

Bryant Gregory Mathews

CONTACT	Department of Mathematics, Physics, and Statistics Azusa Pacific University (626) 815-6000 x6536 bmathews@apu.edu	
EDUCATION	Ph.D., Mathematics (Algebraic Geometry) Thesis: <i>Canonical Dimension of Projective Homogeneous Varieties</i> Advisor: Alexander S. Merkurjev UCLA, Los Angeles, CA	2005–09
	M.A., Mathematics UCLA, Los Angeles, CA	2003–04
	Certificate, Teaching English as a Foreign Language Educational Services International, Arcadia, CA	Summer 2002
	B.A., Mathematics, <i>Cum Laude, Phi Beta Kappa</i> Harvard University, Cambridge, MA	1998–2000, 2001–02
	Certificate, French Language Alma College, Alma, MI / Alliance Française, Paris, France	Spring 2001
	A.A., Liberal Arts, <i>With Distinction</i> Simon’s Rock College of Bard, Great Barrington, MA	1996–98
EMPLOYMENT	Azusa Pacific University, Azusa, CA Department Chair Professor Associate Professor Assistant Professor	2015–present 2018–present 2013–18 2009–13
	University of California, Los Angeles Lecturer Teaching Assistant Consultant Teaching Fellow Teaching Associate	2008–09 2008 2007 2004–06
	Research Science Institute, California Institute of Technology, Pasadena Teaching Assistant	August 2004
	Tianjin Normal University, Tianjin, China English Instructor	2002–03
	Harvard University, Cambridge, MA Teaching Assistant	1999–2000, 2001–02
LEADERSHIP ROLES	Chair, CLAS STEM Curriculum Review Committee	2018–present

	Steering Committee Member, APU Chairs' Advisory Council	2017–present
	Chair, APU Department of Mathematics, Physics, and Statistics	2015–present
	Board Member, Association of Christians in the Mathematical Sciences (ACMS)	2015–present
	Member, APU Chairs' Advisory Council Committee on Chair Workload	2018
	Search Committee Member	
	Statistics (Chair)	2017–18
	Physics (Chair)	2017–18
	Statistics	2015
	Mathematics	2010–11
	Faculty Representative, APU Undergraduate Enrollment Management Council Student Success Working Group	2017
	Working Group Member, Bachelor of Arts in Interdisciplinary Studies/Vocation Minor	2016–17
	Advisory Board Member, APU Learning Enrichment Center	2015–17
	Teaching/Learning Faculty Fellow, APU Center for Teaching, Learning, and Assessment	2014–16
	Chair, APU Undergraduate Program Review Committee	2011–14
	Elected CLAS Representative, APU Undergraduate Studies Council	2011–14
	Editorial Board Member, Young Mathematicians Network	2011–13
CONSULTING	Azusa Pacific University , Azusa, CA	
	Tableau Dashboard Designer	2017–18
	National Center for Research on Evaluation, Standards, & Student Testing , UCLA Graduate School of Education & Information Studies, Los Angeles	
	Mathematics and Ontology Specialist, Geometry	2009
	Subject-Matter Expert: Algebra I	2009
TEACHING	Azusa Pacific University , Azusa, CA	
	<i>Assistant Professor/Associate Professor/Professor</i>	2009–present
	Elementary Algebra	
	Self-Paced Mathematics Lab	
	First-Year Seminar	
	Mathematics Seminar I	
	College Algebra	
	Analytical Inquiry	
	Fundamentals of Precalculus	
	Precalculus	

Calculus I
 Calculus II
 Multivariable Calculus
 Differential Equations
 Discrete Mathematics and Proof
 Linear Algebra
 Geometry
 Abstract Algebra
 Real Analysis
 Topology
 Complex Analysis

University of California, Los Angeles

Lecturer 2008–09
 Precalculus
 Linear Algebra and Applications
 Combinatorics

Teaching Associate/Fellow 2004–07
 Finite Mathematics
 Integration and Infinite Series
 Calculus of Several Variables I
 Calculus of Several Variables II
 Honors Calculus of Several Variables I
 Honors Calculus of Several Variables II
 Honors Linear Algebra and Applications
 Advanced Linear Algebra I
 Advanced Linear Algebra II
 Mathematical Game Theory
 Graduate Abstract Algebra I

