
  58. "Composition operators from  $(k, \theta)$ -logarithmic Bloch spaces to weighted Bloch spaces," (50-minute talk), Math Colloquium, FC, 2/12.
  57. "The Bunyakovsky conjecture," (15-minute talk), Math Colloquium, FC, 1/12.
  56. "Beal's conjecture," (15-minute talk), Math Colloquium, FC, 11/11.
  55. "Artin's conjecture on primitive roots," (40-minute talk), Math Colloquium, FC, 11/11.
  54. "The Agoh-Giuga conjecture," (20-minute talk), Math Colloquium, FC, 10/11.
  53. "The  $1/3 - 2/3$  conjecture," (30-minute talk), Math Colloquium, FC, 9/11.
  52. "Schanuel's conjecture," (45-minute talk), Math Colloquium, FC, 9/11.
  51. "The problem of characterizing the real sequences that generate bounded power series in a single, real variable," (20-minute talk), Math Colloquium, FC, 8/11.
  50. "The Stone-Weierstrauss theorem for infinite-dimensional vector-space valued functions," (30-minute talk), PSUMS, FC, 7/11.
  49. "1. How many groups of order  $n$  are there for each positive integer  $n$ ? 2. The gnu-hunting conjecture," (30-minute talk), Math Colloquium, FC, 5/11.
  48. "A question answered 'Yes' by Paul Erdős: 'If aliens from outer space some day demand that we find a Ramsey number, for example,  $R(5, 5)$ , or they'll kill us all, should we just kill the aliens?," (30-minute talk), Math Colloquium, FC, 3/11.
  47. "Khabibullin's conjecture" (20-minute talk), Math Colloquium, FC, 2/11.
  46. "The regular primes conjecture" (30-minute talk), Math Colloquium, FC, 1/11.
  45. "The Riemann hypothesis and an equivalent elementary statement, due to J. Lagarias, involving the divisor function and harmonic numbers" (50-minute talk), Math Colloquium, FC, 11/10.
  44. "Lehmer's conjecture" (20-minute talk), Math Colloquium, FC, 11/10.
  43. "Pre-lecture in preparation for Yuichiro Kakihara's 10/19 Colloquium lecture" (45-minute talk), Math Colloquium, FC, 10/10.
  42. "Gilbreath's conjecture" (20-minute talk), Math Colloquium, FC, 10/10.
  41. "The counting problem for rational distances between points on a parabola" (15-minute talk), Math Colloquium, FC, 9/10.
  40. "An introduction to problems in bicomplex analysis", first Math Colloquium of 2010-2011 (50-minute talk), Claremont Colleges Center for the Mathematical Sciences, 9/10.
  39. "Fortune's conjecture" (20-minute talk), Math Colloquium, FC, 9/10.
  38. "Are there infinitely many prime quadruplets?" (10-minute talk), Math Colloquium, FC, 8/10.
  37. "If (1)  $W$  is a subset of  $n$ -dimensional complex space  $\mathbb{C}^n$  and  $W$  is a union of polynomially convex sets and (2)  $p(W)$  is open for all non-constant polynomial functions on  $\mathbb{C}^n$ , then is  $W$  open?" (45-minute talk), PSUMS, FC, 7/10.
  36. "(1) Suppose that  $d$  is a semi-metric on a set  $X$  with the property that whenever  $\lim_{n \rightarrow \infty} d(x_n, y_n) = \lim_{n \rightarrow \infty} d(y_n, z_n) = 0$ , we have that  $\lim_{n \rightarrow \infty} d(x_n, z_n) = 0$ . Does the fact that  $\lim_{n \rightarrow \infty} d(x_n, x) = 0$  for some  $x \in X$  imply that  $\lim_{n \rightarrow \infty} d(x_n, y) = d(x, y)$  for all  $y \in X$ ? (2) Can we answer this question even under the additional assumption that whenever  $\lim_{n \rightarrow \infty} d(x_n, x) = \lim_{n \rightarrow \infty} d(y_n, x) = 0$  for some  $x \in X$ , we have that  $\lim_{n \rightarrow \infty} d(x_n, y_n) = 0$ ?" (45-minute talk), PSUMS, FC, 7/10.

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35. "The Hadamard conjecture" (20-minute talk), PSUMS, FC, 7/10.
  34. "Completely continuous composition operators" (50-minute talk), PSUMS, FC, 6/10.
  33. "Euler's conjecture (open since 1760) that there are infinitely many primes that are the sum of 1 and the square of another positive integer" (10-minute talk), Math Association Meeting, FC, 4/10.
  32. "Legendre's conjecture, included in Landau's problem list, that for every positive integer  $n$ , there is a prime between the squares of  $n$  and  $n + 1$ " (10-minute talk), Math Association Meeting, FC, 4/10.
  31. "The Erdős-Strauss Conjecture" (10-minute talk), Math Association Meeting, FC, 3/10.
  30. "Pre-lecture for John Baez' Colloquium: vectors, dot products, cross products, their geometric significance, and an introduction to the quaternions" (45-minute talk), Math Association Meeting, FC, 3/10.
  29. "Are 10 and others, not just 1, lonely numbers?" (25-minute talk), Math Association Meeting, FC, 3/10.
  28. "Rubel's gravitational equilibrium problem (carrying a hefty \$200 prize for any correct solution): Does a universe of any dimension have either a finite or infinite set of locations where gravitational forces allow masses at those locations to stay at rest?" (45-minute talk), Math Association Meeting, FC, 3/10.
  27. "Maxwell's question concerning existence of equilibria for Newtonian charge-distance potentials" (45-minute talk), Math Association Meeting, FC, 3/10.
  26. "Win the lottery or solve this Clay Millennium Prize problem: Are there physically reasonable, smooth solutions to the Navier-Stokes equations?" (45-minute talk), Math Association Meeting, FC, 2/10.
  25. "Are there any natural separable Hilbert spaces of functions on the  $n$ -dimensional complex Euclidean ball for which all composition operators are bounded?" (45-minute talk), Math Association Meeting, FC, 2/10.
  24. "The invariant subspace problem" (45-minute talk), Math Association Meeting, FC, 2/10.
  23. "The search for Bloch's constant" (45-minute talk), Math Association Meeting, FC, 2/10.
  22. "Frobenius' Conjecture, which is now a theorem" (40-minute talk), Math Association Meeting, FC, 1/10.
  21. "Finding a dynamical systems explanation for orbital behavior of celestial objects, such as the recently discovered braid-like behavior sometimes but not always present on portions of Saturn's rings", Math Association Meeting, FC (45-minute talk, 11/09).
  20. "Pre-lecture in preparation for Angel Pineda's Colloquium talk: the tomography problem, pixels, images, attenuation, the Radon transform, sample spaces, probability, numerical and matrixial random variables, probability density functions, image noise, and image noise correlation " (45-minute talk), Math Association Meeting, FC, 11/09.
  19. "Introduction to the mathematics of imaging: 3D Morphology of rapidly evolving celestial objects and tomography", Math Association Meeting (40-minute talk), FC, 11/09.
  18. "The Jacobian conjecture" (45-minute talk), Math Association Meeting, FC, 10/09.
  17. "The Twin, Mersenne, and Sophie Germain Prime Conjectures" (40-minute talk), Math Association Meeting, FC, 10/09.
  16. "Are the sum, difference, product, and quotient of  $\pi$  and  $e$  irrational?" (15-minute talk), Math Association Meeting, FC, 10/09.
  15. "Can positive rational numbers be recursively decomposed into finite sums of unit fractions with even denominator?" (10-minute talk), Math Association Meeting, FC, 10/09.
  14. "Can one find the exact value of the sum of all reciprocals of a fixed even power of the positive integers?" (15-minute talk), Math Association Meeting, FC, 9/09.
  13. "Fermat's Last Theorem to a next theorem; Can a 6th power of a positive integer be the sum of 5 6th powers of positive integers?" (15-minute talk), Math Association Meeting, FC, 9/09.
  12. "The search for an odd perfect number" (10-minute talk), Math Association Meeting, FC, 9/09.
  11. "The Goldbach Conjecture" (15-minute talk), Math Association Meeting, FC, 9/09.
  10. "The Holy Grail of mathematics: The Riemann-Zeta conjecture " (45-minute talk), Math Association Meeting, FC, 9/09.
  9. "Fixed points of holomorphic maps and compact weighted composition operators" (20-minute talk), Southeastern Analysis Meeting, University of Florida, 3/06.
  8. "Fixed points of maps and compact weighted composition operators on convex domains" (20-minute

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- talk), Wabash Modern Analysis Miniconference, Indianapolis, 9/05.
7. "Fixed points and compact weighted composition operators on convex domains" (20-minute talk), International Workshop on Operator Theory and Applications, U. of Connecticut, 7/05.
  6. "Composition operators on Bloch-type spaces of the polydisk" (20-minute talk), Wabash Modern Analysis Mini-Conference, Indianapolis, 9/04.
  5. "Spectra of compact composition operators on bounded symmetric domains" (20-minute talk), Great Plains Operator Theory Symposium, San Juan, Puerto Rico, 5/00.
  4. "Bounded composition operators on holomorphic Lipschitz spaces of the ball" (contributed talk), Southeastern Analysis Meeting, University of Virginia, 3/00.
  3. "Spectra of compact composition operators on function spaces over bounded symmetric domains" (20-minute talk), AMS Special Session on Banach Spaces and Operator Theory, San Antonio, 1/99.
  2. "Spectra of compact composition operators on function spaces over bounded symmetric domains" (20-minute talk), AMS Special Session on Several Complex Variables and Operator Theory, University of Utah, 3/99.
  1. "Compact composition operators on weighted Bergman spaces of the unit ball" (20-minute talk), AMS Special Session on Banach Spaces of Analytic Functions and Operators on These Spaces, Wake Forest University, 10/98.

