

- CONTACT INFORMATION** Department of Mathematics *Email:* daniasheaib@ou.edu
University of Oklahoma *Web:* <http://www2.math.ou.edu/~dsheaib/>
601 Elm Ave. *Phone:* (405) 795-3949
Norman, Oklahoma 73019
- EDUCATION** **Ph.D., Mathematics**, University of Oklahoma, USA, Expected May 2019
Thesis Advisors: Alexander Grigo and Nikola Petrov
- M.A.**, Mathematics, University of Oklahoma, USA, December 2015
- M.Sc.**, Mathematics, American University of Beirut (Beirut, Lebanon), June 2009
Dissertation: Mathematical and Computational Models for Population and Epidemic Studies
Advisor: Nabil Nassif
- B.Sc.**, Mathematics, Beirut Arab University (Beirut, Lebanon), June 2006
- RESEARCH INTERESTS** Applications of Dynamical Systems, Mathematical and Computational Modeling, Mathematical Biology, Population Dynamics, Fluid Mechanics, Probability Theory and Stochastic Processes
- EMPLOYMENT** **University of Oklahoma**, Norman, Oklahoma, USA
Graduate Teaching Assistant, Department of Mathematics, August 2011 – present
- Argonne National Laboratory**, Lemont, Illinois, USA
National Science Foundation Mathematical Sciences Graduate Internship, June 2017 – August 2017
- Beirut Annunciation Orthodox College**, Beirut, Lebanon
Mathematics and Science teacher, Mathematics and Science Division, September 2010 – June 2011
- American University of Beirut**, Beirut, Lebanon
- Research Assistant, Department of Mathematics, July 2008 – July 2011
 - Teaching Assistant, Department of Mathematics, January 2010 – June 2010
 - Graduate Assistant, Department of Mathematics, September 2006 – June 2008
- AWARDS AND FELLOWSHIPS** **Nancy L. Mergler Dissertation Completion Fellowship**, Fall 2018 – Spring 2019
Granted annually by the Provost's Office to seven most outstanding dissertation proposals from PhD candidates in Norman-Campus programs.
- Provost's Certificate of Distinction in Teaching**, Fall 2015, Spring 2017 and Spring 2018
Awarded by the Office of the Senior Vice President and Provost to the top ten percent of all graduate teaching assistants across Norman campus based on student evaluations.
- Harold Huneke Endowed Scholarship**, April 2018
Awarded by the Department of Mathematics to PhD students for their excellent performance as graduate teaching assistants.
- Richard V. Andree Memorial Scholarship**, April 2014 and April 2017
Awarded by the Department of Mathematics to PhD students for their academic excellence and department and university citizenship.
- Mathematics Graduate Fellowship**, Fall 2015 – Spring 2017
Special fellowship awarded by the Department of Mathematics to the most promising and dedicated PhD students.

Nancy Scofield Hester Mathematics Scholarship, April 2015

Awarded by the Department of Mathematics to support the academic progress of PhD students.

PUBLICATIONS

N. Nassif, D. Sheajib and G. El Jannoun. *A Simulation Model for the Physiological Tick Life Cycle.* In: Pinto A., Zilberman D. (eds), Springer Proceedings in Mathematics & Statistics: Modeling, Dynamics, Optimization and Bioeconomics III, 224: 273–284, 2018.

N. Nassif and D. Sheajib. *Spectral Methods for Scalar Age-Structured population Models.* In: Brock F., Saleeby E. (eds), Proceedings of NDU Conference: Analysis and Computational Mathematics, 103–123, 2009.

SUMMER SCHOOLS

Stochastic Partial Differential Equations. MSRI, Berkeley, California, July 7–18, 2014

Houston Summer School on Dynamical Systems. University of Houston, Houston, Texas, May 13–21, 2013

TEACHING EXPERIENCE

University of Oklahoma, Norman, Oklahoma

Instructor of Record:

- Calculus and Analytic Geometry II : Summer 2018
- Calculus and Analytic Geometry III: Summer 2016
- Calculus and Analytic Geometry I: Summer 2015, Spring 2016
- Pre-Calculus for Business, Life, and Social Sciences: Fall 2013

Discussion Session Leader:

- Calculus and Analytic Geometry I: Fall 2012, Spring 2013, Fall 2015, Fall 2016, Spring 2017, Spring 2018
- Calculus and Analytic Geometry II: Fall 2017
- Differential and Integral Calculus II (accelerated Honors): Spring 2015
- Differential and Integral Calculus I (accelerated): Fall 2014
- Differential and Integral Calculus III (accelerated): Spring 2014