Harvard University, Cambridge, MA

Teaching Assistant 1999–2000, 2001–02
 Calculus II
 Multivariable Calculus
 Linear Algebra

PUBLICATIONS “Loving Mathematically,” article in the online journal *In All Things* of the Andreas Center at Dordt College (28 March 2017).
 “Individual Presentations of Group-Written Proofs,” chapter in *Beyond Lecture: Techniques to Improve Student Proof-Writing Across the Curriculum*, Mathematical Association of America, MAA Notes Series, Volume 85 (2016), pp. 91–96.
 “Incompressibility of orthogonal Grassmannians of rank 2,” *Journal of Algebra*, Volume 349, Issue 1 (1 January 2012), pp. 353–363.

PRESENTATIONS “Tropical Polynomials,” Los Angeles Math Circle, UCLA 2016
 “Optimizing the ‘Introduction to Proofs’ Course: Syntax, Semantics, and Style,” Biennial Meeting of the Association of Christians in the 2015

Mathematical Sciences, Redeemer University College, Hamilton,
Ontario

- “Tropical Orthogonal Rank of Graphs,” Special Session on Graphs, Matrices, and Related Topics, Joint Mathematics Meetings, San Antonio 2015
- “Voting Systems That Combat Polarization” (joint with Ray Biggerstaff), APU Math and Physics Research Day 2013
- “Training Desires Through the Study of Mathematics,” Seminar on Virtues, Vices, and Teaching, Calvin College, Grand Rapids, MI 2013
- “A Mathematician’s Reflections on James K. A. Smith’s *Desiring the Kingdom*,” Association of Christians in the Mathematical Sciences, Bethel University, St. Paul 2013
- “All Tied Up in Knots: Unraveling the Mystery Behind Rope Tangles,” APU Common Day of Learning 2013
- “Best Teachers: What Do They Do and How Do They Do It?” keynote presentation at APU Faculty Development Day, with Sandra Richards Mayo 2012
- “Indecision Graphs and Tropical Orthogonal Labeling,” Mathematics Colloquium, California State University, San Bernardino 2012
- “The Tropical Minimum Rank Problem,” Association of Christians in the Mathematical Sciences, Westmont College 2011
- “Is Mathematics Just Logical Deduction?” APU Philosophy Colloquium 2011
- “Introduction to Tropical Mathematics,” Los Angeles Math Circle, UCLA 2010

RESEARCH	Voting Systems That Combat Polarization (1 student)	Summer 2013
MENTORING	Tropical Orthogonal Rank of Graphs (3 students)	Summer 2011
	Tropical Minimum Rank Problem (2 students)	Summer 2010

HONORS, AWARDS,	APU University Leadership Award	2018
FELLOWSHIPS,	APU Provost’s Anticipatory Thinking Grant	2017-18
AND GRANTS	California Space Grant Consortium Sub-Award	2016
	APU Faculty Development Council Travel Grant	2011
	APU Faculty Research Council Research Grant	2011
	Mathematical Association of America Project NExT Fellowship	2010–11
	UCLA Mathematics Department Research Assistantship	2007–09
	UCLA National Science Foundation VIGRE Fellowship	2003–07
	Harvard Phi Beta Kappa Honor Society	2002
	John Harvard Honorary Scholarship for Academic Achievement	1999, 2000, 2002
	Harvard Detur Book Prize for top first-year students	1999
	Barry M. Goldwater Scholarship for Excellence in Science and Mathematics	1998–2000
	Math & Science Award for top graduating student at Simon’s Rock College	1998

