

Melvin Royer

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EDUCATION

1997 Ph.D., Mathematics, Purdue University
1991 ABD, Electrical Engineering, Purdue University
1989 M.S., Electrical Engineering, Purdue University
1988 B.S., Electrical Engineering, with highest distinction, Purdue University

WORK EXPERIENCE

2009 – Present *Division Chair*, Division of Mathematics and Computer Information Sciences
Indiana Wesleyan University, Marion IN

- Served as IWU Math representative to Indiana Core Transfer Library initiative
- Evaluated student internships for awarding of academic credit
- Served as organizational chair of the IWU CAS division chairs
- Served on task force developing new Engineering major
- Co-designed classrooms and faculty office area for move to new academic building
- Served as CIS Department Coordinator
- Represented division at Academic Affairs and Division Chair meetings
- Developed new Math Interdisciplinary major
- Wrote content for updated divisional website and print recruiting materials
- Chaired numerous search committees for new faculty hires
- Mentored faculty in professional development and rank promotion process
- Set agenda and led division meetings
- Implemented division level program assessment plans
- Disseminated information and served as liaison between faculty and administration
- Wrote capital and technology requests
- Led divisional external review
- Evaluated faculty seeking promotion and multi-year contracts and responded to faculty annual self-evaluations
- Hired and supervised adjunct faculty

2019 – Present *Professor*, Division of Mathematics and Computer Information Sciences
2001 – 2019 *Associate Professor*, Indiana Wesleyan University, Marion IN

- Organized national conference of the Association of Christians in the Mathematical Sciences
- Co-organized contributed paper sessions at the Joint Math Meetings of the American Mathematical Society and Mathematical Association of America
- Supervised or co-supervised 3 student undergraduate research projects
- Designed and taught First Year Experience math course for new freshmen
- Designed and taught fully online section of liberal arts mathematics course
- Taught 25 different math courses (plus several others offered independent study) at all undergraduate levels plus 4 physics courses, 2 computer science courses, and 1 university freshmen orientation course.

- Developed computer projects in Maple®, Minitab®, Geometers Sketchpad®, Excel
- Implemented tablet technology into classes
- Co-developed pre-engineering program (implemented 2010)
- Developed engineering program preliminary proposal
- Faculty advisor for student math club
- Team sponsor for state MAA math contest
- Faculty advisor for 3 senior honors theses
- Mentored new faculty members, officially and unofficially
- School observations and supervision of mathematics education student teachers
- Academic advising of Math and Computer Information Science majors
- Mathematical Association of America Project NExT-Indiana Fellow (mentor)
- Developed 5 new mathematics courses
- Initiated and conducted department colloquium series
- Took students to national and state conferences
- Grader for AP® Calculus exams
- Served/serving on the following Indiana Wesleyan Faculty Councils/Committees

University: Senate, Technology

CAS: Nominating, General Education, Academic Policies and Procedures,
Academic Affairs, Secondary Education, Academic Advising, Faculty
Chapel Steering, Technology Committee

CAS Task force for restructuring university faculty committees

CAS Task force for restructuring IWU General Education

2006 – 2009 *Department Coordinator*, Department of Mathematics,
Indiana Wesleyan University, Marion IN

- Planned department budget and teaching schedules
- Wrote capital and technology requests
- Hired and oversaw adjunct faculty
- Co-designed mathematics classrooms when department moved to renovated building
- Set agenda and led department meetings
- Co-led departmental assessment efforts and report writing
- Led search committee for new faculty hire
- Planned and hosted departmental social events
- Led department curriculum restructuring
- Initiated Mathematics Department Colloquium

1998 – 2001 *Instructor*, Department of Mathematics, Parkland College, Champaign IL

- Awarded tenure and promotion to Associate Professor for 2001-2002 contract
- Taught nine different courses at all community college levels
- Extensive Derive® software and graphing calculator classroom use
- Supervised students doing self-study developmental courses in college Learning Lab
- Mentored new full-time instructor
- Chaired or served on the following Parkland College Committees:
 - Mathematics 2000-2001 Faculty Search Committee (Chair)
 - Mathematics Transfer Course Academic Assessment Committee (Chair)
 - Parkland College Faculty Professional Development Committee (Chair)
 - Mathematics Department Student Scholarship Committee (Chair)
 - Parkland College Committee on Academic Exceptions and Student Affairs
 - Two prior Mathematics Faculty Search Committees
 - Various Textbook Committees