**FACILITATION/MENTORING OF STUDENT MATHEMATICAL RESEARCH PRESENTATIONS  
(BOLD NUMBERING INDICATES THAT A LATEX BEAMER PRESENTATION AND/OR WORK-  
ING ARTICLE IN LATEX HAS BEEN GENERATED)**

- 346.** Lucas Morgan (one of my math research seminar students), "Erdős' minimum overlap problem," PSOMS, FC, 7/16.
- 345.** Abdallah Anees (one of my math research seminar students, entering UC Davis in Fall 2016 as a Computer Science major), "The MLC conjecture that the Mandelbrot set is locally connected, PSOMS, FC, 7/16.
- 344.** Tim Day (one of my math research seminar students), "What is the density of the solitary numbers? Is it 0?," PSOMS, FC, 7/16.
- 343.** James Francese (one of my math research seminar students), "The structure theorem for finitely-generated abelian groups," PSOMS, FC, 7/16.
- 342.** Julio Berina (one of my math research seminar students, now a computer science major at CSULB), "The Skolem problem," PSOMS, FC, 6/16.
- 341.** Alex Goldman (one of my former ENGAGE in STEM research interns, entering UCLA in Fall 2016 as a math major), "From intermediate algebra to the Bergman space," PSOMS, FC, 6/16.
- 340.** Julio Berina (one of my math research seminar students), "The Skolem problem," Math Colloquium, FC, 5/16.
- 339.** Scott Tran (one of my math research seminar students), "Hardy-Littlewood Conjecture F," Math Colloquium, FC, 5/16.
- 338.** Raymond Lam (one of my math research seminar students), "An open problem involving derivations," Math Colloquium, FC, 5/16.
- 337.** Cody Yanna (one of my math research seminar students), "An introduction to RSA encryption," Math Colloquium, FC, 5/16.
- 336.** Omar Dominguez (one of my math research seminar students), "The P vs. NP conjecture," Math Colloquium, Fullerton College, 5/16.
- 335.** Shaheer Islam (one of my math research seminar students), "Sendov's conjecture," Math Colloquium, FC, 5/16.
- 334.** Agnes Tsang (one of my math research students), "Bunyakovsky's conjecture," Math Colloquium, FC, 5/16.
- 333.** Adam Allred (one of my former math research seminar students), "An introduction to Hausdorff dimension, toward fractals," Math Colloquium, FC, 5/16.
- 332.** Nick Corum (one of my mathematics independent study students), "Jacobson's conjecture," Math Colloquium, FC, 5/16.
- 331.** Ivan Chi (one of my math research seminar students), "The P vs. NP conjecture," Math Colloquium,

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- FC, 4/16.
330. Ryan Wilcox (one of my math research seminar students), "Error correcting code," Math Colloquium, FC, 4/16.
329. Shaheer Islam (one of my discrete mathematics students), "Sendov's conjecture," Math Colloquium, FC, 4/16.
328. Harjot Chahal (one of my math research seminar students and also a CSUF student), "Are there infinitely many Wilson primes?," Math Colloquium, FC, 3/16.
327. Jacob Cornejo (one of my math research seminar students, now a math major at CSULB), "Hadwiger's conjecture in graph theory," Math Colloquium, FC, 3/16.
326. Nick Stearns (one of my ENGAGE in STEM research interns), "Defining the Riemann-zeta function and analytic continuity," Math Colloquium, FC, 3/16.
325. Julio Berina (one of my math research seminar students), "The Skolem Problem," Math Colloquium, FC, 2/16.
324. Alex Goldman (one of my ENGAGE in STEM Research Interns), "Boolean algebra and the Exponential Time Hypothesis," Math Colloquium, FC, 2/16.
323. Nick Stearns (one of my ENGAGE in STEM Research Interns), "The generalized Dickson conjecture," Math Colloquium, FC, 2/16.
322. Hanh Vo (one of my ENGAGE in STEM Research Interns), "Are there infinitely many Lucas primes?," Math Colloquium, FC, 2/16.
321. Brian Sturgis-Jensen (one of my math seminar students), "Are there infinitely many palindromic primes?," Math Colloquium, FC, 12/15.
320. Lauren D'Lucas (one of my honors math seminar and multivariable calculus students), "Pillai's conjecture," Math Colloquium, FC, 12/15.
319. Fahim Ahmed (one of my multivariable calculus students, entering UCLA in Fall 2016 as an applied math major), "Maxwell's question regarding the number of equilibrium points of charge-distance potentials," Math Colloquium, FC, 12/15.
318. Ivan Chi (one of my honors math seminar and multivariable calculus students), "The Frankl union-closed sets conjecture," Math Colloquium, FC, 12/15.
317. Harjot Chahal (one of my math seminar students), "Are there more than three Wilson primes, and if so, how many are there?," Math Colloquium, FC, 12/15.
316. Shaheer Islam (one of my honors calculus students), "How many Pell primes are there, and who is Pell?," Math Colloquium, FC, 12/15.
315. Jason Yu (one of my honors calculus students), "How many regular primes are there?," Math Colloquium, FC, 11/15.
314. Rizo Obara (one of my math seminar students), "Is every Mersenne number with prime index necessarily square-free?," Math Colloquium, FC, 11/15.
313. Kassandra Flores, "Moser's worm problem," Southern California Conference for Undergraduate Research (SCCUR), Pomona, 11/15.
312. Adam Allred, "An introduction to fractals and Hausdorff dimension," SCCUR, Pomona, 11/15.
311. Thomas Long (one of my math seminar students), "The Erdős-Faver-Lovasz conjecture," SCCUR, Pomona, 11/15.
310. Kassandra Flores (one of my math seminar and honors calculus students), "Moser's worm problem," SCCUR, Pomona, 11/15.
309. Cody Yanna (one of my math seminar students), "How many Woodall primes are there?," Math Colloquium, FC, 11/15.
308. Abdallah Anees (one of my math seminar students), "The MLC conjecture that the Mandelbrot set is locally connected," Math Colloquium, FC, 11/15.
307. Adam Allred, "An introduction to fractals and Hausdorff dimension," Math Colloquium, FC, 11/15.
306. Agnes Tsang (one of my math seminar students), "How many Wieferich primes are there?," Math Colloquium, FC, 11/15.
305. Ian Kolaja (one of my math seminar/honors calculus students), "Are there infinitely many primes  $p$  such that the  $(p - 1)$ 'st power of 2 is congruent to 1 modulo the square of  $p$ ?," Math Colloquium, FC, 11/15.



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304. Emily Maldonado (one of my math seminar students), "The Bateman-Horn Conjecture," Math Colloquium, FC, 10/15.
  303. Lamson Nguyen (one of my math seminar student), "Density of perfect powers," Math Colloquium, FC, 10/15.
  302. Kassandra Flores (one of my math seminar students), "Moser's worm problem," Math Colloquium, FC, 10/15.
  301. Tanay Shah (one of my math seminar/honors calculus students), "The moving sofa problem," Math Colloquium, FC, 10/15.
  300. Agnes Tsang, "Are there infinitely many Wieferich primes?," Math Colloquium, FC, 10/15.
  299. Nicholas Stearns (one of my math seminar students and research interns), "Pre-lecture for the talk by Irene Sabadini," Math Colloquium, FC, 10/15.
  298. Jacob Cornejo (one of my multivariable calculus/math seminar students), "The generalized Dickson conjecture," Math Colloquium, FC, 10/15.
  297. Christopher Lim (one of my math seminar students, entering UC Berkeley in Fall 2016 as an applied math major), "Are there infinitely many primes  $p$  such that the  $(p-1)$ 'st power of 2 is congruent to 1 modulo the square of  $p$ ?," Math Colloquium, FC, 9/15.
  296. Cameron Goedinghaus (one of my former math seminar student), "What is the shape of the universe?," Math Colloquium, FC, 9/15.
  295. Lauren D'Lucas (one of my math seminar students), "Pillai's conjecture," Math Colloquium, FC, 9/15.
  294. Cody Yanna (one of my math seminar students), "Are there infinitely many Woodall primes?," Math Colloquium, FC, 9/15.
  293. Hanh Vo (one of my ENGAGE IN STEM research interns and a multivariable calculus student of mine), "Behavior of various products of matrices: tensor, direct, bracket, circle, and matrix products," Math Colloquium, FC, 9/15.
  291. Alexander Goldman (my former math seminar student and an ENGAGE in STEM Research Intern), "The exponential time hypothesis," Math Colloquium, FC, 9/15.
  290. Nicholas Stearns, "Ducci sequences of complex  $n$ -tuples," Math Colloquium, FC, 8/15.
  289. James Hansberry, "Are all of the primes in the Euclid-Mullins sequence?," Pacific Summer Open Math Seminar (PSOMS), FC, 7/15.
  288. Adam Allred, "Finding upper bounds for halving lines of  $k$ -sets in the plane," PSOMS, FC, 7/15.
  287. Shannon Yu (one of my math seminar students), "The Happy Ending Problem," PSOMS, FC, 7/15.
  286. Timothy Day (one of my math seminar students), "What is the density of the solitary numbers, and does 10 have any friends?," PSOMS, FC, 7/15.
  285. Lamson Nguyen (one of my math seminar students), "The Landin-Parker-Selfridge conjecture," PSOMS, FC, 7/15.
  285. Emily Maldonado (one of my math seminar students), "The Bateman-Horn conjecture," PSOMS, FC, 7/15.
  284. Benjamin Yu (one of my junior high school special admit math seminar students), "Shephard's conjecture that every convex polyhedron has a net," PSOMS, FC, 7/15.
  283. Mundy Reimer (one of my math seminar students), "The mathematics of neural networks," PSOMS, FC, 7/15.
  282. Alejandra Solorzano (one of my former math seminar students), "Are there infinitely many Woodall primes?," PSOMS, FC, 6/15.
  281. Ryan Russell, "The group counting number problem and the gnu hunting conjecture," PSOMS, FC, 6/15.
  280. Hahn Vo (one of my ENGAGE in STEM Research Interns), "The congruent number problem," PSOMS, FC, 6/15.
  279. Thor Roe (one of my former trigonometry students, entering UC Berkeley in Fall 2016), "Are there infinitely many amicable numbers?," PSOMS, FC, 6/15.
  278. Cameron Goedinghaus (one of my former math seminar students), "The Jacobian conjecture, after Dana Clahane, Craig Luis, and Melissa Riddle), Math Colloquium, FC, 5/15.
  277. Jeremy Saqr (who earned a BA in Applied Math at SFSU and now is a software test engineer at Panasonic), "An introduction to number theory experiments via Python and the question, 'If  $a$  is a