SERVICE

DEPARTMENT

Hired 16 new adjunct faculty	2015–present
Planned and led department meetings and retreats	2015–present
Scheduled approximately 160 course sections per year	2015–present
Oversaw approximately 10 full-time faculty and 25 adjunct faculty per year	2015–present
Responded to hundreds of petitions per year	2015–present
Represented department at approximately 10 recruiting and orientation events per year	2015–present
Advised APU team for the William Lowell Putnam Mathematical Competition	2012–present
Developed new courses	2011–present
GE 100 First-Year Seminar (mathematics and physics section)	
MATH 90 Foundations of Mathematical Reasoning	
MATH 99 Self-Paced Mathematics Lab	
MATH 100 Mathematics Seminar I	
MATH 110 College Algebra (online version)	
MATH 115 Mathematics in Society	
MATH 130 Introduction to Statistics (online version, joint with Andre Harmse)	
MATH 149 Fundamentals of Precalculus	
MATH 165 Calculus I	
MATH 166 Calculus II	
MATH 167 Sequences and Series	
MATH 200 Mathematics Seminar II	
MATH 268 Multivariable Calculus	
MATH 269 Vector Calculus	
MATH 280 Discrete Mathematics and Proof	
MATH 340 Geometry (new version)	
MATH 460 Topology	
MATH 495 Advanced Topics in Mathematics	
MATH 496 Mathematics Senior Seminar	
Coordinated preparation and submission of Program Review Reports for mathematics and physics	2018
Evaluated eight Associate’s Degree for Transfer (ADT) agreements with local community colleges	2018
Department liaison for the development of the Integrated Bachelor’s/ Credential 3+1 program for the Secondary Mathematics Education Track	2017–18

Oversaw the approval and implementation of the new Statistics Minor	2017–18
Led an overhaul of the department’s calculus program to meet the needs of 2017–18 partner disciplines and to emphasize conceptual and contextual learning	
Worked with program director to facilitate development of the new M.S. in Applied Statistics and Analytics program	2016–18
Led an overhaul of the department’s developmental and general education mathematics programs to implement national recommendation, improve student success, and target the needs of various student populations	2015–18
Created a Department Resources Google Site to host department forms, resources, and meeting agendas, along with documents related to advising, curriculum, adjunct faculty, and math placement	2017
Initiated the remodel of the Segerstrom Conference Room to enable use as a classroom	2017
Initiated annual exit survey and interview for graduating seniors	2016
Overhauled Department of Mathematics, Physics, and Statistics website	2016
Designed department’s summer research internship application process	2016
Led a rewrite of all mathematics course descriptions and student learning outcomes	2016
Wrote the text for the mathematics and applied mathematics Education to Vocation pamphlets	2016
Coordinated with department faculty and the University Library to reallocate approximately \$2,000 per year of library journal subscriptions to more effectively serve department needs	2016
Oversaw the approval and implementation of the new Applied Mathematics Major and negotiated Actuarial Science Concentration with the School of Business and Management	2015–16
Initiated significant changes to the Liberal Studies Math Concentration to bring it in line with state requirements and make it more appealing	2015
Initiated partnership with the Learning Enrichment Center to offer Supplemental Instructions for the Introduction to Statistics course	2015
Traveled to National Professional Science Master’s Association meeting in Atlanta to investigate the master’s degree possibilities for our department	2014

Initiated changes to the Mathematics Minor leading to a doubling in the enrollment from 22 to 44 in one year 2014

UNIVERSITY

Implemented Respondus online proctoring for ALEKS math placement assessments 2017–18

Designed enrollment and grades dashboards for university administrators using SQL and Tableau 2017–18

Panelist for VOC 200 Exploring Vocation course 2017

Recruited and moderated “Wisdom from Seasoned Chairs” panel at New Chair Orientation 2017

Co-organized three Faculty Dialogues on Making Space for Civil Conversation Across Difference 2017

Overhauled APU’s math placement program to incorporate the ALEKS Placement, Preparation, and Learning (PPL) system 2015–17

Placed two data analyst student interns in the APU Undergraduate Academic Success Center and Center for Global Learning and Engagement 2016

Interviewed for Full Faculty Kickoff video on how I seek to encourage the spiritual development of my students 2016

Organized Teaching Triads for the College of Liberal Arts and Sciences 2015

Co-led (with Kirsten Humer from Theater Arts) a discussion of the play *Proof* by David Auburn following a public reading of the play 2015

Mentored a student in APU’s Blueprints Mentoring Program 2012–13

Panelist for APU Coram Deo event: “Faith in a Post-Christian World–Multidisciplinary Perspectives” 2011

Organized and moderated a multi-disciplinary panel discussion on beauty following a screening of the film *Between the Folds*, APU Common Day of Learning 2011

Interviewed for a short film on beauty in the disciplines for College of Liberal Arts and Sciences (CLAS) Faculty/Staff Retreat 2010

