

**DR. ANA-MARIA CROICU**  
**PROFESSOR OF MATHEMATICS**  
**Kennesaw State University (KSU)**

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**Webpage: <http://facultyweb.kennesaw.edu/acroicu/index.php>**

**EDUCATION**

2000-2005	<b>Doctoral degree</b> , Florida State University, USA, Applied Mathematics
1996-2001	<b>Doctoral degree</b> , Babes-Bolyai University, Romania, Pure Mathematics
1994-1995	<b>Master's degree</b> , Technical University of Cluj-Napoca, Romania, Electrical Engineering
1990-1995	<b>Bachelor's degree</b> , Babes-Bolyai University, Romania, Mathematics
1989-1994	<b>Bachelor's degree</b> , Technical University of Cluj-Napoca, Romania, Electrical Engineering

**PROFESSIONAL EXPERIENCE**

Fall 2018-present	<b>Professor of Mathematics</b> , Kennesaw State University, USA
Fall 2017-present	<b>Graduate Faculty</b> , Kennesaw State University, USA
Fall 2009-present	<b>Courtesy Professor</b> , Florida State University, USA
Fall 2011-Fall 2018	Associate Professor of Mathematics, Kennesaw State University, USA
Fall 2006-Fall 2011	Assistant Professor of Mathematics, Kennesaw State University, USA
Fall 2005-Fall 2006	Research Associate, School of Computational Science, Florida State University, USA
Fall 2002-Fall 2005	Teaching Assistant, Department of Mathematics, Florida State University, USA
Summer 2000-Fall 2002	Research Assistant, School of Computational Science, Florida State University, USA
Fall 1995-Summer 2002	Assistant Professor, Department of Mathematics, Technical University of Cluj-Napoca, Romania

**MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS**

American Mathematical Society (AMS)  
Society for Industrial and Applied Mathematics (SIAM)  
Pi Mu Epsilon (National Mathematics Honor Society)

**HONORS, AWARDS, AND FELLOWSHIPS**

Spring 2017 Department of Mathematics nominee for the College of Science and Mathematics  
*Distinguished Scholarship Award*

Fall 2016 KSU Nominee and Finalist to the *USG 2017 Felton Jenkins, Jr. Hall of Fame Faculty Awards* (Teaching)

Fall 2015 *KSU Foundation Distinguished Teaching Award* Recipient

2014-2019 National Science Foundation (NSF), USA: “*Scholarship Program in Science and Mathematics: Supporting the Academic Achievements of Disadvantaged Students*” Award (PI: Ana-Maria Croicu) (Teaching, Supervision and Mentoring)

Fall 2014 Finalist *KSU Foundation Distinguished Teaching Award* Recipient

2013 College of Science and Mathematics nominee for the *Georgia Board of Regents Excellence in Teaching Award for Online Teaching*

Fall 2012 Nominated for the College of Science and Mathematics *Distinguished Teaching Award*

July 2012 NASA Ames Research Center, CA: Research Collaboration

2011-2012 College of Science and Mathematics *Distinguished Teaching Award* Recipient

Fall 2010 Nominated for the College of Science and Mathematics *Distinguished Teaching Award*

June 2010 NASA Ames Research Center, CA: NASA Visiting Scientist Program

Fall 2009 Nominated for the College of Science and Mathematics *Distinguished Scholarship Award*

Fall 2009 Nominated for the College of Science and Mathematics *Distinguished Service Award*

Fall 2009 Mentor-Protégé Award in the College of Science and Mathematics (CSM)

Summer 2009 CSM Hybrid Course Development Award, College of Science and Mathematics

2008-2012 National Science Foundation (NSF), USA: “*Collaborative Research: Efficient High Order Methods for Deterministic and Stochastic Problems in Flow Analysis and Control*” Award (PI: Ana-Maria Croicu) (Research and Creative Activity)

2007-2013 National Science Foundation (NSF), USA: “*Scholarship Program in Science and Mathematics at Kennesaw State University*” Award (PI: Ana-Maria Croicu) (Teaching, Supervision and Mentoring)

2007 2007 Faculty Summer Research Program for College of Science and Mathematics

Summer 1999 Fulbright Scholarship Runner-up for doctoral studies in USA

January 1999 Tempus Fellowship from the European Union at Katholieke Universiteit Leuven, Belgium (Teaching)

June-July 1997 Tempus Fellowship from the European Union at Technical University of Graz, Austria (Teaching)