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- positive integer greater than 1, then are there infinitely many prime numbers  $p$  such that the  $(p - 1)$ 'st power of  $a$  is congruent to 1 modulo the square of  $p$ ?" Math Colloquium, FC, 5/15.
276. Chris Olson (one of my math seminar students), "An introduction to dynamical systems, after Robert Devaney," Math Colloquium, FC, 5/15.
275. Jayson Barker (one of my applied math seminar students, entering UC Berkely as a physics major in Fall 2016), "Are all Fermat and Mersenne numbers with prime exponent (index) square-free?," Math Colloquium, FC, 4/15.
274. Jake Wagner (one of my former honors calculus students), "What is the probability that two randomly selected elements of the symmetric group on  $n$  elements generate this group? (Part III)," Math Colloquium, FC, 3/15.
273. Hanh Vo (one of my honors pure math seminar students), "The details of Fermat's proof that 1 isn't congruent (after Keith Conrad)," Math Colloquium, FC, 3/15.
272. Alex Goldman (one of my former math seminar students), "Hadamard's conjecture and higher-dimensional generalizations of the cross product," Joint Southern California-Nevada Sectional Meeting of the MAA and the 10th Pacific Coast Undergraduate Mathematics Conference, Thousand Oaks, 3/15.
271. Shannon Condon, "Is the Mandelbrot set locally connected? Is it decidable?," Joint Southern California-Nevada Sectional Meeting of the MAA and the 10th Pacific Coast Undergraduate Mathematics Conference, Thousand Oaks, 3/15.
270. Matthew Lee (one of my math seminar students, entering UCLA as an applied math major in Fall 2016), "The Collatz conjecture," Math Colloquium, FC, 3/15.
269. Jake Wagner, "What is the probability that two randomly selected elements of the symmetric group generate it? (Part II)," Math Colloquium, FC, 2/15.
268. Alexander Ardalan (one of my pure math seminar students), "Carmichael's totient function conjecture," Math Colloquium, FC, 2/15.
267. Jake Wagner, "What is the probability that two randomly selected elements of the symmetric group of order  $n$  generate the group?," Math Colloquium, FC, 2/15.
266. Phil Pesca (my ENGAGE in STEM research intern, who transferred to UCLA as a math major in Spring 2015), "The Hurwitz integers," Math Colloquium, FC, 2/15.
265. Diamond Carter (one of my honors pure math seminar students), "Do the solitary numbers have positive density among the integers?," Math Colloquium, FC, 12/14.
264. Thomas Long (one of my honors pure math seminar students), "Schanuel's conjecture," Math Colloquium, FC, 12/14.
263. Julianna Fiala (one of my applied math seminar students), "Ducci's vanishing squares," Math Colloquium, FC, 11/14.
262. Alex Goldman (one of my multivariable calculus students), "Hadamard matrices and rediscovering a generalization of the cross product," Math Colloquium, FC, 11/14.
261. Alejandra Solorzano (one of my honors pure math seminar students), "The Collatz conjecture," Math Colloquium, FC, 11/14.
260. Stephen Grecny (one of my honors calculus students), "The Bateman-Horn conjecture," Math Colloquium, FC, 11/14.
259. Eric Vargas (one of my pure math seminar students), "The Erdős-Turan conjecture on additive bases," Math Colloquium, FC, 2014.
258. Alexander Goldman, "Hadamard matrices and rediscovering a generalization of the cross product," SCCUR, Fullerton, 10/14.
257. Nicholas Stearns, "Density of structures generated by elementary cellular automata," SCCUR, Fullerton, 10/14.
256. Khoi Vo (one of my former ENGAGE in STEM Research Interns and my former math independent study student, now in the Mathematics MA program at CSULB), "The weak law of large numbers and two interesting applications," SCCUR, Fullerton, 10/14.
255. Sabrina Lee (one of my honors calculus students), "Pollock's octahedral numbers conjecture," SCCUR, Fullerton, 10/14.
254. Alejandra Solorzano, "The Collatz conjecture," SCCUR, Fullerton, 10/14.
253. Diamond Carter (one of my honors pure math seminar students), "Do the solitary numbers have positive density?," Math Colloquium, FC, 10/14.

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252. Jonathan Beatima (one of my honors pure math seminar students), "The Fermat-Catalan conjecture," Math Colloquium, FC, 10/14.
  251. Alex Ardalan (one of my honors pure math seminar students), "The Bateman-Horn conjecture," Math Colloquium, FC, 10/14.
  250. Allen Mina (one of my applied math Seminar and multivariable calculus students), "Singmaster's conjecture," Math Colloquium, FC, 10/14.
  249. Alejandra Solorzano, "The Collatz conjecture," Math Colloquium, FC, 9/14.
  248. Alex Goldman, "The Hadamard matrix conjecture," Math Colloquium, FC, 9/14.
  247. Julianna Fiala, "Ducci's vanishing squares," Math Colloquium, FC, 9/14.
  246. Thomas Long, "Schanuel's conjecture," Math Colloquium, FC, 9/14.
  245. Sean Douglas (one of my pure math seminar students, who entered UC Berkeley as an Economics major in Fall 2015), "Are there infinitely many Sophie Germain primes?," Math Colloquium, FC, 9/14.
  244. Craig Luis (a former linear algebra/differential equations and applied math seminar student of mine as well as my ENGAGE in STEM Research Intern during Summer 2014, entering USC's School of Pharmacy in Fall 2016), "Professor Ducci's amazing vanishing squares," Math Colloquium, FC, 8/14.
  243. Efreem Chavez (one of my multivariable calculus students), "The Bateman-Horn conjecture," PSUMS, FC, 7/14.
  242. Jonathan Kwak (one of my multivariable calculus students), "The Erdős-Straus conjecture," PSUMS, FC, 7/14.
  241. Akbar Shah (one of my multivariable calculus students), "Approaching rational numbers with odd denominators with sums of unit fractions with odd denominators as small as possible," PSUMS, FC, 7/14.
  240. Emily De Boer (one of my multivariable calculus students), "Pollock's octahedral numbers conjecture," PSUMS, FC, 7/14.
  239. Craig Luis, "The Jacobian conjecture," PSUMS, FC, 7/14.
  238. John Cepeda (one of my pure math seminar students), "Cramér's conjecture," PSUMS, FC, 7/14.
  237. Caroline Kim (one of my pure math seminar students), "The lonely runner conjecture," PSUMS, FC, 7/14.
  236. Jenny Wong (one of my multivariable calculus students), "Are there any odd perfect or  $m$ -superperfect numbers?," PSUMS, FC, 7/14.
  235. Daniel Kotlyar (one of multivariable calculus students), "A simple dynamical solar system with diverse behaviors," PSUMS, FC, 7/14.
  234. Phil Pesca (one of my ENGAGE in STEM Research Interns and my pure math seminar student, now a math major at UCI), "Hypercomplex Gaussian moat problems II," PSUMS, FC, 7/14.
  233. Sukvihr Sidhu (one of my multivariable calculus students, who graduated from Cal Poly Pomona in Spring 2016 with a BS in Computer Science), "Andrica's conjecture," PSUMS, FC, 7/14.
  232. Conan Song (one of my pure mathematics seminar and multivariable calculus student), "Artin's conjecture on primitive roots," PSUMS, FC, 7/14.
  231. Luz Jimenez-Vela (one of my ENGAGE in STEM Research Interns, now an American Physical Society Masters-to-Ph.D. Bridge Program Fellow at Florida State University), "Toward multicomplex differential forms, PSUMS, FC, 7/14.
  230. Chris Olson (one of my pure math seminar students), "Littlewood's conjecture," PSUMS, FC, 7/14.
  229. Vinh Tran (one of my ENGAGE in STEM Research Interns and my pure math seminar student, now a Chemistry major at UC Berkeley), "Littlewood's conjecture," PSUMS, FC, 7/14.
  228. Alex Goldman (one of my honors pure mathematics seminar students), "The Herzog-Schonheim conjecture," PSUMS, FC, 7/14.
  227. Joon Choi (one of my honors applied mathematics seminar students, now a biology major at Chapman University), "An introduction to mathematical neuroscience," PSUMS, FC, 7/14.
  226. Phillip Pesca, "The complex and bicomplex Gaussian moat problems," PSUMS, FC, 7/14.
  225. Chris Olson, "The Littlewood conjecture," Math Colloquium, FC, 5/14.
  224. John Morrill (one of my pure mathematics seminar students), "Kaplansky's conjecture on group rings," Math Colloquium, FC, 5/14.
  223. Cameron Goedinghaus (one of my pure mathematics seminar and second-semester calculus stu-

