

# Dr. Jillian Stupiansky

Associate Professor of Mathematics | John Carroll University  
Associate Chair | Department of Math, Computer Science, and Data Science  
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## Curriculum Vitae

### Education

- **Ph.D. in Mathematics**, University of Florida, *2013*  
Thesis: Mathematical modeling of citrus greening  
Advisor: Dr. Sergei S. Pilyugin
- **M.S. in Mathematics**, University of Florida, *2009*
- **B.S. in Mathematics**, Birmingham-Southern College, *2007*  
Thesis: The math behind the BCS football ranking system  
Advisor: Dr. Doug Riley

### Professional Employment

- **Associate Professor of Mathematics**, *2022 - present*  
**Associate Chair, Dept of Math, Computer Science, and Data Science**, *2022 - present*  
John Carroll University, University Heights, OH
- **Associate Professor of Mathematics**, *2019 - 2022*  
**Assistant Professor of Mathematics**, *2014 - 2019*  
University of North Alabama, Florence, AL
- **Assistant Professor of Mathematics**, *2013 - 2014*  
Westminster College, Fulton, MO
- **Teaching Assistant**, *August 2007 - April 2013*  
University of Florida, Gainesville, FL
- **Graduate Research Assistant**, *Spring 2011*  
*Funded by Emerging Pathogens Institute*, University of Florida, Gainesville, FL
- **Graduate Research Assistant**, *Summers 2010, 2011, 2012*  
*Funded by NSF Grant DMS-0818050; PI: S. Pilyugin*, University of Florida, Gainesville, FL

### Professional Development

- **Project NExT Fellow**, *2013 - 2014*

### Courses Taught

#### *John Carroll University*

- MT 130 Applied Calculus
- MT 135 Calculus and Analytic Geometry I

#### *University of North Alabama*

- MA 105 Introduction to Finite Mathematics
- MA 110 Finite Mathematics
- MA 121 Calculus for Business and Life Science I (*developed online course*)
- MA 125, 125H Calculus I, Calculus I Honors
- MA 126 Calculus II
- MA 147 Elementary Statistics (*course coordinator*)
- MA 325 Foundations of Mathematics

- MA 331 Linear Algebra with Proof
- MA 345 Applied Statistics I
- MA 355 Differential Equations
- MA 395 Characterizing DNA Exceptions (*special topics course*)
- MA 471 Applied Mathematics
- MA 491 Senior Seminar: Math in Industry (*special topics course*)
- MA 491 Senior Seminar: Applied Research Methods (*ind. study special topics course*)
- MA 611 Applied Mathematics for the Teacher (*graduate course; developed online course*)
- MA 295, 395, 495 Directed Research (*independent study*)

### ***Westminster College***

- MAT 114 Elementary Statistics
- MAT 214 Calculus II
- MAT 310 History of Mathematics
- MAT 331 Mathematics Seminar

### ***University of Florida***

- Instructor
  - MAC 1105 Basic College Algebra
  - MAC 1114 Trigonometry
- Discussion Leader
  - MGF 1106 Mathematics for Liberal Arts Majors I
  - MAC 1147 Precalculus with Trigonometry
  - MAC 2233 Survey of Calculus I
  - MAC 2311 Calculus I
  - MAC 2312 Calculus II
  - MAC 2313 Calculus III

### ***Birmingham-Southern College***

- Teaching Assistant
  - MA 150 Introduction to Mathematical Modeling

### **Refereed Articles**

- Kimbrough, L. J., Figueroa, C. E., Stupiansky, J. C., Jones, S. R., “Pressure Drop of Respirable Dust Cyclone Samplers”, *International Journal of Occupational Hygiene*, Tehran University of Medical Sciences, Vol 11 No 2, pp. 114-125, *August 2019*.
- J. Jerkins and J. Stupiansky, “Mitigating IoT insecurity with inoculation epidemics”, *Proceedings of the ACMSE 2018 Conference*, ACM, pp. 4:1-4:6, *March 2018*.
- K. Jacobsen, J. Stupiansky, and S. Pilyugin, “Mathematical modeling of citrus groves infected by Huanglongbing”, *Mathematical Biosciences and Engineering*, 10(3): 705-728, *June 2013*.