1992-1995 Merit Award, Babes Bolyai University, Cluj-Napoca, Romania (Undergraduate Student Award)

## **TEACHING, SUPERVISION AND MENTORING**

### **COURSES TAUGHT AT KENNESAW STATE UNIVERSITY (KSU)**

1. MATH 1111, College Algebra
2. MATH 1112 (online), College Trigonometry
3. MATH 1113 (face-to-face), Precalculus
4. MATH 1113 (online), Precalculus
5. MATH 1190, Calculus I

6. MATH 3000, Software of Mathematics
7. MATH 3260, Linear Algebra
8. MATH 3260 (online), Linear Algebra
9. MATH 3261, Numerical Methods
10. MATH 3398, Internship
11. MATH 4400, Directed Study
12. MATH 4490, Special Topics Course on “Numerical Optimization”
13. MATH 4699, Undergraduate Research

## **STUDENT SUPERVISION AT KSU**

### **PhD Student’s Dissertation Committee:**

1. Sergiu Buciumas, Fall 2018 - present

### **Graduate Research Assistants:**

1. Gunjan Garg (MS Construction Management), Fall 2017-Spring 2018
2. Seung Lee (MS Applied Statistics), Fall 2016-Spring 2018
3. Muniza Naqvi (MS Applied Statistics), Fall 2016-Spring 2017
4. Robert Edmund Evans (MS Integrative Biology), Spring 2016
5. John Michael Croft (MS Applied Statistics), Fall 2015-Spring 2016
6. Ossie Buckner (MS Chemical Sciences), Fall 2015

### **Capstone Experience Supervision:**

1. Noah Daleo, project advisor, Fall 2009
2. Jessica Carr, project advisor, Spring 2010
3. Elizabeth Leslie, project advisor, Spring 2010
4. Leroy Farmer, project advisor, Spring 2010
5. Tiara Nesbitt, project advisor, Spring 2010
6. Margesha Patel, project advisor, Spring 2010
7. Jeffrey Peters, project advisor, Spring 2010
8. Morgan Atterberry, Spring 2013

### **Directed Study / Undergraduate Research Supervision:**

1. Noah Daleo, Fall 2009
2. Morgan Atterberry, Spring 2013
3. Joshua Howard, Spring-Fall 2014
4. Samuel King, Fall 2014-Spring 2015
5. Patrick Schambach, Spring 2017

### **Undergraduate Research Presentations:**

1. Noah Daleo, Summer 2009 - Summer 2010: “*Controlling the Spread of a Disease Under The Uncertainty of the Model Parameters*”, Won one of the 30 awards given nation-wide by Mathematical Association of America for undergraduate research at the Joint Mathematics Meetings, San Francisco, CA, 2010
2. Kayla Von Hagel, Spring 2012: “*Access Control Logic*”, Presented at KSU’s 17th Annual Symposium of Student Scholars, 2012

3. Morgan Atterberry, Spring 2013: “*Mathematical Models of Infectious Disease*”, Presented at KSU’s 18th Annual Symposium of Student Scholars, 2013
4. Joshua Howard, Spring-Fall 2014: “Control of Carbon-Dioxide Gas. Preliminary results”, Presented at KSU's 19th Annual Symposium of Student Scholars, 2014
5. Samuel King, Fall 2014 – Spring 2015: “*Introduction to Mathematical Modeling of Ebola Outbreaks*”, Fourth Annual Kennesaw Mountain Undergraduate Mathematics Conference, KSU, October 10-11, 2014
6. Patrick Schambach, Spring 2017: “*Mathematical Analysis of Tumor Growth Models Combining Chemotherapy and Immunotherapy*”, 41st Annual SIAM Southeastern Atlantic Section Conference, March 18 - 19, 2017, Florida State University
7. Patrick Schambach, Spring 2017: “*Mathematical Analysis of Tumor Growth Models Combining Chemotherapy and Immunotherapy*”, Presented at KSU's 22nd Annual Symposium of Student Scholars, 2017

### **High School Student Internship/Research Supervision:**

1. Ethan Bothelo, Magnet Program – Wheeler High School, Fall 2019
2. Blake Law, Magnet Program - Kennesaw Mountain High School, Fall 2019

### **STUDENT ADVISING AT KENNESAW STATE UNIVERSITY**

1. Undergraduate students mentored/advised:
  - Mathematics Majors
  - Applied Mathematics Minors (2007-2016)
  - NSF Scholarship Students (2007-2020)