PROFESSION

Co-hosted (with Edwin Ding) the SIMIODE Student Competition Using Differential Equations Modeling (SCUDEM) 2018

Wrote a successful proposal to host the 2021 Conference of the Association of Christians in the Mathematical Sciences at APU	2017
Coordinated YMN Poster Session, MAA Mathfest, Lexington, KY	2011
Reviewed abstracts for the Young Mathematicians Conference at The Ohio State University	2011
Chaired a session at (and took five students to) the Pacific Coast Undergraduate Math Conference, Loyola Marymount University	2011

COMMUNITY

Appointed school representative on the District Advisory Council (DAC), Pasadena Unified School District	2018–present
Led middle and high school students in a Conway’s Rational Tangles activity at the Association of Christian Schools International Science Fair	2018
Judge at the Math Academy SOLVE Competition at CalTech	2018
Informal advisor to Jason Roberts, founder of Math Academy	2016–18
Reviewed a \$300,000 grant application for the Keck Foundation	2017
Initiated a partnership with Azusa’s Center Middle School to staff a new after-school math club with APU students and to supply it with \$2,000 of math games (from a grant)	2016–17
Directed APU Math Day for 80 high school students	2012

PROFESSIONAL DEVELOPMENT

LEADERSHIP DEVELOPMENT

APU Department Chairs Retreat (annually)	2015-present
Leading and Influencing as a Department Chair (Academic Impressions), San Diego	2017
Analytics for Academics: Producing Actionable Information about Students and Learning to Improve Effectiveness (WSCUC/Pitzer College), Claremont, CA	2017
Gateway Courses and Student Success: Foundational Issues in Educational Equity and Social Justice (Gardner Institute for Excellence in Undergraduate Education, UC Irvine)	2017
APU “Teams That Thrive” three-part workshop <ul style="list-style-type: none"> • Leading Teams That Thrive • Running Excellent Team Meetings • Dealing Effectively with Diverse Personalities & Communication Styles on Your Team 	2017
The Emotionally Healthy Leader (APU Center for Vocational Ministry)	2017

Mathematics Department Chairs Workshop (American Mathematical Society), Seattle	2016
Project Kaleidoscope Summer Leadership Institute, Crestone, CO	2013
Best College Teachers Summer Institute (Ken Bain), West Orange, NJ	2011

COURSES TAKEN

Business Metrics for Data-Driven Companies (Coursera/Duke University)	2017
Mastering Data Analysis in Excel (Coursera/Duke University)	2017
Data Visualization and Communication With Tableau [final project not completed] (Coursera/Duke University)	2017
Managing Big Data with MySQL [final project not completed] (Coursera/Duke University)	2017
APU Orientation to Online Teaching	2017
Faith Integration and Curriculum Development, APU graduate course	2011

FAITH INTEGRATION PAPERS FOR RANK PROMOTION

“Naturalist Philosophies of Mathematics in Christian Perspective” (for promotion to Professor)	2017
“Annotated Bibliography: Mathematics and Christian Faith” (for promotion to Associate Professor)	2014

CONFERENCES/SEMINARS/TALKS WITH FAITH COMPONENT

Common Good Conference (Made to Flourish), Montebello, CA	2017
Redeeming Work (Christianity Today), Costa Mesa, CA	2015
Association of Christians in the Mathematical Sciences Biennial Conference, Redeemer University, Hamilton, Ontario	2015
N.T. Wright: “Interpreting Paul for the Future of the World” (Fuller Seminary), Pasadena, CA	2014
Miroslav Volf: “World Faiths: A Christian Perspective” (Fuller Seminary Payton Lectures), Pasadena, CA	2014
Rick Colling: “Evolution and the Christian Faith,” APU School of Theology	2013
Southern California Christians in Science Winter Day Conference, APU	2013
Association of Christians in the Mathematical Sciences Biennial Conference, Bethel University, St. Paul, MN	2013
Talk of God, Talk of Science Conference (Fuller Seminar), Pasadena, CA	2013
Troy Van Voorhis: “Is Science Enough?” (Veritas Forum), Caltech	2013
John Lennox: “Can Science and Religion Coexist?” (Veritas Forum), USC	2013
Satyan Devadoss: “Science is Not Everything” (Veritas Forum), CalTech	2011
Association of Christians in the Mathematical Sciences Biennial Conference, Westmont College, Santa Barbara, CA	2011

