

Kenneth M. Levasseur

CV - 2026

Present Position

Professor, Department of Mathematics and Statistics,
University of Massachusetts Lowell
Lowell, MA 01854

Contact Information

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Education

- B. A. 1971 Mathematics, St. Anselm College, Manchester, NH
- M. S. 1973 Mathematics, University of Rhode Island
- Ph. D. 1980 Mathematics, University of Rhode Island

Professional Employment

- 1994 to Present - Professor, University of Massachusetts Lowell
- 1985 to 1994 - Associate Professor, University of Lowell/University of Mass. Lowell
- 1980 to 1985 - Assistant Professor, University of Lowell
- 1977 to 1980 - Instructor, St. Anselm College, Manchester, NH

Other Positions

- 2013 to 2016 - Chair, Department of Mathematical Sciences, University of Massachusetts Lowell
- 2011 - 2015, Co-director, [UTeach UMass Lowell](#)
- September 2000 - June 2001: Senior Scientist, Education Developement Center, Newton, MA
- 1990 to 1999 - Chair, Department of Mathematical Sciences, University of Massachusetts Lowell
- August 1995 to September 1996 - Interim Dean - College of Arts & Sciences - University of Mass. Lowell
- May 1995 to July 1995 - Associate Dean - College of Arts & Sciences- University of Mass. Lowell
- Accredited by Wolfram Research as a *Mathematica* Trainer - 1998
- October 1996: Visiting Scholar, Wolfram Research, Champaign IL.

- October 1995: Visiting Scholar, Wolfram Research, Champaign IL.
- Fall, 1989: Visiting Lecturer, AT&T Bell Laboratories, North Andover, MA.

Research Interests

Discrete Mathematics and Abstract Algebra; and implementation of algorithms in these fields using computer algebra systems such as *Mathematica* and Sage

Publications

- "Pass the Buck on a Rooted Tree," *Mathematics Magazine*, 96:4 (2023), 446-454, DOI: 10.1080/0025570X.2023.2231859
- "Pass the Buck" on a Complete Binary Tree," *Mathematics Magazine*, 95:4 (2022), 349-353, DOI: 10.1080/0025570X.2022.2094165
- "Chip-Firing Graph Configurations," <http://demonstrations.wolfram.com/ChipFiringGraphConfigurations/> Wolfram Demonstrations Project, 2018
- [Applied Discrete Structures](#) (with A. Doerr), an open-content discrete mathematics text, Version 3.10, 2023.
- "Groupoid generation by relations," (with Al Hibbard), [Mathematica in Education and Research](#), Vol. 11, Number 1(2006) 30-49.
- "Mathematical Habits of Mind," (with Al Cuoco) Chapter 3 of [Teaching Mathematics through Problem Solving](#), NCTM: Reston VA, 2003.
- [Classical Mathematics in the Age of CAS](#)," (with Al Cuoco) Chapter 6 of **Computer Algebra Systems in Secondary School Mathematics**, NCTM: Reston VA, 2003.
- [A Microworld for Learning Abstract Algebra](#)," (with Al Hibbard), **Mathematica in Education and Research**, 9(Summer-Fall 2000) 5-11.
- [Exploring Abstract Algebra with Mathematica](#) (with Al Hibbard, Central College, IA), Springer-Telos, 1999.
- [The Solution of Linear Equations with Integer Coefficients Using Modular Arithmetic and Cramer's Rule.](#) **Mathematica in Education & Research**, 4(Winter, 1995) 14-18.
- "Getting Started with *Mathematica*," a chapter in UML College of Engineering Computer Handbook, 1995.
- [A Microworld for Elementary Group Theory.](#) **Mathematica in Education** , 3(Fall, 1994) 5-10.
- **College Algebra & Trigonometry**, (with L. Andrusaitis and A. Doerr), McGraw-Hill, 1994.
- [A Human Name Collision](#)," **Mathematica in Education**, 2(Fall 1992) p 7 - 8.
- "An Application of Fourier Transforms," **The Mathematica Journal**, 2(Summer 1992) p 60-61
- "Card Guessing," **Arithmetic Teacher**, April, 1991, p 2 ff..
- **Applied Discrete Structures for Computer Science**, second edition (with A. Doerr), SRA: Chicago, 1989.

- "How to Beat Your Kid at Their Own Game," **Mathematics Magazine**, 61(1988).301-305.