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- dents), "Are there infinitely many prime twins? Triplets? Quadruplets?, etc...," Math Colloquium, FC, 5/14.
222. Justin Grago (one of my pure mathematics seminar students and my Calculus II student), "The Erdős-Straus conjecture," Math Colloquium, FC, 5/14.
221. Nick Carpini (one of my honors pure mathematics seminar students), "Has the weak Goldbach conjecture been solved?," Math Colloquium, FC, 4/14.
220. Xinyang Yu (one of my honors pure mathematics seminar students), "Lehmer's Mahler measure conjecture," Math Colloquium, FC, 4/14.
219. Caleb Kunchandy (one of my linear algebra/differential equations students, who transferred to Cal Poly Pomona), "Are there any quasiperfect or  $m$ -superperfect numbers?," Math Colloquium, FC, 4/14.
218. Nathaniel Hovey (one of my second-semester calculus students), "Using complex variables to model behavior of the solar system," Math Colloquium, FC, 4/14.
217. Quocviet Luu (one of my honors pure math seminar and second-semester calculus students), "Are there any pseudoperfect or odd, weird numbers?," Math Colloquium, FC, 3/14.
216. Joon Choi (one of my second-semester calculus students), "The weak and strong Goldbach conjectures," Pacific Coast Undergraduate Mathematics Conference (PCUMC), Malibu, 3/14.
215. Faith Forcucci (one of my former honors pure math seminar students, who transferred to Cal Poly Pomona as a Mechanical Engineering major in Fall 2014), "Landau's problems," PCUMC, Malibu, 3/14.
214. Quoc Viet Luu, "Are there any odd, weird numbers, and how large are their abundancies?," PCUMC, Malibu, 3/14.
213. Nate Hovey, "An introduction to mathematical models of solar system orbital behavior," PCUMC, Malibu, 3/14.
212. Alfredo Velez (one of my second-semester calculus students, now at CSULB), "The Agoh-Giuga conjecture," PCUMC, Malibu, 3/14.
211. Caleb Kunchandy, "Are there any quasiperfect or odd  $m$ -superperfect numbers?," PCUMC, Malibu, 3/14.
210. Alexander Goldman, "Groups and the Herzog-Schonheim conjecture," PCUMC, Malibu, 3/14.
209. Evan Amoranto (one my former second-semester calculus students, who completed his BS in Mathematics at CSUF in Spring 2015), "Pollock's octahedral numbers conjecture," Math Colloquium, FC, 2/14.
208. Eric Santana (one of my former second-semester calculus students), "The Hadamard conjecture," Math Colloquium, FC, 2/14.
207. Matthew Joslin (my ENGAGE in STEM Research Assistant, now a Computer Engineering major at UCI), "An introduction to RSA encryption," Math Colloquium, FC, 1/14.
206. Vinh Tran (one of my honors pure math seminar students), "The  $1/3$ - $2/3$  conjecture," Math Colloquium, FC, 12/13.
205. Farid Mohsini (one of my honors pure math seminar and calculus students), "The Erdős-Mollins-Walsh conjecture," Math Colloquium, FC, 12/13.
204. Darren Terrence (one of my calculus and pure math seminar student), "If aliens from outer space someday demand that we find a Ramsey number, say  $R(6,6)$ , or they'll kill us all, should we just kill the aliens, as Erdős asked?," Math Colloquium, FC, 12/13.
203. Monika Singha (one of my pure math seminar students, who entered UCI as a Biology major in Fall 2014), "The Kothe conjecture," Math Colloquium, FC, 12/13.
202. Chris Grant (one of my math independent study student and my honors pure math seminar student), "Lehmer's Mahler measure conjecture," Math Colloquium, FC, 12/13.
201. Joon Choi (one of my honors calculus and honors pure math seminar students), "The Goldbach conjecture," Math Colloquium, FC, 11/13.
200. Jennifer Ta (one of my honors calculus students), "The Collatz conjecture," Math Colloquium, FC, 11/13.
199. Daniel Reina (one of my pure math seminar students), "On a simple number-theoretic formulation of the Riemann Hypothesis," Math Colloquium, FC, 11/13.
198. Andrea Lopez (one of my calculus students), "The Kakeya maximal function conjecture," Math Col-

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- loquium, FC, 11/13.
197. Alexander Goldman (one of my math independent study and calculus students), "The Herzog-Schonheim conjecture," Math Colloquium, FC, 11/13.
  196. Mario Castillo (one of my second-semester and honors pure math seminar students), "Open problems involving semi-metric spaces," Math Colloquium, FC, 10/13.
  195. Christina Yoo (one of my honors calculus students), "The Agoh-Giuga conjecture," Math Colloquium, FC, 10/13.
  194. Faith Forcucci, "Legendre's conjecture, included in Landau's problem list, that for every positive integer  $n$ , there is a prime between the squares of  $n$  and  $n + 1$ ," Math Colloquium, FC, 10/13.
  193. Eileen Lee (one of my honors pure math seminar students), "The Frankl union-closed sets conjecture," Math Colloquium, FC, 10/13.
  192. Joon Choi, "Recent developments in the resolution of the Goldbach conjecture," Math Colloquium, FC, 10/13.
  191. Valerie Guerra (one of my former pure math seminar students and former ENGAGE in STEM Interns, now a math major at CSUF), "The Collatz conjecture," Math Colloquium, FC, 9/13.
  190. Keziah Tan (my applied math seminar student, who entered UCLA as a Biology major in Fall 2014), "The Casas-Alvero conjecture," Math Colloquium, FC, 9/13.
  189. Joon Choi (entered Chapman University in Fall 2015), "The strong Goldbach conjecture and two arxiv.org papers that together may have proven recently that the weak Goldbach conjecture holds," Math Colloquium, FC, 9/13.
  188. Raul Reyes (my pure math seminar student and former ENGAGE in STEM Intern), "Is the 196-algorithm finite?," Math Colloquium, FC, 9/13.
  187. Valerie Guerra, "The search for the exact value of Bloch's constant, II," Math Colloquium, FC, 8/13.
  186. Rory Mulcahey (my math seminar student, who entered CSUF in Fall 2014 as a Computer Science major), "Yes: Erdős' answer to the question, 'If aliens promise to kill us all if we don't produce the Ramsey number  $R(6,6)$  in a day or less, should we just kill the aliens?'," PSUMS, FC, 8/13.
  185. Sally Kim (my calculus student), "The Elliot-Halberstam conjecture," PSUMS, FC, 8/13.
  184. Valerie Guerra, "The search for the exact value of Bloch's constant," PSUMS, FC, 8/13.
  183. Brian Hernandez (my math seminar and second-semester calculus student, currently at CSUF), "Open problems concerning Latin squares and their higher-dimensional analogues," PSUMS, FC, 8/13.
  182. Trevor Ta (my ENGAGE in STEM Research intern, who graduated from UC Berkeley in Fall 2015 with a BS in Computer Science/Electrical Engineering and is now a software developer at Oracle), "Open problems concerning prime numbers, including, 'Is every Mersenne number with prime exponent square-free?'," PSUMS, FC, 8/13.
  181. Aaron Matthews (my former multivariable calculus student, now a Research Assistant and Computer Engineering major at CSUF), "More chaos of the logistic map," PSUMS, FC, 8/13.
  180. Derek Taylor (my math seminar and former multivariable calculus student, who entered CSUF as a Math major in Fall 2011), "Recent advances in the disproof of Borsuk's conjecture," PSUMS, FC, 7/13.
  179. Hunter He (my second-semester calculus student), "The regular prime conjecture," PSUMS, FC, 7/13.
  178. Daniel Reina, "A simple number-theoretic statement that is equivalent to the Riemann Hypothesis," PSUMS, FC, 7/13.
  177. Mohammad Khan (one of my former ENGAGE in STEM Research Interns, who will finish his BS in Applied Mathematics at UC Berkeley in August 2016), "The Sierpinski problem," PSUMS, FC, 7/13.
  176. Matthew Joslin, "Recursive subordination of odd denominator fractions by sums of unit fractions with odd denominators: is this always a finite process?," PSUMS, FC, 6/13.
  175. Joshua Dubon (my former ENGAGE in STEM Research Intern, who graduated with a degree in Math from UCLA in Spring 2014), "Do Diophantine quintuples exist?," PSUMS, FC, 6/13.
  174. Keziah Tan (my former second-semester calculus and pure math seminar student, who graduated from UCLA with a degree in Biology in Spring 2016), "Irrationality measure and open questions as to whether or not certain quantities are irrational or transcendental," PSUMS, FC, 6/13.
  173. Han Zheng (one of my UCI calculus students), "An introduction to tropical arithmetic and polynomials," Math Colloquium, FC, 5/13.
  172. Aaron Sung (one of my UCI calculus students), "Fibonacci numbers, their generalizations, open questions about them, and their appearances in nature," Math Colloquium, FC, 4/13.