### **Works in Preparation**

- J. Stupiansky and J. Stovall, “Modeling the devastation of hemlock trees in the Great Smoky Mountains”.

### **Works in Progress**

- D. Schmidt, J. Stupiansky, and B. Steffen, “A depositional and paleontological analysis of a fossil-bearing unit within the Blackwater Draw Formation, Plainview, Texas”.

## Student Research

- M. Orr, “Analysis of Golf Course Features and their Impact on Scores” (Spring 2022)
- T. Clayton, “Time Series Analysis of COVID-19 Cases” (Spring 2021)
- P. Ewoltdt, “Indicators of Success in College Calculus” (Fall 2020)
- D. Johnston and M. Morris, “Modeling the Spread of Tuberculosis” (Fall 2019)
- E. Fancher, A. Mosley, and J. Tittle, “The Math behind March Madness” (Spring 2018)
- L. Mason, “Modeling the Slackwater Darter Population” (Fall 2017 - Spring 2018)
- A. McGee, “The Spread Process of Reinvading Otters” (Fall 2015)

## Selected Presentations

- *Modeling the Devastation of Hemlock Trees in the Great Smoky Mountains*  
Mathematical Association of America Southeastern Section Annual Meeting, Cleveland, TN  
J. Stupiansky and J. Stovall (March 2019)
- *Mitigating IoT insecurity with inoculation epidemics*  
Association for Computing Machinery Southeast Conference, Richmond, KY  
J. Jerkins\* and J. Stupiansky (April 2018)
- *Mitigating IoT insecurity with inoculation epidemics*  
Mathematical Association of America Southeastern Section Annual Meeting, Clemson, SC  
J. Jerkins and J. Stupiansky\* (March 2018)
- *Modeling the devastation of hemlock trees in the Great Smoky Mountains*  
Mathematical Association of America MathFest, Chicago, IL  
J. Stupiansky\* and J. Stovall (August 2017)
- *Statistical analysis of sedimentological and paleontological data*  
Mathematical Association of America MathFest, Columbus, OH  
D. Schmidt, J. Stupiansky\*, and B. Steffen (August 2016)
- *Stat. analysis of sedimentological and paleontological data from Blackwater Draw Formation*  
Mathematical Association of America Southeastern Section Annual Meeting, Birmingham, AL  
D. Schmidt, J. Stupiansky\*, and B. Steffen (March 2016)
- *Depositional interpretation of a fossil-bearing stratum using integrated sedimentological and paleontological data*  
Geological Society of America Annual Meeting, Baltimore, MD  
D. Schmidt\*, J. Stupiansky, and B. Steffen (November 2015)
- *Introduction to mathematical modeling* (invited talk)  
Truman State University Mathematical Biology Colloquium, Kirksville, MO (February 2014)
- *An introduction to citrus greening and a host-vector model with roguing*  
Society for Mathematical Biology Annual Meeting, Knoxville, TN (July 2012)
- *Mathematical modeling of citrus greening* (poster)  
Mathematical Methods in Systems Biology and Population Dynamics Workshop, Muizenberg, South Africa (January 2012)
- *Mathematical modeling of citrus greening* (poster)  
Spatio-Temporal Dynamics in Disease Ecology and Epidemiology Workshop, Columbus, Ohio  
J. Stupiansky\* and K. Jacobsen\* (October 2011)
- *Mathematical modeling of citrus greening*  
University of Florida Conference on Computational and Systems Biology, Gainesville, FL  
(April 2011)

- *The math behind the BCS football ranking system*  
Birmingham-Southern College Honors Day, Birmingham, AL  
J. Stupiansky\* and K. Baltensperger\* (May 2006)
- *Predator-prey models*  
Western Carolina University Smoky Mountain Undergraduate Research Conference on the History of Mathematics, Cullowhee, NC (April 2006)