Conferences and Seminars

- "Pass the Buck on a Complete Binary Tree," 2021 Joint Math Meetings (virtual) contributed speaker.
- Invited Panelist, Workshop on Open Source Mathematics Texts, Northeast Regional Meeting of the Mathematical Association of America, Gordon College, November 2015.
- "What a Difference 30 Years Makes! - Adventures in Mathematics Textbook Publishing," Joint Math Meetings, Baltimore, 2014.
- "Functions and Modeling at UMass Lowell" - 2013 UTeach Conference, Austin, TX.
- "How to Beat Your Kid at Their Own Game," Focus on Mathematics Seminar, January 9, 2006.
- "Using Interactive Labs to Explore Abstract Algebra Topics" - Minicourse at the Joint Math Meetings, San Diego CA, January 2002.
- "A Collaborative Approach to Professional Development Through Problem Solving," Special Session on Mathematics and Education Reform at the Joint Math Meetings, New Orleans, LA, January, 2001.
- "A Microworld for Exploring Abstract Algebra" - AMS Meeting - UMass Lowell, April 1, 2000
- "Interactive Labs in a Microworld for Abstract Algebra" - NERCOMP Mathematica SIG - Amherst College, February 22, 2000
- "Exploring Abstract Algebra with Interactive Labs" - Minicourse at the Joint Math Meetings, Washington D. C., January, 2000.
- "Exploring Abstract Algebra with Interactive Labs" - Minicourse at the Joint Math Meetings, San Antonio, January 1999.
- "An On-line Course in *Mathematica*," UMass ITC Conference, April 1998
- "Exploring Abstract Algebra with *Mathematica*" - UMass Lowell Mathematics Colloquium, April 1998.
- "Problem Solving in Mathematics," a Discussion of Problem-Solving and Critical Thinking Instruction at UMass Lowell, March 1998.

Teaching Activities

- I have taught and/or coordinated the following courses either regularly or on occasion:
- MATH.1320 Calculus II
- MATH.2100 Functions and Modeling
- MATH.3220 Discrete Structures II
- MATH.4130 Number Theory
- MATH.4190 *Mathematica*

- MATH.4200/5200 Mathematical Problem Solving
- MATH.4210/5210 Abstract Algebra
- MATH.5100 Computers and Calculators in the Classroom
- MATH.5550 Applied Math for Life Scientists

Grants

- Co-PI, UMass President's Office Creative Economy Grant, "Lowell Tex: Embracing Lowell's Cultural, Historical, and Educational Assets to Create Pathways to STEM," 2015-16. (\$34,500)
- Co-PI, UTeach replication grant from the Mass Dept. of Education, 2011-2014 (3 years/\$1,599,876)
- PI of the UML subcontract for *Mathematical Experiences*, a state of Massachusetts Title IIB grant to work with elementary school teachers in Lawrence on mathematics content, 2008-2011.
- Co-PI (with Tibor Beke): UMass Instructional Technology Grant: *Enhanced Learning and Advice through Online Assignments*, 2008-9.
- Co-PI (with Joel Therrien): Teaching and Learning Seed Grant: *Introducing WeBWork to UML*, 2007-8.
- PI of the UML subcontract for [*Focus on Mathematics*](#), an NSF Math & Science partnership, 2003-2009.

Other professional activities

- Member of the planning committee for The Math Mill (<https://sites.google.com/view/mvmtc/home>), a math teachers' circle, which was started in 2019. Presented or co-presented at five meetings.
- Coach - UMass Lowell participation in the William Lowell Putnam Mathematics Competition, 2014-2023.
- Participant - *PRIME* - a project with Lowell High School and Lawrence High School Math and English teachers to improve college readiness, 2010-13.
- Panelist - *A Day of mathematics*, a program for high school mathematics teachers sponsored by the Mass. Dept. of Education, November 15, 2007.
- Participant in *Math Applications Shaping Tomorrow* (MAST), an NSF project based at Northern Essex Community College, 2003-2004.
- Member of the editorial panel and chapter author for Teaching Mathematics through Problem Solving, published by NCTM in 2003.
- Participant in *Building Regional Capacity*, a joint UML/EDC/EMAMDH project designed to deliver courses to train professional development for leaders in mathematics.
- Team member - Mastering Adaptive and Scalable Systems (MASS) for STEM Education, July 2018-June 2019.

- Led a discussion of the the consultant's report on the teaching of problem-solving at UML - March 1998
- Panelist - "Diversity in the Core Curriculum" - UML Council on Diversity and Pluralism conversations dinner - October 27, 1999
- Member of the [Mathematical Association of America](#)

Outreach

- Speaker at MassPIRG press event on open source textbooks, April 2015
- Member - Amherst NH "Goals 2000" committee - a committee to revamp the K-12 mathematics curriculum in my town, 2001-2003.
- Lowell High School Career Day - February, 1999
- Lawrence Schools Academic Olympics, Mathematics Competition- 1999, 2000
- Souhegan High School Technology Symposium - October, 1999

Committees

- Faculty Senate 2018-2023
- Core Curriculum Committee (Senate committee), 2018-2023.
- Member - University Teaching and Learning Committee, 2011-2016
- Member - Council on Teaching, Learning & Research as Scholarship, 1994 - 2008.
- Member and co-chair - *Task Force on Retention Issues*, (a task force of the Council on Teaching, Learning & Research as Scholarship), 1996 - 2008
- Member - Task Force on Teaching with Technology, a task force of the Council on Teaching, Learning & Research as Scholarship, 2000 - 2008.
- Chair/Co-chair - Department Scholarship Committee, 2018-2026

Awards

- Mathematical Sciences Teaching Excellence Award - 2002, 2008
- OERscar for activity promoting Open Educational Resources by MASSPIRG, 2021 and 2023