### **SCHOLARSHIP OF TEACHING; RESEARCH AND CREATIVE ACTIVITY; PROFESSIONAL SERVICE; AND/OR ADMINISTRATION & LEADERSHIP**

### **PUBLICATIONS**

**Under Review Journal Articles: Research and Creative Activity Related: N/A**

### **Work in Progress: Research and Creative Activity Related**

1. **Croicu A.M.**, Botelho E., Mathematical Modeling Using Systems of Differential Equations with Applications in Biology, (2019)
2. **Croicu A.M.**, Law B., Safety and Traffic Efficiency of Roundabouts, All-Way Stops, and Traffic Lights, (2019)
3. **Croicu A.M.**, Hussaini M.Y., Jameson A., Klopfer G., Multi-objective Airfoil Shape Optimization, To be submitted to American Institute of Aeronautics and Astronautics (AIAA) Journal, (2019)  
Impact Factor: **1.207**, SRJ Indicator: **0.88**
4. **Croicu A.M.**, Hussaini M.Y., Jameson A., Klopfer G., Robust Airfoil Optimization Using a Conditional Expected Maximum Value Approach, To be submitted to American Institute of Aeronautics and Astronautics (AIAA) Journal, (2019)  
Impact Factor: **1.207**, SRJ Indicator: **0.88**

## Refereed Journal Articles: Research and Creative Activity Related

5. **Croicu A.M.**, An Optimal Control Mathematical Model to Reduce and Eradicate Anthrax Disease in Herbivorous Animals, *Bulletin of Mathematical Biology*, 81 (1), 235-255, (2019)  
Impact Factor: **1.263**, SRJ Indicator: **0.68**, Cited: 4 Times
6. **Croicu A.M.**, Kolumban J., On a Generalized Hemivariational Inequality on Banach Spaces, *Results in Mathematics*, June 2018, 73:87, (2018)  
Impact Factor: **0.873**, SRJ Indicator: **0.66**, Cited: 2 Times
7. **Croicu A.M.**, Jarrett A., Cogan N., Hussaini M.Y., Short-term Antiretroviral Treatment Recommendations Based on Sensitivity Analysis of a Mathematical Model for HIV Infection of CD4+T Cells, *Bulletin of Mathematical Biology*, (2017)  
Impact Factor: **1.263**, SRJ Indicator: **0.68**, Cited: 3 Times
8. **Croicu A.M.**, Optimal Control of a Mathematical Model for the 2014 Ebola Outbreak in West Africa, *Mathematica*, 59 (82) (2017)  
SRJ Indicator: **0.11**
9. **Croicu A.M.**, Short- and Long-Term Optimal Control of a Mathematical Model for HIV Infection of CD4+T Cells, *Bulletin of Mathematical Biology*, 77 (2015), 2035-2071  
Impact Factor: **1.263**, SRJ Indicator: **0.68**, Cited: 12 Times
10. **Croicu A.M.**, Hussaini M.Y., Jameson A., Klopfer G., Robust Airfoil Optimization Using Maximum Expected Value and Expected Maximum Value Approaches, *American Institute of Aeronautics and Astronautics (AIAA) Journal*, 50 (2012), No. 9, 1905-1919  
Impact Factor: **1.207**, SRJ Indicator: **0.88**, Cited: 12 Times
11. **Croicu A.M.**, Hussaini, M.Y., Multiobjective Stochastic Control in Fluid Dynamics via Game Theory Approach: Application to the Periodic Burgers Equation, *Journal of Optimization Theory and Applications*, 139 (2008), 501-514  
Impact Factor: **1.289**, SRJ Indicator: **1.09**, Cited: 2 Times
12. **Croicu A.M.**, Hussaini M.Y., On the Expected Optimal Value and the Optimal Expected Value, *Applied Mathematics and Computation*, 180 (2006), No. 1, 330—341  
Impact Factor: **1.738**, SRJ Indicator: **0.96**, Cited: 6 Times
13. **Croicu A.M.**, Single- and Multiple-objective Stochastic Programming Models with Applications to Aerodynamics, PhD Thesis, Florida State University  
Cited: 4 Times
14. **Croicu, A.M.**, On the Eigenvalue Problem for a Generalized Hemivariational Inequality, *Studia Universitatis Babes-Bolyai Mathematica*, 47 (2002), No.1, 25—42  
Cited: 1 Time
15. **Croicu A.M.**, On a Generalized Hemivariational Inequality on Reflexive Banach Spaces, *Libertas Mathematica*, 22 (2002), 17—31  
Cited: 2 Times
16. **Croicu, A.M.**, Computation of Nash Equilibria: A Gradient-type and Relaxation-type Method, *Automation, Computers and Applied Mathematics*, 8 (1999), No. 1-2, 44—60  
Cited: 3 Times

