

Zeliha Kilic

Education

- 2012–present **PhD Candidate in Mathematics, UNC at Chapel Hill.**
Research in Physical Applied Math
Expected Graduation in 2018
Advisor: Professors Richard McLaughlin and Roberto Camassa.
- 2010–2012 **MSc. in Pure Mathematics, Marmara University, Istanbul.**
Research in Commutative Algebra
MSc. Thesis is titled as "Multiplicative Lattice Theory"
Ranked 1st
Advisor: Prof. Unsal Tekir.
- 2006-2010 **BS in Mathematics, Marmara University, Istanbul.**
Ranked 1st
- 2009-2010 **Certificate on Pedagogical Formation, Marmara University, Istanbul.**
Teaching Certificate required for teaching Math at government High Schools for BS degree holders in Math

Working Experience

- 2010(Sept.) **Graduate Teaching Assistant, Bahcesehir University, Istanbul, Turkey.**
-2012(July)
- May **Graduate Research Assistant, UNC at Chapel Hill.**
2015–August
2015
- May **Graduate Teaching Assistant, UNC at Chapel Hill.**
2015–Present
- Summer **Director, Review for Comprehensive Exam in Methods of Applied Math for PhD Candidacy.,**
2016,2017 UNC at Chapel Hill.
- Spring 2018 **SAMSI Graduate Student Fellow, Stipend and Tuition support for Spring 2018.**

Teaching Experience

- Summer **Graduate Student Instructor, UNC at Chapel Hill .**
2015,Session Math 130,Precalculus Math
1 and 2
- Fall 2015 **Graduate Student Instructor, UNC at Chapel Hill .**
Math 110, College Algebra
- Fall 2015 **Graduate Student Teaching Assistant, UNC at Chapel Hill .**
Grader,Directing Review Sessions for Math 528
Mathematical Methods for the Physical Sciences I

- Spring 2016 **Graduate Student Instructor, UNC at Chapel Hill .**
Math 110, College Algebra
- Summer 2016-Session 2 **Graduate Student Instructor, UNC at Chapel Hill .**
Math 130, Precalculus Math
- Summer 2016 **Director, Review for Comprehensive Exam in Methods of Applied Math f., UNC at Chapel Hill.**
- Fall 2016 **Graduate Student Instructor, Math 118, Modern Math Topics(Math for Non-Science Majors), UNC at Chapel Hill.**
- Fall 2016 **Graduate Student Teaching Assistant, UNC at Chapel Hill .**
Grader, Directing Review Sessions for Math 528
Mathematical Methods for the Physical Sciences I
- Spring 2017 **Graduate Student Teaching Assistant, UNC at Chapel Hill .**
Grader, Directing Review Sessions for Math 529
Mathematical Methods for the Physical Sciences II
- Spring 2017 **Graduate Student Teaching Assistant, UNC at Chapel Hill .**
Grader, Tutoring during the lectures(as a part of interactive teaching module) for Math 383
First Course in Differential Equations
- Summer 2017 **Director, Review for Comprehensive Exam in Methods of Applied Math., UNC at Chapel Hill.**
- Summer 2017 **Graduate Student Instructor, Math 383L, First Course in Differential Equations Laboratory, Course is computational lab component designed to help students visualize ODE solutions in Matlab. Emphasis is on differential equations motivated by Applied Sciences, UNC at Chapel Hill.**
- Summer 2017 **Graduate Student Instructor, Math 528L, Laboratory for Mathematical Methods for the Physical Sciences I (1). Training in the use of symbolic and numerical computing packages and their application to the MATH 528 lecture topics(It is mostly covering linear PDEs), UNC at Chapel Hill.**
- Summer 2017 **Graduate Student Teaching Assistant, Math 294, Undergraduate Seminar in Math., UNC at Chapel Hill.**
- Fall 2017 **Graduate Student Teaching Assistant, UNC at Chapel Hill .**
Grader for Math 528
Mathematical Methods for the Physical Sciences I
- Fall 2017 **Graduate Student Instructor, UNC at Chapel Hill .**
Math 119, Introduction to Mathematical Modeling (Provides an introduction to the use of mathematics for modeling real-world phenomena in a nontechnical setting. Models use algebraic, graphical, and numerical properties of elementary functions to interpret data. This course is intended for the nonscience majors.)