\* indicates presenter(s) of joint work

### Other Selected Conferences and Workshops Attended

- Data Think Tank for Sports Analytics, Virtual Working Group (beg. Mar 2022 - *upcoming*)
- UNA Workshop for Faculty Leaders & Potential Leaders, Florence, AL (Mar 2022 - *upcoming*)
- Get in the Game: Sports Analytics Research and its Outlets, Virtual Minicourse (Feb 2022)
- HudsonAlpha Characterizing Our DNA Exceptions Workshop, Huntsville, AL (May 2018)
- Society for Mathematical Biology Annual Meeting, Salt Lake City, UT (Jul 2017)
- Preparation for Industrial Careers in Math Data Analytics Workshop, Provo, UT (May 2017)
- Mathematical Association of America MathFest, Washington, DC (Aug 2015)
- Preparation for Industrial Careers in Math Workshop, Provo, UT (May 2015)
- University of Alabama Women in STEM Experience, Tuscaloosa, AL (Jan 2015)
- Mathematical Association of America MathFest, Portland, OR (Aug 2014)
- Joint Mathematics Meetings, Baltimore, MD (Jan 2014)
- Mathematical Association of America MathFest, Hartford, CT (Aug 2013)
- Joint Mathematics Meetings, San Diego, CA (Jan 2013)

### Selected Grants for Research, Teaching, and Professional Development

- 2018: University of North Alabama Research Grant  
\$1357 to attend HudsonAlpha CODE (Characterizing Our DNA Exceptions) training workshop in Huntsville, AL and offer corresponding course
- 2017: PIC Math (Preparation for Industrial Careers in Mathematics)  
Acceptance and full travel grant to attend PIC Math Data Analytics workshop in Provo, UT (funded by MAA and CURM)
- 2016: Elizabeth Gaines Mann Professorship of Mathematics, University of North Alabama  
\$5075 to conduct research and attend conferences
- 2015: PIC Math (Preparation for Industrial Careers in Mathematics)  
\$6500 to attend training workshop in Provo, UT and offer corresponding course (funded by NSF, MAA, and SIAM)

### Research Permits

- 2017-2019: National Park Service Permit  
Conduct research within Great Smoky Mountain National Park

### **Selected University Service - John Carroll University**

- Core Curriculum Committee, STEM Representative, 2022-present

### **Selected University Service - University of North Alabama**

- Chair, Math Department Tenure and Promotion Committee, 2021
- Chair, Math Department Hiring Committee, 2021-2022
- Coordinator, MA 147 Elementary Statistics, 2016-2022
- Math Department Advising Liaison, 2020-2022
- Faculty Senate, 2018-2022
- Math Major Committee, 2018-2022
- Co-chair, Math Department Scholarship Committee, 2016-2022
- Division I Transition Team, 2018-2022
- Athletics Committee, 2021-2022
- Senate Faculty Affairs Committee, 2021-2022
- Undergraduate Readmissions Committee, 2016-2021 (Chair, 2020)
- Scorekeeper, UNA Three-Minute Thesis Competition, 2015-2019
- Engineering Technology Faculty Search Committee, 2018
- Organizer, Mathematics Graduate School Panel, 2018
- Leader, Forensic Trigonometry Lesson at CPR<sup>2</sup> Summer Institute, 2017, 2018
- Math Department General Education Committee, 2015-2017
- Chair, Committee for Academic Affairs Award for Outstanding Advising, 2016
- College of Arts and Sciences Mission Statement Committee, 2016

### **Professional Service**

- 2017: Chair, Contributed Session on Classroom Teaching and Pedagogy at Mathematical Association of America Southeastern Section Annual Meeting
- 2017: Judge, Student Poster Session at Society for Mathematical Biology Annual Meeting
- 2016: Referee: PRIMUS (Problems, Resources, and Issues in Mathematics Undergraduate Studies)
- 2016: Judge, Alabama Junior Academy of Science State Paper Reading Competition
- 2014: Judge and Moderator, Student Presentations at Kennesaw Mountain Undergraduate Mathematics Conference
- 2014: Judge, Undergraduate Poster Session at Joint Mathematics Meetings

### **Technical Skills:**

- L<sup>A</sup>T<sub>E</sub>X
- Mathematica, MATLAB, R
- MyMathLab, WebAssign, Hawkes Learning
- Canvas, Moodle