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171. Hai Ly Tran (who graduated with a BS from UCLA in Business Economics in Spring 2015), "What is Brownian motion, and how can it be used in quantitative finance?," Math Colloquium, FC, 4/13.
  170. Mohammad Khan, "Do odd, weird numbers exist?," PCUMC, Pomona, 3/13.
  169. Valerie Guerra, "Pollock's octahedral numbers conjecture," PCUMC, Pomona, 3/13.
  168. Aaron Matthews, "Chaos of the logistic map," PCUMC, Pomona, 3/13.
  167. Aaron Sung, "Fibonacci numbers and their generalizations," PCUMC, Pomona, 3/13.
  166. Stanley Zhou (one of my UCI calculus students), "Open questions about semi-metric spaces," PCUMC, Pomona, 3/13.
  165. Han Zheng, "Tropical arithmetic and polynomials," PCUMC, Pomona, 3/13.
  164. Trevor Ta, "The search for smooth, physically reasonable solutions to the Navier-Stokes equations," PCUMC, Pomona, 3/13.
  163. Eric Santana, "The Hadamard conjecture II," PCUMC, Pomona, 3/13.
  162. Jeremy Phillips (now a student at the California Maritime Academy), "Primes, polynomials, and Ulam's spiral," Math Colloquium, FC, 3/13.
  161. Valerie Guerra, "Can the sixth power of an integer be the sum of five sixth powers of integers?," Math Colloquium, FC, 3/13.
  160. Trevor Ta, "The Navier-Stokes equations," Math Colloquium, FC, 2/13.
  159. Valerie Guerra, "Pollock's octahedral number conjecture," Math Colloquium, FC, 2/13.
  158. Aaron Matthews, supervised jointly by Bill Cowieson and me), "Chaos of the logistic map (with applications to random music)," Math Colloquium, FC, 12/12.
  157. Jeremy Phillips (supervised jointly by Bill Cowieson and me), "Ulam's spiral and Hardy-Littlewood Conjecture F" and "Bunyakovsky's conjecture," Math Colloquium, FC, 12/12.
  156. Mohammad Khan (supervised jointly by Bill Cowieson and me), "Khabibullin's conjecture," Math Colloquium, FC, 12/12.
  155. Marion Quijano (jointly supervised by Bill Cowieson and me), "The Erdős-Szekeres conjecture," Math Colloquium, FC, 11/12.
  154. Triet (Trevor) Tahien (Ta) (jointly supervised by Bill Cowieson and me), "The Navier-Stokes equations," California Community College Math Conference, FC, 11/12.
  153. Khoi Vo, "An introduction to quaternions," California Community College Math Conference, FC, 11/12.
  152. Keziah Tan, "Euler's identity: the Shakespearian sonnet of mathematical equations," California Community College Math Conference, FC, 11/12.
  151. John Mahoney (one of my former math seminar students), "The P. vs. NP problem," California Community College Math Conference, FC, 11/12.
  150. Mitchell Hoertz (one of my former multivariable calculus students, who completed a BS in Mechanical Engineering at UC Berkeley and is now a Product Design Engineer at Apple, Inc.). "The Euler equations," California Community College Math Conference, FC, 11/12.
  149. Valerie Guerra, "The search for the exact value of Bloch's constant," California Community College Math Conference, FC, 11/12.
  148. Ben Hartley (a former ENGAGE in STEM Research Intern of mine who completed his BS in Mathematics at UC Santa Cruz in Spring 2015), "Pentagons and the cosine of  $72^\circ$ ," California Community College Math Conference, FC, 11/12.
  147. Mohammed Khan, "Khabibullin's conjecture," California Community College Math Conference, FC, 11/12.
  146. Ryan Trias (one of my ENGAGE in STEM Research Interns and former second-semester calculus students, who completed his BS in Economics at CSUF in Spring 2015), "Fundamentals of digital signal processing," California Community College Math Conference, FC, 11/12.
  145. Evan Amoranto (who completed his BS in Mathematics (Teaching Option) at CSUF in Spring 2016), "Fibonacci numbers, primes, metafibonacci numbers, and closest return times of polynomials," California Community College Math Conference, FC, 11/12.
  144. Joey Victor (who entered CSULB as a Healthcare Administration major in Fall 2015), "Cramér's conjecture," Math Colloquium, FC, 11/12.
  143. Triet (Trevor) Tahien (Ta), "A Clay Millenium (\$1 million) Prize Problem: Are there smooth, phys-

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- ically reasonable solutions to the Navier-Stokes equations?," Math Colloquium and the California Community College Math Conference, FC, 11/12.
142. Kyle Lee (who entered the Stony Brook U. Ph.D. program in Theoretical Physics in Fall 2014), "Understanding the mathematics of dark matter and energy," Math Colloquium, FC, 11/12.
  141. Evan Amoranto, "Fibonacci numbers, primes, metafibonacci numbers, and closest return times of polynomials," Southern California-Nevada Sectional Meeting of the MAA, CSULB, 10/12.
  140. Chris Lao (a former calculus student of mine, now a Math major at San Diego State University), "Lehmer's Mahler measure problem," Math Colloquium, FC, 10/12.
  139. Ryan Trias, "Carmichael's totient function conjecture," Math Colloquium, FC, 10/12.
  138. Don Frank (one of my former ENGAGE in STEM Interns and math seminar students), "Aperys theorem and the question of whether  $p$ -series for odd numbers 3 or larger are transcendental," Math Colloquium, FC, 10/12.
  137. Valerie Guerra, "Can a 6th Power of a Positive Integer be the Sum of Five 6th Powers of Positive Integers? (after Klee/Wagon)," Math Colloquium, FC and the Southern California-Nevada Sectional Meeting of the MAA, CSULB, 10/12.
  136. Raul Reyes, "Alternate forms of the Riemann Hypothesis," Math Colloquium, FC and the Southern California-Nevada Sectional Meeting of the MAA, CSULB, 10/12.
  135. Khoi Vo, "Are 10 and other numbers besides 1 lonely?," Southern California-Nevada Sectional Meeting of the MAA, CSULB, 10/12.
  134. Justin Gottula (one of my Summer 2012 ENGAGE in STEM Research Interns and math seminar/independent study students, who entered UCI as a computer science major), "Is a sigma-field in a set  $X$  always, ever, or never closed under a quandle operation on the power set of  $X$ ?," Math Colloquium, FC, 9/12.
  133. Evan Amoranto, "Generalizations of Fibonacci sequences and the question of whether infinitely many Fibonacci numbers are prime," Math Colloquium, FC, 9/12.
  132. Keziah Tan, "The Erdős-Strauss conjecture," Math Colloquium, FC, 8/12.
  131. Evan Amoranto, "Are there infinitely many Fibonacci numbers that are prime?," PSUMS, FC, 7/12.
  130. Ryan Trias, "Time-frequency analysis and the Fourier and short-time Fourier transforms with applications to audio," PSUMS, FC, 7/12.
  129. Matthew Pak (one of my former multivariable calculus students, who complete a BS in anthropology at Cal Poly Pomona in Spring 2016), "Does every universe contain a place where one can stay at rest?," PSUMS, FC, 7/12.
  128. Jesus Lara (one of my former math seminar students), "The Erdős-Mollins-Walsh conjecture," PSUMS, FC, 6/12.
  127. Anthony Serrano (one of my math seminar and former second-semester calculus students), "Khabibullin's conjecture," Math Colloquium, FC, 5/12.
  126. Alex Higgins (one of my former math seminar/independent study/multivariable calculus students, who completed his BS in Mathematics at Fairmont State University in Spring 2015, taught junior high school for a year, and enters the Applied Stats MS Program at U. of Northern Colorado in Fall 2016), "Fractality and music," Math Colloquium, FC, 5/12.
  125. Evan Amoranto, "Which real sequences generate bounded power series in one variable?," Math Colloquium, FC, 5/12.
  124. Katherine Estevez (one of my former second-semester calculus students, now at CSU Fullerton), "Gilbreath's conjecture," Math Colloquium, FC, 5/12.
  123. John Mahoney, "The P vs. NP Problem," Math Colloquium, FC, 5/12.
  122. Melissa Riddle (one of my former math seminar/independent study/multivariable calculus students, now a math major at CSUF), "The Jacobian conjecture, Part II," Math Colloquium, FC, 5/12.
  121. Ryan Trias, "An Introduction to time-frequency analysis using the short-term Fourier transform, with applications to audio," Freshman/Sophomore Division Prize-winning Poster, Southern California-Nevada Sectional Meeting of the MAA, CSUF, 4/12.
  120. Raul Reyes, "Fortune's conjecture," (Poster), Southern California-Nevada Sectional Meeting of the MAA, CSUF, 4/12.
  119. Keziah Tan, "The plane fixed point problem," (Poster), Southern California-Nevada Sectional Meeting of the MAA, CSUF, 4/12.
  118. Keziah Tan, "The plane fixed point problem," Math Colloquium, FC, 4/12.