### **Non-Refereed Journal Articles: Research and Creative Activity Related**

17. **Croicu, A.M.**, Ciupa, R., Gasoline Injector Numerical Variational Model by the Finite Element Method, *Acta Technica Napocensis*, 41 (1998), 223—228
18. **Croicu, A.M.**, Ciupa, R., Descending Methods Applied in the Pole Shape Optimization of an Electromagnet, *Acta Technica Napocensis*, 39 (1996), No. 2, 139—144
19. **Croicu, A.M.**, Ciupa R., The Optimization of an Electromagnet by the Gradient Method, *Acta Electrotehnica Napocensis*, 36 (1995), No.1, 75—77

### **Refereed Chapters in Books: Teaching, Supervision and Mentoring Related**

20. Multiple Authors from Technical University of Cluj-Napoca, including **Croicu, A.M.**, In: *Teste Grila de Mathematica* (translation: “Multiple Choice Mathematics Tests”), UTPRES Technical University Cluj-Napoca, Romania, 1999

### **Non-Refereed Proceedings: Research and Creative Activity Related**

21. **Croicu, A.M.**, Ciupa R., Optimization in Electrotechnics through Descending Methods. Examples, In: *CAD in Electromagnetism and Electrical Circuits*, 1997 (102—107)

### **Other published works:**

22. Lepadatu, D., **Croicu, A.M.** “Year of Romania at Kennesaw State University”. *Romanian Times*. Vol. 250, November 2010.

## **PRESENTATIONS**

### **Refereed Conference Presentations: Research and Creative Activity Related**

1. *NSF Scholarship in Science and Mathematics at Kennesaw State University*, **Croicu, A.M.**, Joint Mathematics Meetings, January 15-18, 2020 (Off Campus, Poster Presentation)
2. *NSF Scholarship in Science and Mathematics at Kennesaw State University*, **Croicu, A.M.**, Joint Mathematics Meetings, January 16-19, 2019 (Off Campus, Poster Presentation)
3. *An Optimal Control Model to Reduce and Eradicate Anthrax Disease in Herbivorous Animals*, Savannah State University, April 12, 2018 (Off Campus, Invited Speaker)
4. *Outbreak or Bio-terrorism? An Optimal Control Model to Reduce and Eradicate Anthrax disease*, **Croicu, A.M.**, Joint Mathematics Meetings, January 10-13, 2018 (Off Campus, Special Session)
5. *NSF Scholarship in Science and Mathematics at Kennesaw State University*, **Croicu, A.M.**, Joint Mathematics Meetings, January 10-13, 2018 (Off Campus, Poster Presentation)
6. *Optimal Control Applied to Anthrax Transmission in Animal Populations*, **Croicu, A.M.**, 41st Annual SIAM Southeastern Atlantic Section Conference, March 18 - 19, 2017, Florida State University (Off Campus, Special Session)
7. *NSF Scholarship in Science and Mathematics at Kennesaw State University. Preliminary Report*, **Croicu, A.M.**, Joint Mathematics Meetings, January 4-7, 2017 (Off Campus, Poster Presentation)