Grader:

- Introduction to Partial Differential Equations: Summer 2014
- Introduction to Ordinary Differential Equations: Fall 2011
- Linear Algebra I: Fall 2011

American University of Beirut, Beirut, Lebanon

Teaching Assistant:

- Introductory Partial Differential Equations: Fall 2008
- Discrete Mathematics and Numerical Analysis: Fall 2006, Spring 2007, Fall 2007, Spring 2009

Undergraduate Tutoring and Grading:

- Calculus I, II, III: Fall 2006, Spring 2007, Fall 2007, Spring 2008
- Discrete Mathematics and Numerical Analysis: Fall 2006, Spring 2007, Fall 2007, Spring 2008
- Numerical Analysis programming assignments (Matlab): Fall 2007

TRAINING

Departmental Endorsement in Preparation for Teaching Undergraduate Mathematics – the “teaching certificate“ awarded to students who have expressed special interest in teaching mathematics at the undergraduate level, have taught college mathematics courses and have completed at least six semester hours of coursework focused on teaching and learning of undergraduate mathematics, Mathematics Department, University of Oklahoma, May 2017

Teach College Mathematics – a one-credit-hour course to prepare GTAs for the teaching setting at the undergraduate level, Mathematics Department, University of Oklahoma, Fall 2012

International Teaching Assistant Training Program – a program tailored toward international students who will be graduate teaching assistants, University of Oklahoma, August 2011

**OTHER
TEACHING
ACTIVITIES**

Graduate Teaching Assistant Elite Retention Squad – a pilot group of GTAs chosen by the Office of the Provost at the University of Oklahoma to discuss strategies for increasing student retention rates, University of Oklahoma, March 2, 2016

Panel Discussion on Adventures in TA Land – a panel organized by the Resources for Alternative Methods in Pedagogy for University Professionals (RAMP UP) Seminar, Mathematics Department, University of Oklahoma, September 22, 2015

**CONFERENCE
AND
INVITED
TALKS**

“Linear Stability Analysis of a Hydrodynamic Problem”, Joint Mathematics Meeting 2019, Baltimore, Maryland, January 16-19, 2019

“How Soon is Now? Dynamics and Phenomena”, Bowdoin College, Brunswick, Maine, February 6, 2018

“Introduction to Mathematical Modeling and Dynamical Systems”, Math Fest, University of Oklahoma, Norman, Oklahoma, February 24, 2017

“Mathematical and Computational Models for Population and Epidemic Studies”, Analysis and Convexity Seminar, University of Oklahoma, Norman, Oklahoma, November 26, 2012

“Modeling Approach for the Physiological Tick Life Cycle”, The second annual meeting of the Lebanese Society for Mathematical Sciences (LSMS-2011), Lebanese American University. Beirut campus, Lebanon, April 1-2, 2011

“Mathematical Modeling for the Physiological Tick Life Cycle”, CAMS Meeting, American University of Beirut. Beirut, Lebanon, May 19, 2010

“Numerical Solutions of Age-Structured SIR Epidemic Models”, Mathematics Workshop, Beirut Arab University. Dibbiyeh campus, Lebanon, March 26, 2009

“Variational Formulations for Age-Structured Population and SIR Epidemic Models”, Symposium on Status and Perspectives for Future Lebanon-Mediterranean Research Cooperation in Mathematical Sciences, American University of Beirut. Beirut, Lebanon, January 16-17, 2009

“Variational Formulations for Age-Structured SIR Epidemic Models”, Conference on Analysis, Computational Mathematics and Statistics, Notre Dame University. Louaize, Lebanon. The result of this conference is a paper published by Research Publishing Services entitled “On Spectral Methods for Scalar Age-Structured Population Models”, September 18-19, 2008

“Computational Models for Age-Structured SIR Epidemic Models”, Workshop on Computational models and health science, American University of Beirut. Beirut, Lebanon, June 7, 2008

**DEPARTMENTAL
SEMINAR
TALKS**

“General Expanding Maps and Their Spectrum”, Dynamical Systems Working Seminar, November 8, 2016

“TED Talk on Issues in Math Education: A Dynamical Approach to Formal Conception”, Undergraduate Mathematics Curriculum & Pedagogy Seminar, May 2, 2016

“Numerical Solutions to SDE’s”, Dynamical Systems Working Seminar, December 8, 2015

“Euler method for ODEs and SDEs”, Dynamical Systems Working Seminar, December 1, 2015