- 1997 – 1998 *Adjunct Instructor*, Department of Mathematics, Ivy Tech State College, Lafayette IN
- 1990 – 1997 *Teaching Assistant*, Departments of Mathematics and Electrical Engineering,
Purdue University, West Lafayette IN
- 1985 – 1988 *Cooperative Education Intern* (alternating semesters), IBM Corporation, Boca Raton FL
- VLSI chip design
 - Debugging prototype PC motherboards
 - Quality control engineering on PC manufacturing line

REVIEWED PUBLICATIONS

- 2018 “Axioms: Mathematical and Spiritual, What Says the Parable,” *Association of Christians in the Mathematical Sciences Proceedings*, Volume 21, 2018.
- 2012 “Gabriel’s Other Possessions,” *PRIMUS*, vol 22, issue 4, 2012.
- 2001 *Linear Algebra with Business Applications 3/e* (with Sherbert, Brown, and Adawi), McGraw-Hill Primis Custom Publishing, 2001. (new edition of textbook)

OTHER PUBLICATIONS

- 2015 “Parables to a Mathematician,” *Association of Christians in the Mathematical Sciences Proceedings*, Volume 19, Ancaster Ontario.
- 1997 *Ginzburg-Landau Equations for a Three-Dimensional Superconductor in a Strong Magnetic Field*, Ph.D. Thesis. Major area: Partial Differential Equations and Applied Mathematics.

SELECTED PERSONAL VOLUNTEER EXPERIENCES

Team supervisor and classroom instructor of Asian middle-school English teachers through the 4-6 week Engage Summer Training Program of the Christian volunteer organization English Language Institute.

- 2018 *Instructor*, ELI Engage at Vientiane, Laos
- 2014-2016 *Co-organizer* and local contact for Old German Baptist Brethren NC church conference held at Indiana Wesleyan in June 2016 (2000 attendance, 4 days)
- 2009-2018 Frequent Participant and occasional *Leader* of church Bible studies
- 2015 *Instructor*, ELI at Anshan City Bureau of Education, Anshan, China
- 2012 *Team Supervisor*, ELI Camp Mongolia, Ulaanbaatar, Mongolia
- 2009 *Team Supervisor*, ELI at Deyang Foreign Language School, Deyang, China
- 2007 *Team Supervisor*, ELI at Shunyi Technical Institute, Shunyi, China
- 2005 *Instructor*, ELI at Chaoyang Education College, Beijing, China
- 2000 *Instructor*, ELI at Changchun Education College, Changchun, China
- 1999 – 2000 *Volunteer ESL Tutor*, Project READ (Adult Literacy), Champaign IL
- 1996 – 1997 *Volunteer ESL Tutor*, Lafayette Adult Reading Academy, Lafayette IN

EXTERNAL PROFESSIONAL SERVICE

- 2019 Lead organizer of the national Biennial meeting of the Association of Christians in the Mathematical Sciences at IWU

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| 2018-2021 | Indiana MAA Section Distinguished Service Award Selection Committee |
| 2017, 2019 | Co-organizer for General Contributed Paper Sessions at Joint Meetings of the AMS/MAA, Atlanta GA (2017) and Baltimore (2019) |
| 2016-2021 | National MAA Committee on Sessions of Contributed Papers |
| 2012 | Refereed articles for <i>PRIMUS</i> journal |
| 2011-2014 | Indiana MAA Section Executive Board (Section Chair 2012-2013) |
| 2011 | Local planner/contact for MAA Indiana Section Meeting at IWU |
| 2006-2009 | Indiana MAA Section Distinguished Service Award Selection Committee |
| 2003-2008 | National MAA Committee on Two-Year Colleges |

SELECTED AWARDS AND GRANTS

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| 2013 | Indiana Wesleyan Ott Award for science faculty |
| 2010 | Indiana Wesleyan Principium Lecture grant |
| 2005 | Who's Who in American Teachers (by student nomination) |
| 2000 | Who's Who in American Teachers (by student nomination) |
| 1996 | Excellence in Teaching Award, Purdue University Department of Mathematics |
| 1994 – 1997 | Purdue Research Foundation Grant |
| 1994 | MacLane Award for Scholarship/Teaching, Purdue University Dept of Mathematics |

CURRENT PROFESSIONAL MEMBERSHIPS (since given date)

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| 2001 | Association of Christians in the Mathematical Sciences |
| 1997 | Mathematical Association of America |

CONFERENCE/WORKSHOP PRESENTATIONS (also numerous IWU Math Dept Colloquia)