8. *Scholarship Program in Science and Mathematics at Kennesaw State University: Supporting the Academic Achievements of Disadvantaged Students*, Tapu D., **Croicu, A.M.**, The 68th Southeastern Regional Meeting of the American Chemical Society, October 23, 2016, Columbia, SC (Off Campus, Poster Presentation)
9. *What Everyone Ought to Know About Optimal Control Applied in Medicine*, **Croicu, A.M.**, 15th International Conference on Applied Mathematics and Computer Science, July 5-7, 2016, Cluj-Napoca, Romania (International) (Off Campus, **Plenary Speaker**)
10. *Effect of Reproduction Number on Optimal Control of a Mathematical Model for HIV Infection of CD4+ T Cells*, **Croicu, A.M.**, 40<sup>th</sup> Annual SIAM Southeastern Atlantic Section Conference, March 12 - 13, 2016, University of Georgia, Athens (Off Campus, Special Session)
11. *West African 2014 Ebola Virus Outbreak: Mathematical Modelling and Analysis*, **Croicu, A.M.**, International Conference on Nonlinear Operators, Differential Equations and Applications, July 14-17, 2015, Cluj-Napoca, Romania (International) (Off Campus, Invited Speaker)
12. *Mathematical Modeling of 2014 Ebola Virus Outbreak*, Croicu, A.M., 39<sup>th</sup> Annual SIAM Southeastern Atlantic Section Conference, March 20 - 22, 2015, University of Alabama at Birmingham (Off Campus, Special Session)
13. *Control of HIV Infection of CD4<sup>+</sup>T Cells*, Croicu, A.M., Joint International Meeting of the American Mathematical Society and the Romanian Mathematical Society, Alba Iulia, Romania, June 27 - 30, 2013 (International, Special Session)
14. *Control of HIV Infection of CD4<sup>+</sup>T Cells - Preliminary Results*, Croicu, A.M., 37<sup>th</sup> Annual SIAM Southeastern Atlantic Section Conference, March 22 - 24, 2013, Oak Ridge National Laboratory and University of Tennessee-Knoxville (Off Campus, Special Session)
15. *Robust Airfoil Optimization Using Maximum Expected Value and Expected Maximum Value Approaches*, Croicu, A.M., 36<sup>th</sup> Annual SIAM Southeastern Atlantic Section Conference, March 24 - 25, 2012, Shelby Center for Science and Technology, University of Alabama in Huntsville, Huntsville (Off Campus, Special Session)
16. *Higher probability of lower risk in stochastic optimization*, Croicu, A.M., “Probability and Related Aspects”, Alba Iulia, Romania, May 22 - 26, 2012 (International, Special Session)
17. *Robust Airfoil Optimization Using Maximum Expected Value and Expected Maximum Value Approaches*, Croicu, A.M., Workshop on Advances in Computational Mathematics and Engineering, Florida State University, September 28-29, 2012 (Off Campus, Invited Lecture)
18. *Controlling an SIRS Epidemic Model Under Parameter Uncertainty*, **Croicu, A.M.**, International Conference on Nonlinear Operators, Differential Equations and Applications, July 5-8, 2011, Cluj-Napoca, Romania (International) (Off Campus, Invited Lecture)
19. *Challenges of Control/Optimization under Uncertainty*, **Croicu, A.M.**, Joint Mathematics Meetings, January 6-9, 2011, New Orleans, LA, USA (Off Campus, Special Session)
20. *A Non-Stochastic Talk on Stochastic Optimization/Control*, **Croicu, A.M.**, Joint Mathematics Meetings, January 13-16, 2010, San Francisco, CA, USA (Off Campus, Special Session)
21. *Optimal Control /Optimization under Uncertainty in a Nutshell*, **Croicu, A.M.**, The 33rd SIAM Southeastern-Atlantic Section Annual Meeting, Columbia, SC, 2009 (Off Campus, Special Session)
22. *Stochastic Control Problems in Biosciences: A Numerical and Computational Analysis*, **Croicu, A.M.**, International Conference Semi Centennial “Tiberiu Popoviciu”, May 7-10, 2008, Cluj-Napoca, Romania (International, Presentation on Special Session)

23. *Stochastic Optimization in Aerodynamics*, **Croicu, A.M.**, International Workshop on Stochastic Phenomena. 2<sup>nd</sup> Transylvanian Summer School, May 26-31, 2008, Cluj-Napoca, Romania (International, Presentation on Special Session).
24. *A Game Theory Approach in Optimization and Optimal Control. Applications to Fluid Dynamics and Aerodynamics*, **Croicu, A.M.**, International Conference on Nonlinear Operators, Differential Equations and Applications, July 4-8, 2007, Cluj-Napoca, Romania (International, Presentation on Special Session).
25. *Stochastic Optimization Models with Applications to Mechanics, Population Dynamics, Aerodynamics*, **Croicu, A.M.**, Joint Mathematics Meetings, January 12-15, 2006, San Antonio, TX, USA (Off Campus, Special Session)
26. *On the Expected Optimal Value and the Optimal Expected Value*, **Croicu A.M.**, 2005 Fall Southeast Section Meeting, October 15-16, 2005, Johnson City, TN, USA (Off Campus, Special Session)