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117. Ben Hartley, "Is a polynomially open-invariant subset of complex  $n$ -space that is an increasing union of polynomially convex, compact sets open?," Math Colloquium, FC, 4/12.
  116. David Eng (entered the MD program at Loma Linda University in Fall 2015), "The Catalan-Dickson aliquot sequence conjecture," Math Colloquium, FC, 4/12.
  115. Elodie Resseguie (one of my 2012 ENGAGE in STEM Summer Research Interns and former math independent study students, who is now a National Science Foundation Fellow in the Particle Physics Ph.D. program at the University of Pennsylvania), "Erdős' conjecture on arithmetic progressions," Math Colloquium, FC, 4/12.
  114. Alex Sabin (one of my former multivariable calculus students, who transferred to Cal Poly Pomona), "Carmichael's totient function conjecture," Math Colloquium, FC, 3/12.
  113. Camilo Aguilar (one of my former second-semester calculus students, who entered the Electrical Engineering PhD program at Purdue University in Fall 2015), "Goldbach's conjecture," Math Colloquium, FC, 3/12.
  112. Melissa Riddle, "The Jacobian conjecture," Honors Transfer Council Conference, UCI, 3/12.
  111. Raul Reyes, "Fortune's conjecture," Math Colloquium, FC, 3/12.
  110. Joshua Dubon, "Composition operators on Bloch-Orlicz spaces," PCUMC, Cal Poly Pomona, 3/12.
  109. Keziah Tan, "The plane fixed point problem," PCUMC, Cal Poly Pomona, 3/12.
  108. Valerie Guerra, "The search for Bloch's constant," PCUMC, Cal Poly Pomona, 3/12.
  107. Melissa Riddle, "The Jacobian Conjecture," PCUMC, Cal Poly Pomona, 3/12.
  106. Ryan Trias, "An introduction to Fourier and short time Fourier transforms with applications to audio signal processing," PCUMC, Cal Poly Pomona, 3/12.
  105. Ben Hartley, "Openness of polynomially open-invariant, increasing unions of compact and polynomially convex sets," PCUMC, Cal Poly Pomona, 3/12.
  104. Amer Saleemi (one of my former mathematics seminar/math independent study students, who completed his degrees in math and physics at Cal Poly Pomona in Spring 2016), "Groups, isomorphisms, the group counting number problem, and the gnu hunting conjecture," PCUMC, Cal Poly Pomona, 3/12.
  103. Matthew Pak, "Do gravitational forces cancel in every universe?," PCUMC, Cal Poly Pomona, 3/12.
  102. David Eng, "The Catalan-Dickson aliquot sequence conjecture," PCUMC, Cal Poly Pomona, 3/12.
  101. Annalise Bui (one of my Summer 2012 ENGAGE in STEM Research Interns and former math independent study students, now at CSUF), "The invariant subspace problem," PCUMC, Cal Poly Pomona, 3/12.
  100. Khoi Vo, "Are 10 and other numbers besides 1 lonely?," PCUMC, Cal Poly Pomona, 3/12.
  99. Kurt Hessian (one of my former second-semester calculus students), "The  $abc$  conjecture," PCUMC, Cal Poly Pomona, 3/12.
  98. Tiffany Nguyen (one of my former second-semester calculus students, now a Biology major at USC), "Speeding up the healing of wounds using mathematical biology," PCUMC, Cal Poly Pomona, 3/12.
  97. Raul Reyes, "Fortune's conjecture," PCUMC, Cal Poly Pomona, 3/12.
  96. Katherine Estevez (one of my second-semester calculus students, now at CSUF), "Gilbreath's conjecture," PCUMC, Cal Poly Pomona, 3/12.
  95. Amer Saleemi, "Groups, isomorphisms, the group counting number problem, and the gnu hunting conjecture," Math Colloquium, 3/12.
  94. Annalise Bui, "The invariant subspace problem," Math Colloquium, FC, 2/12.
  93. Don Frank, "How Fourier series arise from the heat," Math Colloquium, FC, 2/12.
  92. Valerie Guerra, "The search for Bloch's constant," Math Colloquium, FC, 2/12.
  91. Melissa Riddle, "The Jacobian Conjecture," Math Colloquium, FC, 2/12.
  90. Kevyn Oskar Negron (one of my math independent study and math seminar students, now a math and physics major at CSUF), "The ring of  $p$ -adic integers," Math Colloquium, FC, 1/12.
  89. Christopher Thornton (one of my former math independent study students, now a Computer Science major at UCI), "Password strength and entropy," Math Colloquium, FC, 12/11.
  88. Kevyn Oskar Negron, "An introduction to the geometry of ultrametric spaces," 2nd California Community College Student Math Conference (CCCSMC), FC, 12/11.
  87. Nicholas Systad (one of my math seminar and multivariable calculus students), "Introduction to risk



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- analysis," 2nd California Community College Student Math Conference, FC, 12/11.
86. Benjamin Hartley, "Demystifying a Putnam problem," 2nd California Community College Student Math Conference, FC, 12/11.
  85. Camilo Aguilar, "The Goldbach conjecture," 2nd California Community College Student Math Conference, FC, 12/11.
  84. Nelson Cade (one of my former second-semester calculus students), "The search for the exact value of Bloch's constant," 2nd California Community College Student Math Conference, FC, 12/11.
  83. Melissa Riddle, "The Jacobian conjecture," 2nd California Community College Student Math Conference, FC, 12/11.
  82. Khoi Vo, "Are 10 and other numbers besides 1 lonely?," 2nd California Community College Student Math Conference, FC, 12/11.
  81. Samuel Cahyadi (one of my former second-semester calculus students, who graduated from UCI in Spring 2015 with a BS in Mechanical Engineering), "The twin prime conjecture," 2nd California Community College Student Math Conference, FC, 12/11.
  80. Laura Ulloa (one of my former second-semester calculus students, entering the BS Program in Biochemistry at CSUF in Fall 2016), "Legendre's conjecture that there is a prime between any two consecutive squares," 2nd California Community College Student Math Conference, FC, 12/11.
  79. Michael Forsuelo (one of my Summer 2012 ENGAGE in STEM Research Interns and former math seminar and multivariable calculus student, who graduate with degrees in Chemistry/Math from UC Berkeley in Spring 2016), "In any universe, is there at least one place where you can stay at rest?," 2nd California Community College Student Math Conference, FC, 12/11.
  78. Rory Mulcahey, "Is every Mersenne number square free?," 2nd California Community College Student Math Conference, FC, 12/11.
  77. Morgan Alex Walter-Higgins, "The search for an odd perfect number, and weighted perfectness," 2nd California Community College Student Math Conference, FC, 12/11.
  76. Alejandro Aguilar (one of my former multivariable calculus students), "Are infinitely many primes one more than a square?," 2nd California Community College Student Math Conference, FC, 12/11.
  75. Donald Frank, "How Fourier (trigonometric) series arise from the heat!," 2nd California Community College Student Math Conference, FC, 12/11.
  74. Mitchell Hoertz (who completed his degree in Mechanical Engineering at UC Berkeley in Spring 2016), "The Navier-Stokes and Euler equations," 2nd California Community College Student Math Conference, FC, 12/11.
  73. Wilson Lee (one of my former math independent study students, who graduated with a double major in Computational/Systems Biology and Applied Mathematics at UCLA, "A tutorial on the hidden Markov model and its applications to population genetics," 2nd California Community College Student Math Conference, FC, 12/11.
  72. David Eng, "The search for the number of transversals in a Latin square," 2nd California Community College Student Math Conference, FC, 12/11.
  71. Marianna Jagodina (one of my math independent study students and, at that time, a new tenure-track faculty member at FC), "Using Fourier series to show that the sum of the the 2-series is  $\pi^2/6$ ," Math Colloquium, FC, 11/11.
  70. Kevyn Oskar Negron, "Isometries in metric and ultrametric spaces," Math Colloquium, FC, 11/11.
  69. Joshua Dubon, "What are the sums of the various p-series when p is odd and greater than 1? Are they irrational? Are they transcendental?," Math Colloquium, FC, 11/11.
  68. Kalen Kochan (one of my former math seminar students), "Questions arising from the Cameron-Erdős conjecture," Math Colloquium, FC, 11/11.
  67. Dylan Knuth (one of my former math seminar students, now working for IBM), "Can the sum of five sixth powers of positive integers be equal to the sixth power of another positive integer?," Math Colloquium, FC, 10/11.
  66. Justin Gottula, "Using C++ to generate or count quandles on finite sets," Math Colloquium, FC, 10/11.
  65. Jose Sanchez (one of my former math seminar and second-semester calculus students), "Counting the number of groups of a given order and the gnu hunting conjecture," Math Colloquium, FC, 10/11.
  64. Nicholas Systad, "The unsolved part of Hilbert's seventh problem," Math Colloquium, FC, 9/11.
  63. Dylan Knuth, "How many distinct binary operations on the power set of a finite set are quandle