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| 2018 | “A Bridge to Everywhere,” Joint Meetings of the AMS/MAA, San Diego CA |
| 2017 | “Axioms: Mathematical and Spiritual,” Association of Christians in the Mathematical Sciences, Charleston SC |
| 2015 | “Parables to a Mathematician,” Association of Christians in the Mathematical Sciences, Ancaster Ontario |
| 2014 | “The Ross Urn Paradox,” Indiana Purdue Fort Wayne conference in honor of Martin Gardner, Ft Wayne IN (invited) |
| 2012 | “Getting the Act Together,” Joint Meetings of the AMS/MAA, Boston MA |
| 2011 | “Thinking About Thinking: Projects With Neural Network Models,” MAA MathFest, Lexington KY |
| 2011 | Faculty workshop on Faith and Integration, Indiana Wesleyan University |
| 2010 | “Dynamical Systems: Mathematical Beauty Joins Utility,” Indiana Wesleyan University Principium Lecture Series, Marion IN |
| 2010 | “Gabriel’s Other Equipment”, MAA Indiana Section Meeting, Franklin College, Franklin IN |
| 2010 | “Gabriel’s Other Equipment”, Joint Meetings of the AMS/MAA, San Francisco CA |
| 2008 | “Hands-on Correlation Activities in Introductory Statistics,” Joint Meetings of the AMS/MAA, San Diego CA |

- 2007 “Success Stories in a First Year Seminar for Math Majors,” Joint Meetings of the AMS/MAA, New Orleans LA
- 2005 “Economical Radar Guns”, Joint Meetings of the AMS/MAA, Atlanta GA
- 2004 “Starting Math Majors Off on the Right Foot,” Joint Meetings of the AMS/MAA, Phoenix AZ (with Gail Greene)
- 1998 “Ginzburg-Landau Equations for a Three-Dimensional Superconductor in a Strong Magnetic Field,” Pi Mu Epsilon Conference, Miami University, Oxford OH

SELECTED PROFESSIONAL CONFERENCES ATTENDED (also active in Indiana MAA Section)
 (* = took undergraduate students)

- 2019 Association of Christians in the Mathematical Sciences, Marion IN (lead organizer)
 *Joint Meetings of the AMS/MAA, Baltimore MD (session organizer)
- 2018 *Joint Meetings of the AMS/MAA, San Diego CA
- 2017 Association of Christians in the Mathematical Sciences, Charleston SC
 *Joint Meetings of the AMS/MAA, Atlanta GA (session organizer)
- 2016 *Joint Meetings of the AMS/MAA, Seattle WA
- 2015 Christian Engineering Conference, Seattle Pacific University, Seattle WA
 *Association of Christians in the Mathematical Sciences, Ancaster Ontario
- 2014 *Joint Meetings of the AMS/MAA, Baltimore MD
 CIC Workshop for Department/Division Chairs, St Louis MO
- 2013 *Special Interest Group of the Association of Computing Machinery, Denver CO
- 2012 *Joint Meetings of the AMS/MAA, Boston MA
- 2011 *Joint Meetings of the AMS/MAA, New Orleans LA
 AAC&U Engaging Departments Institute, Ellicott MD
 MAA MathFest, Lexington KY
- 2010 *Joint Meetings of the AMS/MAA, San Francisco CA
 MAA PREP Workshop “Mathematical Modeling in Population Biology and Epidemiology,”
 Lubbock, TX
 MAA MathFest, Pittsburgh PA
- 2009 Association of Christians in the Mathematical Sciences National Meeting, Wheaton IL
- 2008 *Joint Meetings of the AMS/MAA, San Diego CA
- 2007 Joint Meetings of the AMS/MAA, Atlanta GA
- 2006 MAA PREP Workshop “Leading the Academic Department”, Washington DC
 MAA PREP Course “Mathematical Biology”, Sweet Briar VA
 NSF Chautauqua Course “Engineering and Mathematics”, Ruston LA
 MAA MathFest, Knoxville TN
- 2005 Joint Meetings of the AMS/MAA, Atlanta GA
 Association of Christians in the Mathematical Sciences National Meeting, Huntington IN

- 2004 Joint Meetings of the AMS/MAA, Phoenix AZ
Coalition of Christian Colleges and Universities New Faculty Workshop, Elgin IL
- 2003 MAA PREP Course "Teaching Mathematical Masterpieces," Boulder CO
MAA MathFest, Boulder CO
- 2002 Joint Meetings of the AMS/MAA, San Diego CA
- 2000 AMATYC Annual Meeting, Chicago IL
Joint Meetings of the AMS/MAA, Washington D.C.