#### **Non-Refereed Conference Presentations:**

27. *Optimal Control Applied to Anthrax Transmission in Animal Populations*, **Croicu, A.M.**, Workshop on Applied Analysis, May 5-6, 2017, Kennesaw State University (Guest Speaker)
28. *Control of HIV Infection of CD4+T Cells*, **Croicu, A.M.**, Kennesaw Mountain Undergraduate Mathematics Conference, October 11, 2014, Kennesaw State University (Special Session)
29. *Introduction to Mathematical Modeling of Ebola Outbreaks*, **Croicu, A.M.**, Samuel King, Kennesaw Mountain Undergraduate Mathematics Conference, October 11, 2014, Kennesaw State University (Special Session)
30. *Control of Carbon Dioxide Gas in the Atmosphere*, **Croicu, A.M.**, Joshua Howard, 19<sup>th</sup> Annual Symposium of Student Scholars, April 17, 2014, Kennesaw State University (On Campus)
31. *Introduction to Stochastic Control/Optimization*, **Croicu, A.M.**, Lee University, Cleveland, TN, March 31, 2014 (Off Campus, Invited Guest)
32. *Mathematical Models of Infectious Diseases*, **Croicu, A.M.**, Morgan Atterberry, 18<sup>th</sup> Annual Symposium of Student Scholars, April 25, 2013, Kennesaw State University (On Campus)
33. *Mini-Lecture on Robust Design Optimization*, **Croicu, A.M.**, Kennesaw Mountain Undergraduate Mathematics Conference, November 11-12, 2011, Kennesaw State University (On Campus, Special Session)
34. *Mad Money: Is Your Money Safe?(or Constraint Optimization Techniques with Applications to Portfolio Optimization)*, **Croicu, A.M.**, Math Talks, Kennesaw State University, November 20, 2008 (On Campus)
35. *How to Make Inspired Choices in our Random World*, **Croicu, A.M.**, Math Talks, Kennesaw State University, September 20, 2007 (On Campus)
36. *A Flavor of Optimization under Uncertainty*, **Croicu, A.M.**, Colloquium Series, Southern Polytechnic State University, Marietta GA, October 12, 2007 (Invited Talk, Off Campus)
37. *A Non-stochastic Introduction to Stochastic Control*, **Croicu, A.M.**, Math Talks, Kennesaw State University, Kennesaw GA, April 12, 2007 (On Campus)
38. *Stochastic Optimization Models with Applications to Mechanics, Population Dynamics, Aerodynamics*, **Croicu, A.M.**, Workshop on Numerics for Stochastic Differential Equations with Applications, School of Computational Science, Florida State University, Tallahassee FL, February 26-March 2, 2006



39. *Stochastic Optimization Models with Applications to Mechanics, Population Dynamics, Aerodynamics*, **Croicu, A.M.**, University of Tennessee, Knoxville TN, February 21, 2006 (Invited Talk)
40. *Stochastic Optimization Models with Applications to Mechanics, Population Dynamics, Aerodynamics*, **Croicu, A.M.**, University of South Carolina Upstate, Spartanburg SC, February 17, 2006 (Invited Talk)
41. *Stochastic Optimization Models with Applications to Mechanics, Population Dynamics, Aerodynamics*, **Croicu, A.M.**, University of North Carolina at Asheville, Asheville NC, February 13-14, 2006 (Invited Talk)
42. *Stochastic Optimization Models with Applications to Mechanics, Population Dynamics, Aerodynamics*, **Croicu, A.M.**, Kennesaw State University, Kennesaw GA, February 10, 2006 (Invited Talk)
43. *Stochastic Optimization Models with Applications to Mechanics, Population Dynamics, Aerodynamics*, **Croicu, A.M.**, Cleveland State University, Cleveland OH, February 6-7, 2006 (Invited Talk)
44. *Stochastic Optimization Models with Applications to Mechanics, Population Dynamics, Aerodynamics*, **Croicu, A.M.**, University of North Florida, Jacksonville FL, February 3, 2006 (Invited Talk)
45. **Croicu, A.M.**, The 6<sup>th</sup> International Conference on Applied Mathematics and Mechanics, Cluj-Napoca, Romania, September 24-27, 1998 (International, Special Session, Co-organizer)
46. **Croicu, A.M.**, The 5<sup>th</sup> International Conference on Applied Mathematics and Mechanics, Cluj-Napoca, Romania, October 15-20, 1996 (International, Special Session, Co-organizer)