“Stochastic Integrals with respect to Brownian Motion I,II”, Dynamical Systems Working Seminar, October 20, 27, 2015

“Discussion of Eisenberg and Dreyfus paper on the Reluctance to Visualize in Mathematics”, Undergraduate Mathematics Curriculum & Pedagogy Seminar, October 19, 2015

“Stochastic Integration and Ito’s Formula”, Dynamical Systems Working Seminar, October 13, 2015

“Variational Principle and Hamilton-Jacobi Equations I, II, III”, Dynamical Systems Working Seminar, February 4, 11, 18, 2015

“A Slow-Fast Invitation to Geometric Singular Perturbation Theory”, Analysis and Convexity Seminar, April 28, 2014

“Geometric Singular Perturbation in View of Fenichel Theory I, II”, Dynamical Systems Working Seminar, November 7, 21, 2013

**CONFERENCES
AND
WORKSHOPS**

Midwest/McGehee Dynamical Systems Conference. University of Minnesota, Minneapolis, Minnesota, November 1–4, 2018

The 4th Annual Meeting of SIAM Central States Section. University of Oklahoma, Norman, Oklahoma, October 5–7, 2018

The 2018 Teaching Symposium: Strategies for engaged student learning in undergraduate STEM courses. Maine Center for Research in STEM Education (RISE), University of Maine, Orono, Maine, June 27, 2018

KUMUNU (Universities of Kansas, Missouri and Nebraska) Conference in PDE, Dynamical Systems and Applications. University of Kansas, Lawrence, Kansas, April 21–22, 2015

38th Midwest Probability Colloquium. Northwestern University, Evanston, Illinois, October 13–15, 2016

KUMU (Universities of Kansas and Missouri) Conference in PDE, Dynamical Systems and Applications. University of Missouri, Columbia, Missouri, April 23–24, 2016

4th Semi-Annual Oklahoma Research in Undergraduate Mathematics Education (RUME) Conference. University of Oklahoma, Norman, Oklahoma, March 26, 2016

Eighteenth Annual Legacy of R. L. Moore Conference: Empowering with Inquiry-Based Learning. Austin, Texas, June 25–27, 2015

KUMU (Universities of Kansas and Missouri) Conference in PDE, Dynamical Systems and Applications. University of Kansas, Lawrence, Kansas, April 18–19, 2015

1st Semi-Annual Oklahoma Research in Undergraduate Mathematics Education (RUME) Conference. University of Oklahoma, Norman, Oklahoma, September 20, 2014

The Fourth Oklahoma PDE Workshop. Oklahoma State University, Stillwater, Oklahoma, October 26–27, 2013

First International Conference on Dynamics of Differential Equations. Georgia Institute of Technology, Atlanta, GA, March 16–20, 2013

Tutorials on Dynamics of Differential Equations. Georgia Institute of Technology, Atlanta, GA, March 15, 2013

AMS Spring Southeastern Sectional Meeting. University of Mississippi, Oxford, MS, March 1–3, 2013

UNIVERSITY SERVICES

Departmental Committees

- Search Committee for a First Year Mathematics Director, August 2016 – December 2016
- Undergraduate Committee, August 2013 – May 2014

Other Services

- Invited Member on the Student-to-Student Orientation Panel, August 8, 2018
- Math Day Volunteer, Falls of 2011 – 2018
- Organizer of the Mathematics Graduate Student Seminar, Fall 2014 – Spring 2015
- Vice president of the Mathematics Graduate Student Association, August 2013 – January 2014
- Co-organizer of the English language training seminars for international students at the Department of Mathematics, Fall 2013

PROFESSIONAL MEMBERSHIP

Society for Industrial and Applied Mathematics

American Mathematical Society

OTHER ACTIVITIES

Chair, Fluid Mechanics Session, *Joint Mathematics Meeting 2019*, Baltimore, Maryland, January 16, 2019

Member, Organizational Committee, *The 4th Annual Meeting of SIAM Central States Section*, University of Oklahoma, Norman, Oklahoma, October 5–7, 2018

President, Lebanese Student Association, University of Oklahoma, Norman, Oklahoma, August 2015–July 2016

Assistant to the chair, Organizational Committee, *Lebanese Society for Mathematical Sciences first annual meeting*, Lebanese University, faculty of sciences, Fanar campus, Mount Lebanon, Lebanon, January 2010

PROGRAMMING EXPERIENCE

Python, MATLAB, MATHEMATICA, C and L^AT_EX

LANGUAGES

Arabic (native), English (fluent), French (working command)

REFERENCES

Alexander Grigo

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