Association of Christians in the Mathematical Sciences Biennial Conference, 2009
Wheaton College, Wheaton, IL

MATHEMATICS WORKSHOPS

Mathematical Depth Workshop (UC Irvine Department of Logic and Philosophy of Science) 2014

Research Experience for Undergraduate Faculty (American Institute of Mathematics), ICERM, Brown University 2012

Linear Algebraic Groups and Related Structures, BIRS, Banff, Alberta 2009

Summer Graduate Workshop on Toric Varieties, MSRI, Berkeley, CA 2009

Combinatorial Challenges in Toric Varieties, AIM, Palo Alto, CA 2009

Combinatorial, Enumerative, and Toric Geometry, MSRI, Berkeley, CA 2009

PIMS Algebra Summer School, University of Alberta 2007

- Minicourses on Lie algebras, algebraic groups, and K-theory

Linear Algebraic Groups and Cohomology, Emory University 2007

MATHEMATICS CONFERENCES

Joint Meetings of the AMS and MAA, San Diego 2018

Joint Meetings of the AMS and MAA, Atlanta 2017

Joint Meetings of the AMS and MAA, Seattle 2016

- Minicourse: Getting Started in the Scholarship of Teaching and Learning
- Minicourse: Visual Topics in Undergraduate Complex Analysis

Joint Meetings of the AMS and MAA, San Antonio 2015

- Minicourse: Teaching Statistics Using R and RStudio

Conference on Torsors, Nonassociative Algebras and Cohomological Invariants, Fields Institute, Toronto 2013

MAA Southern California–Nevada Section Meeting, CSU Long Beach 2012

MAA Southern California–Nevada Section Meeting, CSU Fullerton 2012

MAA Southern California–Nevada Section Meeting, Harvey Mudd College 2012

MAA Southern California–Nevada Section Meeting, CSU Los Angeles 2011

MAA Mathfest/Project NExT, Lexington, KY 2011

- Minicourse: The Mathematics of Folding and Unfolding

Joint Meetings of the AMS and MAA/Project NExT, New Orleans, LA 2011

- Short Course: Matroids You Have Known

MAA Southern California–Nevada Section Meeting, Point Loma Nazarene 2011

MAA Southern California–Nevada Section Meeting, UC Irvine 2010

MAA Mathfest/Project NExT, Pittsburgh, PA 2010

MAA Southern California–Nevada Section Meeting, California Lutheran University	2009
Joint Meetings of the AMS and MAA, Washington, D.C.	2009
<ul style="list-style-type: none"> • Minicourse: Directing Undergraduate Research • Minicourse: A Game Theory Path to Quantitative Literacy 	
Joint Meetings of the AMS and MAA, San Diego, CA	2008
<ul style="list-style-type: none"> • Short Course: Combinatorics: Past, Present, and Future • Minicourse: Mathematics and Geometry of Voting 	
MAA Southern California–Nevada Section Meeting, Santa Ana College	2007
Southern California Algebra Conferences, UCLA	2004–07

OTHER

APU Center for Teaching, Learning, and Assessment Faculty Development Day (annually)	2015-present
APU First-Year Seminar Faculty Development Day	2018
APU Diversity Workshop: Expanding Cultural Competence: Building Meaningful Connections	2018
APU Vocational Mentoring Workshop	2018
APU Summer Intensive on Teaching Writing	2017
APU Panel on Supporting Underrepresented First Generation Students: Voices from the Community	2017
APU Faculty Dialogue: Making Space for Civil Conversation Across Difference	2017
Designing Your Life Workshop (Stanford University Alumni Association), Los Angeles	2017
Workshop on Mentoring Math Majors (Cal State, Northridge)	2016
Teaching Triad (APU College of Liberal Arts and Sciences)	2015
APU Faculty Seminar in the Liberal Arts: <i>Don Quixote</i>	2014
USA Origami National Convention, New York City	2011
APU Faculty Seminar in the Liberal Arts: Confucius and Laozi	2011
APU Faculty Seminar in the Liberal Arts: Plato's <i>Republic</i>	2010