## **GRANTS AND CONTRACTS**

### **Funded Projects as PI:**

1. *Scholarship Program in Science and Mathematics: Supporting the Academic Achievements of Disadvantaged Students*, **Croicu, A.M.**, Gadidov A., Hoganson K., Matson R., Tapu, D., National Science Foundation (NSF), \$612,362.00, 2014-2020 (Teaching, Supervision and Mentoring)
2. *Mentor-Protégé Award in the College of Science and Mathematics: Stochastic Control of the SIRS Model*, **Croicu, A.M.**, College of Science and Mathematics (CSM), Kennesaw State University, \$2,000.00, 2009-2010 (Research and Creative Activity)
3. *CSM Hybrid Course Development*, **Croicu, A.M.**, College of Science and Mathematics (CSM), Kennesaw State University, \$1,400.00, 2009 (Teaching, Supervision and Mentoring)
4. *Collaborative Research: Efficient High Order Methods for Deterministic and Stochastic Problems in Flow Analysis and Control*, **Croicu, A.M.**, National Science Foundation (NSF), \$54,941.00, 2008-2012 (Research and Creative Activity)
5. *Scholarship Program in Science and Mathematics at Kennesaw State University*, **Croicu, A.M.**, Gadidov A., Garrido, J., Matson R., Tapu, D., National Science Foundation (NSF), \$551,780.00, 2007-2013 (Teaching, Supervision and Mentoring)
6. *2007 Faculty Summer Research Program for College of Science and Mathematics*, **Croicu, A.M.**, Kennesaw State University, \$4,680.00, Summer 2007 (Research and Creative Activity)

**Proposals under Review as PI: N/A**

**Proposals Submitted and Reviewed, but not Funded as PI:**

7. *RUI: Data-Driven Fractional Order Modelling and Control with Applications to Bike Share Systems*, **Croicu, A.M.**, Min Wang, National Science Foundation (NSF), \$198,075.00, 2019-2022 (Research and Creative Activity)
8. *RUI: Collaborative Research: Achieving Reliable Power System Operation with Uncertain Heterogeneous Energy Resources and Loads*, **Croicu, A.M.**, National Science Foundation (NSF), \$60,335.00, 2018-2021 (Research and Creative Activity)
9. *AMPS: RUI: An Optimal Control Under Uncertainty Method for Robust Performance in Electric Power Systems*, **Croicu, A.M.**, National Science Foundation (NSF), \$107,247.00, 2018-2021 (Research and Creative Activity)
10. *RUI: Computational Approaches to Optimal Control with Uncertain Parameters and Applications to Biomedicine*, **Croicu, A.M.**, National Science Foundation (NSF), \$116,010.00, 2017-2020 (Research and Creative Activity)
11. *Optimal Control Strategy of the Zika Virus Using Sterile Insect Technique (SIT)*, **Croicu, A.M.**, Philippe Laval, Kennesaw State University, CSM RSP Program, \$18,671.56, 2016 (Research and Creative Activity)
12. *KSU Internationalization Through Multiculturalism and Multilingualism*, **Croicu, A.M.**, Lepadatu, D., Tapu, D., Moodie, D., Kennesaw State University, \$98,283, 2014 (Teaching, Supervision and Mentoring and Professional Service)
13. *RUI: Optimization / Control Under Uncertainty in Fluid Dynamics and Biosciences*, **Croicu, A.M.**, National Science Foundation (NSF), \$150,668.00, 2011-2012 (Research and Creative Activity)
14. *CAREER: Optimization/Control Under Uncertainty in Fluid Dynamics and Biosciences*, **Croicu, A.M.**, National Science Foundation (NSF), \$582,474.00, 2010 (Research and Creative Activity)
15. *STEP: Early Enrichment Program in Science and Mathematics at Kennesaw State University*, **Croicu, A.M.**, Epps A., Tapu, D., Jackson P., Amlaner C., National Science Foundation (NSF), \$1,952,335.00, 2009 (Teaching, Supervision and Mentoring)
16. *PRISM: Early Enrichment Program in Science and Mathematics at Kennesaw State University*, **Croicu, A.M.**, Amoroso D, Epps A., Tapu, D., Jackson P., National Science Foundation (NSF), \$1,434,560.00, 2009 (Teaching, Supervision and Mentoring)
17. *CAREER: Stochastic Control and Stochastic Model Reduction in Biosciences and Fluid Dynamics*, **Croicu, A.M.**, National Science Foundation (NSF), \$481,639.00, 2007 (Research and Creative Activity)
18. *FRG: Collaborative Research: Efficient High Order Methods for Deterministic and Stochastic Problems in Flow Analysis and Control*, **Croicu, A.M.**, National Science Foundation (NSF), \$108,991.00, 2006 (Research and Creative Activity)