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- operations?," Math Colloquium, FC, 9/11.
62. Kevyn Oskar Negron, "p-adic calculus," Math Colloquium, FC, 9/11.
  61. Melissa Riddle, "An explicit representation of the Riemann-zeta function everywhere except 1 and the Riemann Hypothesis," Math Colloquium, FC, 9/11.
  60. Joshua Dubon, "Composition operators on Bloch-Orlicz spaces," Math Colloquium, FC, 8/11.
  59. Jordan Bakke (one of my former Calculus II students, who entered Portland State University as a math major in Fall 2014), "Cardinal and ordinal multisets and two-player competitions," Math Colloquium, FC, 8/11.
  58. Tyler Deliman (one of my former College Algebra for Business Calculus students, who transferred to and graduated from Chapman University), "The Goldbach conjecture," PSUMS, FC, 7/11.
  57. Tiffany Nguyen, "What is mathematical biology, and what is it used for? (after A. Friedman)," PSUMS, FC, 7/11.
  56. Student who wishes to remain anonymous and graduated with a BS in Physics from Ohio Wesleyan University in Spring 2015), "Tropical mathematics, after Speyer/Sturmfels," PSUMS, FC, 7/11.
  55. Jeremy Saqr (one of my Math Independent Study students), "Multicomplex function algebras and Stone-Weierstrauss theory," PSUMS, FC, 6/11.
  54. Brandon Sim (one of my math independent study students who graduated from Harvard University with a BS in Physics in Spring 2015, now working as quantitative analyst on Wall Street), "Virtual knots, biquandles, and bicomplex numbers," PSUMS, FC, 6/11.
  53. Lena Meyer (one of my math independent study students), "The Cullen prime conjecture and generalized Cullen numbers and matrices," 5/11.
  52. Wilson Lee, "The mathematics of genetic drift," Math Colloquium, FC, 5/11.
  51. Geno Diaz (one of my former second-semester calculus students, now a computer science major at UCI), "The Collatz problem," Math Colloquium, FC, 4/11.
  50. Derek Taylor, "The Borsuk problem," Math Colloquium, FC, 4/11.
  49. Eric Santana, "The Hadamard matrix conjecture," Math Colloquium, FC, 4/11.
  48. Dylan Ayala (one of my former college algebra students), "The Erdős-Strauss and Erdős-Mollins-Walsh conjectures," Math Colloquium, FC, 3/11.
  47. Wilson Lee, "The mathematics of natural selection," Math Colloquium, FC, 3/11.
  46. Matthew Troast (one of my former second-semester calculus students), "Normal magic squares," PCUMC, Loyola Marymount University (LMU), 3/11.
  45. Derek Taylor, "The Borsuk problem," PCUMC, LMU, 3/11.
  44. Eric Santana, "The Hadamard matrix conjecture," PCUMC, LMU, 3/11.
  43. Reza Nikopoor (one of my former Multivariable Calculus and Math Independent Study students, who finished his BA in Computer Science at CSUF in Spring 2014), "Maxwell's question regarding the existence of equilibria for charge-distance potentials," PCUMC, LMU, 3/11.
  42. Wilson Lee, "Early stage arguments indicating that  $\pi + e$  is irrational," PCUMC, LMU, 3/11.
  41. Geno Diaz, "The Collatz problem," PCUMC, LMU, 3/11.
  40. David Eng, "Unsolved math mysteries surrounding Latin squares," PCUMC, LMU, 3/11.
  39. Dylan Ayala, "The Erdős-Mollins-Walsh conjecture," PCUMC, LMU, 3/11.
  38. David Eng, "The search for a general formula for the number of, and an upper bound for the number of transversals in, Latin squares," Math Colloquium, FC, 3/11.
  37. Wilson Lee, "Shark hunting paths part 3: mathematical definitions and conclusion," Math Colloquium, FC, 2/11.
  36. Wilson Lee, "Brownian motion, Wiener processes, Levy walks, and the hunting habits of sharks," Math Colloquium, FC, 2/11.
  35. Wilson Lee, "How sharks use math to hunt," Math Colloquium, FC, 2/11.
  34. Wilson Lee, "The spectrum of a compact weighted composition operator on weighted Hardy spaces of the ball, after Zhou/Yuan, part II," Math Colloquium, FC, 1/11.
  33. Matthew Maldonado (one of my math independent study students, who subsequently completed his B.S. in Geophysics at UC Riverside), "The reflection and other quandles," Southern California Community College Student Math Mini-Conference, 12/10.

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32. Colleen Nelson (one of my math independent study students, who finished her BS in math at UCI in Spring 2013 and is now a system analyst for an elder care firm), "Groups and a problem from this year's Putnam Competition," Southern California Community College Student Math Mini-conference, FC, 12/10.
  31. Reza Nikoopor, "Maxwell's existence question for equilibria of Newtonian charge-location potentials," Southern California Community College Student Math Mini-conference, FC, 12/10.
  30. Gary Ramirez (one of my former second-semester calculus students, who entered the Applied Math MA program at CSUF in Fall 2014 and who now works as an analyst at Urban Science), "Forms of powers of odd numbers," Southern California Community College Student Math Mini-conference, FC, 12/10.
  29. Student who wishes to remain anonymous, "An Introduction to tropical mathematics, after Sturmfels/Speyer," Southern California Community College Student Math Mini-conference, FC, 12/10.
  28. Brandon Sim, "Two recently derived equivalent restatements of the Riemann Hypothesis," Southern California Community College Student Math Mini-conference, FC, 12/10.
  27. Kevin Oskar Negron, "Generating Mandelbrot set images using Mathematica," Math Colloquium, FC, 11/10.
  26. Wilson Lee, "The spectrum of a compact weighted composition operator on weighted Hardy spaces of the polydisk", Math Colloquium, FC, 11/10.
  25. Nicole Gillum (one of my former calculus and math independent study student of mine, now a math teacher at Travis Ranch Middle School), "The Mersenne prime conjecture," Math Colloquium, FC, 9/10.
  24. Wilson Lee, "The question of whether or not the sum, difference, product or exponentiation of  $p$  and  $e$  are irrational; proofs of the irrationality of  $p$  and  $e$ ; continued fractions and computing their sums," Colloquium, FC, 9/10.
  23. Wilson Lee, "A solution to *College Math Journal* Problem 929," Math Colloquium, FC, 8/10.
  22. David Salazar (one of my math independent study and multivariable calculus students, who began a National Science Foundation Graduate Fellowship in Mechanical Engineering at Stanford University in Fall 2014), "The mathematics of planning missions to Mars," PSUMS, FC, 8/10.
  21. Matthew Maldonado (who earned his BS in Geophysics at UCR), "Quandles and the complex plane," PSUMS, FC, 7/10.
  20. Mustafa Khafateh (one of my math independent Study students, who finished his BS at Cal Poly San Luis Obispo in Spring 2014 and is now working as a software engineer), "An introduction to integral transforms, imaging, and tomography", PSUMS, FC, 7/10.
  19. Derek Taylor, "The fourth dimension", PSUMS, FC, 7/10.
  18. Wilson Lee, "Hardy-Weinberg equilibrium conditions with F-statistics and de Finetti's diagram", PSUMS, FC, 7/10.
  17. Demetrius Moore (one of my intermediate algebra students), "The Fibonacci mysteries, such as whether or not there are infinitely many that are prime", Project GPS2 End-of-Year Celebration, FC, 5/10.
  16. Matthew Maldonado, "Quandles and knots," Math Association Meeting, FC, 5/10.
  15. Derek Taylor, "The fourth dimension", Math Association Meeting, FC, 4/10.
  14. Reza Nikoopor, "On Maxwell's question regarding equilibria for charge-distance Newtonian potentials in Euclidean space", Math Association Meeting, FC, 4/10.
  13. Wilson Lee, "An introduction to fields and the question of whether or not the sum, difference, product, or quotient of  $\pi$  and  $e$  are irrational", Math Association Meeting, FC, 4/10.
  12. Vasili Kapogianis (one of my former math independent study students, now an engineering major/math minor at CSU Los Angeles), "Analysis on cusps", Math Association Meeting, FC, 3/10.
  11. Jin Choe (one of my former math independent study students, who completed his BS in Mechanical Engineering in Spring 2014 at UC Berkeley and now works as a mechanical engineer at Zoe Design Associates), "Is there an odd perfect number?", PCUMC, Pepperdine University, 3/10.
  10. Eric Orozco (one of my intermediate algebra students), "Some famous unsolved problems in number theory", PCUMC, Pepperdine University, 3/10.
  9. Reza Nikoopor, "Maxwell's question of the existence of equilibria for Newtonian potentials", PCUMC, Pepperdine University, 3/10.
  8. Colleen Nelson, "Expressing an Integral as an Infinite Series of Derivatives", PCUMC, Pepperdine

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University, 3/10.

7. Kevin Oskar Negron, "Are there universes where gravitational forces allow an object to stay at rest?", PCUMC, Pepperdine University, 3/10.
6. Demetrius Moore, "The Fibonacci mysteries", PCUMC, Pepperdine University, 3/10.
5. Christina Mantas (one of my intermediate algebra students, who later completed her BS degree), "Conjectures about twin, Mersenne, and Sophie Germain primes", PCUMC, Pepperdine University, 3/10.
4. Matthew Maldonado, "A finite quandle on a group of roots of unity", PCUMC, Pepperdine University, 3/10.
3. Wilson Lee, "Are the sum, difference, product, and/or quotient of pi and e irrational?", PCUMC, Pepperdine University, 3/10.
2. Vasili Kapogianis, "Analysis on spikes", PCUMC, Pepperdine University, 3/10.
1. Fidel Cabezas (who subsequently entered the MA program in Computer Science at CSUF and is now a computer game designer), "The search for an odd perfect number and an algorithm for evaluating perfectness," Math Association Meeting, FC, 10/09.