Computer skills

Basic Python, JAVA, PASCAL, LABVIEW

Proficient \LaTeX , MATLAB, Linux, Fortran, DATATANK, DATAGRAPH, MATHEMATICA

Honors

- 2018 AMS, Sectional Meeting Travel Award(\$250)
- 2018 USC, Travel award for 9th Annual Graduate Student Mini-conference in Computational Mathematics
- 2017 Graduate Student Transportation Grant for SIAM-Conference on Analysis of PDEs(SIAMPD17) University of North Carolina at Chapel Hill, Chapel Hill, NC(\$400)
- 2017 AMS Travel Award for JMM 2017(up to\$500)
- 2017 APS DFD Travel Award (\$500)
- 2017 Tanner Graduate Teaching Assistant Award for excellence in Undergraduate Teaching (\$5K)
- 2015(Fall) Graduate Student Travel Grant, Used to attend the enrolled graduate course, Math 735, at Duke University (\$100)

- July 27-August 7, 2015 Summer School grant of MSRI, Summer School at MSRI on Incompressible Fluid Flows at High Reynolds Number, Nominated by the department for this grant
- April 11-12, 2015 AWM travel grant, Used to attend AWM Research Symposium in Maryland (\$200)
- 2012(Fall)-2015(Spring) Ministry of Education of Republic of Turkey Fellowship for PhD studies in abroad
- 2010-2012 The Scientific and Technological Research Council Of Turkey Scholarship for MSc degree seeking students
- 2006-2010 Marmara University Chancellor Scholarship
- 2006(Spring)-2009(Spring) Marmara University, Math Department Scholarship based on the performance until Senior year

Publications

- Camassa, R., Kilic, Z., and McLaughlin, R. M. "Wall effects on symmetry properties of a random passive scalar.", In preparation
- Camassa, R., Kilic, Z., and McLaughlin, R. M. "On the symmetry properties of a random passive scalar with and without boundaries, and their connection between hot and cold states.", Submitted
- Ozkirisci, N. A., Kilic, Z., and Koc, S. "A Note on Primary Spectrum over Commutative Rings.", Scientific Annals of the Alexandru Ioan Cuza University of Iasi (New series) Mathematics, 2016
- Kilic, Z. "Almost Primary Elements in multiplicative lattices", International Journal of Algebra; 7(18), 881-888, 2013.
- Kilic, Z. "Weakly Primary Elements in multiplicative lattices", International Journal of Algebra; 7(18), 889-894, 2013.
- Kilic, Z., MSc Thesis, "Multiplicative Lattices", 2012.

Presentations

- April'18 Kilic, Z., Camassa, R. and McLaughlin, R. M., "Symmetry breaking in a random passive scalar", AMS Sectional Meeting, Boston University, Boston, MA
- March'18 Kilic, Z., Camassa, R. and McLaughlin, R. M., "Symmetry breaking in a random passive scalar", 42nd SIAM Southeastern Atlantic Sectional Conference, University of North Carolina, Chapel Hill, NC
- February'18 Kilic, Z., Camassa, R. and McLaughlin, R. M., "Symmetry breaking in a random passive scalar", Ninth Annual Graduate Student Mini-conference in Computational Mathematics, University of South Carolina, Columbia (USC), SC
- January'18 Kilic, Z., Camassa, R. and McLaughlin, R. M., "Symmetry breaking in a random passive scalar", JMM 2018, San Diego, California
- December'17 Kilic, Z., Camassa, R. and McLaughlin, R. M., "Symmetry breaking in a random passive scalar", 2017 SIAM(PDE) Meeting, Baltimore, Maryland
- November'17 Kilic, Z., Camassa, R. and McLaughlin, R. M., "Symmetry breaking in a random passive scalar", 2017 APS DFD Meeting, Denver, Colorado
- October'17 Kilic, Z., Camassa, R. and McLaughlin, R. M., "Symmetry breaking in a random passive scalar", 2017 TAGMaC meeting at NC State University, Raleigh, North Carolina
- Kilic, Z., McLaughlin, R. M. and Camassa, R. "Turbulent Transport of a Passive Scalar", 2017 IRIS meeting at UGA, Atlanta, Georgia, Flowing through Mathematics Research, Delivered one of five non-technical fluid dynamics talks meant to introduce the audience to the field and to show potential interdisciplinary applications