## **MATH CLUB, CONFERENCE AND SEMINAR FACILITATION EXPERIENCE**

- Organizer, Research and Problem-Solving Seminar, Fullerton College, 2014-Present.
- Session Moderator, SCCUR, Fullerton, 2014.
- Moderator, PCUMC, Pomona, 2013.
- Organizer (with Bill Cowieson), California Community College Math Conference, Fullerton, 2010-12.
- Moderator, Contributed Paper Session, Southern California -Nevada Sectional Meeting of the MAA, CSULB, 2012.
- Organizer, Informal Learning Seminars, FC, 2012 - Present.
- Student Speaker Session I and II moderator, PCUMC, Cal Poly Pomona, 2012.
- Moderator, PCUMC, LMU, 2011.
- Co-advisor (with William Cowieson), FC Math Association, 2010 - 2013.
- Founder and organizer, Pacific Summer Unsolved Mathematics Seminar (PSUMS), FC, 2010 - Present.
- Advisor, Math Association, FC, 2009 - 2010.
- Founding organizer, Math Colloquium, FC, 2009 - Present.
- Organizer, Dynamical Systems Informal Learning Seminar, UC Riverside, 2007.
- Organizer and co-organizer, VIGRE Seminar, Mathematics, Indiana University Bloomington, 2002-2004.

## **LOCAL MATHEMATICS COMPETITION COACHING EXPERIENCE/RESULTS**

- Co-coach with Paul Sjoberg, Abraham Romero-Hernandez, Tim Cobler, and Kara Pham, AMATYC Competition (results: 10 and rank 945 by Hanh Vo, 3 by Jung Anh, 2 by Chris Lim, 1 by Fahim Ahmed and Alex Goldman, Fullerton College, 2015.
- Faculty supervisor/coach/practice organizer (with Dr. RJ Dolbin and Paul Sjoberg) William Lowell Putnam Competition (results: 12 and rank of 1280 by Eva Zhang, 9 by Nick Stearns, 3 by Stephen Yoo, 2 by Hanh Vo, and 1 by Alex Goldman), FC, 2014.
- Co-coach with Bill Cowieson, RJ Dolbin, Abraham Romero-Hernandez, Paul Sjoberg (result: 21st in the nation), American Mathematical Association of Two-Year Colleges Student Math League Competition (AMATYC SML), Fullerton College, 2015.
- Co-coach with Bill Cowieson, RJ Dolbin, Abraham Romero-Hernandez, Paul Sjoberg (result: 11th in the nation), AMATYC SML, Fullerton College, 2014.
- Co-coach with Bill Cowieson, Putnam exam, (results: 10 by Hiep Nguyen [now a Chemistry major at CSULB] and 9 by Vinh Tran [now a Chemistry major at UC Berkeley], FC, 2013.
- 6th in the nation, AMATYC SML Co-Coach, FC, 2012.

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- Co-coach with Bill Cowieson, Putnam Exam (results: 2 by Mike Forsuelo [completed his degree in Chemistry at UC Berkeley] and 1 by Justin Gottula [now a Computer Science major at UCI]), FC, 2011.
  - 7th in the nation, AMATYC SML Co-Coach, FC, 2011.
  - Co-coach with Bill Cowieson, Putnam Exam (result: 10 by Jonathan Wolf, now a Pure Math Ph.D. student at the University of Illinois at Chicago), FC, 2010.
  - Coach, Putnam Exam (result: 10 by Mustafa Khafateh, now a Computer Science alumnus of Cal Poly San Luis Obispo and now a software engineer in the Boston area), FC, 2009.

## RECENT CURRICULUM DEVELOPMENT ACTIVITY

- Curriculum author, Honors Calculus I, FC, 2012.
- Curriculum author, Pure Math Seminar, FC, 2012.
- Curriculum author, Honors Pure Math Seminar, FC, 2012.
- Curriculum author, Applied Math Seminar, FC, 2012.
- Curriculum author, Honors Applied Math Seminar, FC, 2012.
- Curriculum author, General Math Seminar, FC, 2012.
- Curriculum author, Honors General Math Seminar, FC, 2012.
- Curriculum author, Mathematics Seminar, FC, 2010.

## OTHER LEADERSHIP EXPERIENCE

- Vice-President, United Faculty of the North Orange County Community College District (UF/NOCCCD), 2015-Present.
- Fullerton College Site Representative (with Queen Patterson), United Faculty of the North Orange County Community College District (UF/NOCCCD), 2014-15.
- Member, UF/NOCCCD Board of Directors, 2013-14.
- Student Mathematics Research and Events Project Manager (Joint), ENGAGE in STEM, FC, 2012-Present.
- Student Mathematics Research and Events Project Manager (Joint), Project GPS<sup>2</sup>, FC, 2010.
- Prealgebra Textbook Committee Chair, FC, 2009.
- Mathematics Independent Study Course Coordinator, FC 2008 - Present.
- Math & Computer Science Division Faculty Senate Representative, FC, 2008-2012.

## OTHER SERVICE ACTIVITIES

- UF/NOCCCD Representative, President's Hiring Committee, Fullerton College, 2015-16.
- UF/NOCCCD Representative, District Consultative Council, 2015-Present.
- Chair, Insurance and Benefits Committee, NOCCCD, 2015 - Present.
- Member, Insurance and Benefits Committee, NOCCCD, 2014-15.
- Institutional Research and Effectiveness Committee/Institutional Review Board, FC, 2014 - Present.
- Math Lab Committee, FC, 2001-3, 2013 - Present.
- ENGAGE in STEM Scholarship Committee, FC, 2013 - Present.
- Course coordinator, Mathematics Independent Study, FC, 2008 - Present
- Tenure Track Faculty Hiring Committee, FC, 2010 - Present.
- Financial Aid Director Evaluation Committee Member, FC, 2012.
- Honors Advisory Board Member, FC, 2011 - 2012.
- FC Instructional Technology Committee, 2010-2011.

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- North Orange County Community College District Registration Priority Process Improvement Work Group, 2010-2012.
  - Interim Vice President of Instruction Hiring Committee, FC, 2010.
  - Accreditation IIA Team Member, FC, 2009-2010.
  - Senior Undergraduate Mathematics Thesis Co-supervisor for Jason Payne, UCR, 2007-8.
  - Interim Mathematics/Computer Science Dean Hiring Committee, 1998.

## OTHER CONFERENCE PARTICIPATION

- CECHA Workshop on Function Theories for Bicomplex and Hypercomplex Numbers, Chapman University, 2012.
- AMS Western Sectional Meeting, Riverside, 2009.
- "Frontiers in Imaging" Workshop, IMA, U. of Minnesota, 2005.
- "Imaging from Wave Propagation" Workshop, IMA, Minneapolis, 2005.
- "Tutorial on Radar and Optical Imaging" Workshop, Minneapolis, 2005.
- National Joint AMS/MAA/ASL Meeting, Atlanta, 2005.
- Wabash Extramural Modern Analysis Miniconference, Indianapolis, 2003.
- Central Section Meeting of the AMS, Bloomington, 2003.
- Wabash Extramural Modern Analysis Miniconference, Indianapolis, 2001 - 2002.
- Western Section Meeting of the AMS, UCI, 2002.
- Introductory Workshop in Harmonic Analysis, Mathematical Science Research Institute, Berkeley, 1997.
- AMATYC National Meeting, Boston, 1994.
- CMC<sup>3</sup> Meeting, Monterey, 1993.

## GRANTS, AWARDS, AND HONORS

- Educator Wall of Fame, UCI, 2015.
- Top Eleven Finalist, Teacher of the Year, FC, 2012.
- Full-Year Research Sabbatical Leave, FC, 2012.
- FC Foundation President's Circle Grant (\$1,500) to fund Math Colloquium outreach and enrichment activities, 2011.
- Office of Staff Development funds (\$2,200) to 11 external faculty talks during the third year of the Math Colloquium, FC, 2011.
- President's Office Hospitality funds \$1200) for the first 2 of 5 PSUMS talks and hospitality for external faculty and internal student speakers, FC, 2011.
- Office of Staff Development funds (\$2200) to fund the second year of Math Colloquium talks by external faculty, FC, 2010.
- Project GPS2 funds (\$2750) to fund the first year of Math Colloquium talks by external faculty, FC, 2009.
- Mathematics/Computer Science Division Service Award, 2011.
- Excellence in Student Support Commendation, Transfer Center, FC, 2006.
- Membership with full financial support, Institute for Mathematics and its Applications, University of Minnesota, 2005.
- Full-Year Research Sabbatical Leave, Fullerton College, 2005.
- National Science Foundation Vertical Integration of Graduate and Research Education (VIGRE) Post-doctoral Fellowship, Indiana University, Bloomington, 2001-2004.
- University of California Regents' Dissertation Fellowship, 2000.
- Fall Semester Education Sabbatical Leave, FC, 1998.

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## **PROFESSIONAL MEMBERSHIPS**

- Mathematical Association of America, 2003-Present.
- Member, National Curve Bank Advisory Board, 2003-Present.
- American Mathematical Society (AMS), 1987-Present.