Ozkirisci, N.A., Oral, K.H., Tekir, U. and Kilic, Z. "On the Primary Spectrum of Commutative Rings.", ICAAMM 2012 at Yildiz Technical University, Istanbul

Kilic, Z. and Tekir, U. "Semiprime elements in multiplicative lattices", ICAAMM 2012 at Yildiz Technical University, Istanbul

Professional Development and Training

- GRAD 811 , *Communicating In The American Classroom For International Students II.2016(Spring).*, Elective Course, designed for International Graduate Teaching Assistants, offered by the Graduate School of the University of North Carolina, as part of PITAP - Preparing International Teaching Assistants Program. This program is a sequence of two , one semester long courses; GRAD 810 and GRAD 811, aiming for preparing International graduate students for American classrooms and enhancing their skills for more effective teaching and improving their communication skills both in the classroom and outside the classroom. Besides improving teaching skills, many different teaching techniques were implemented through microteachings for more engaged teaching and basics of getting ready for the job market were covered. University of North Carolina - Chapel Hill, NC. Spring semester, 2016..
- GRAD 810 , *Communicating In The American Classroom For International Students I.2014(Fall).*, This is mostly focused on defeating the language barrier through improving pronunciations and more practice with different teaching techniques at basic levels. Many useful tips for more effective interaction with students were parts of this course covered through online materials..
- Math 920 , *Teaching Assistants Teaching Seminar I.2012(Fall).*, Required one semester long course , specific to Math Department. Preparing graduate students for teaching and holding recitations by means of considering different case studies to make sure everyone has a good idea about the pedagogical way of handling different situations both inside and outside the classroom, University of North Carolina - Chapel Hill, NC. Fall semester, 2012. .
- CLIM Sp18 , *Data Assimilation in Dynamical Systems*, The course will cover statistical and computational methods for the analysis of data arising in climate research. Specific topics will include: Dynamical systems: unstable manifolds and attractors, Lyapunov exponents, sensitivity to initial conditions and concept of predictability. Data assimilation and filtering theory: Bayesian viewpoint Nonlinear Filtering: Particle filtering and sampling methods Advanced topics: parameter estimation, Lagrangian data assimilation, SAMSI, Research Triangle Park, NC, Spring Semester, 2018. .

Invited Talks

- January, 2018 **Kilic, Z., Camassa, R. and R. M. McLaughlin**, "*Symmetry breaking in a random passive scalar*", *Elston Lab Meeting, Department of Pharmacology, University of North Carolina at Chapel Hill, Chapel Hill, NC.*
- November, 2017 **Kilic, Z., Camassa, R. and R. M. McLaughlin**, "*Symmetry breaking in a random passive scalar*", *Graduate Mathematics Association Seminar, University of North Carolina at Chapel Hill, Chapel Hill, NC.*
- December, 2016 **Kilic, Z.**, "*Doing Fascinating Math*", *Women in Engineering-IEEE YTU Chapter Monthly Seminars Yildiz Technical University, Istanbul .*

Languages

Turkish **Native Speaker**
English **Fluent**

Services

- NC Science Expo from 2013 to 2017

- Running some Math related Demos at the Joint Fluids Lab

- Interpreter for Community Outreach Group in Raleigh
- Helping Syrian Refugees as a Translator since March 2017

Affiliations

- Joint Applied Mathematics and Marine Sciences Fluids Lab
- The Statistical and Applied Mathematical Research Institute, Durham, NC
- American Mathematical Society
- Association for Women in Mathematics
- Global Graduate Students Advisory Board
- Society for Industrial and Applied Mathematics(SIAM)
- Women in Science and Engineering
- Graduate Women in Science and Engineering
- SAMSI Graduate Student Fellow as of Spring 2017
- SIAM UNC Chapter President as of 2017(one of the co-founders of the chapter)

Mentorship

- 2015- 1st year Graduate Student Mentor
- 2017- Irem Tankul, she is a junior electrical engineering student at Marmara University
- 2016- Senior,High School Student, Keagan Durovich,currently ,he is a freshman at Quest University Canada majoring in engineering

References

- Research References Professors Richard M. McLaughlin, Roberto Camassa and M. Gregory Forest
- Teaching References Dr. Daniel Harris (for Teaching assistant duties),Professor Laura Miller(for Graduate Instructor duties)