**Proposals Submitted and Reviewed, but not Funded as CO-PI:**

19. *Collaborative Research: DSCE360 – A data-driven Sustainable Community Ecosystem*, Wang, M., **Croicu, A.M.**, Priestley, J., Wang, L., National Science Foundation (NSF), \$483,107.00, 2020-2023 (Research and Creative Activity)

## **OTHER INTELLECTUAL CONTRIBUTIONS**

1. Development of MATH 1113 Precalculus (Aleks) Online, **Croicu, A.M.**, Kennesaw State University, 2019
2. Development of MATH 1112 College Trigonometry (Aleks) Online, **Croicu, A.M.**, Kennesaw State University, 2019
3. Development of MATH 3260 Linear Algebra I Online, **Croicu, A.M.**, Kennesaw State University's Internal Quality Matters Review, 2017 (Peer-Reviewed, Teaching, Supervision and Mentoring)
4. Re-Certification/ Re-Development of MATH 1113 Precalculus (MyMathLab) Online, **Croicu, A.M.**, Kennesaw State University's Internal Quality Matters 5 Year Course Re-Review and Certification, 2013 (Peer-Reviewed, Teaching, Supervision and Mentoring)
5. Development of MATH 1113 Precalculus (MyMathLab) Online, **Croicu, A.M.**, Kennesaw State University's Internal Quality Matters Review, 2008 (Peer-Reviewed, Teaching, Supervision and Mentoring)

## **PROFESSIONAL SERVICE**

### **KENNESAW STATE UNIVERSITY**

#### **Kennesaw State University:**

1. Chief Faculty Marshal to more than 40 commencements: Fall 2015-Summer 2018
2. Member of **multi-institutional UGA/KSU/GPC** team to design and deliver an **online MATH 1113 Emporium Course**, 2014-2015
3. Member, Special University Tenure and Promotion Committee, 2014-2015
4. Member, OVPR Pilot/Seed Grant RFP Faculty Review Panel, 2014
5. Member of KSU Peer Review Leadership Team, Provide leadership with faculty peer reviewers and online course developers, Distance Learning Center, July 2011-present
6. Quality Matters Peer Reviewer, January 2008-present, Involved in reviewing proposed online courses
7. Member of "Year of Romania" Committee, 2009-2011, Involved in planning of "Year of Romania"

#### **College of Science and Mathematics (CSM):**

8. Director of NSF Scholarship Program in Science and Mathematics, July 2014-June 2020, Involved in coordinating and management of all NSF grant activities
9. Member of the College Faculty Council, Spring 2017
10. Chair, Tenure and Promotion Committee, 2014-2015
11. Ad Hoc Grant Policy Committee, Fall 2010, Involved in establishing college-wide policies and procedures for choosing which proposals are submitted by CSM in response to a limited-response grant proposal solicitation
12. Director of NSF Scholarship Program in Science and Mathematics, October 2007-October 2013, Involved in coordinating and management of all NSF grant activities

## **Department of Mathematics:**

13. Chair of the Tenure and Promotion Committee, 2018-2020
14. Chair of the Curriculum Committee, Fall 2017-Spring 2020
15. Member of the Search Committee, Fall 2018-Spring 2019
16. Chair of the Search Committee, Fall 2017-Spring 2018
17. Chair of the Curriculum Committee, Fall 2015
18. Chair of Major/Minor Study Committee, Fall 2015
19. Faculty Advisor, NSF Scholarship Program in Science and Mathematics, September 2007-June 2020, Involved in mentoring NSF math majors
20. Member of the Tenure and Promotion Committee, 2012-2013
21. Chair of the Search Committee, 2011-2012
22. Coordinator of the Minor in Applied Mathematics, August 2007-January 2016
23. Scholarship Committee, January 2007-present, Member, Involved in evaluation of scholarship applications
24. Scholarship Webpage Maintenance, January 2007-Fall 2010, Involved in updating the webpage
25. Member of Committee to Select the Calculus Textbook, January-March 2009
26. Development of Learning Objectives for MATH 3000 and MATH 3261 Classes, December 2009

## **THE PROFESSION**

### **Service to Journal:**

27. "Punjab University Journal of Mathematics", 2019-2020, Responsible for reviewing articles
28. "Applied Mathematics and Modelling", 2018, Responsible for reviewing articles
29. "Mathematical Medicine & Biology", 2018, Responsible for reviewing articles
30. "Journal of the Royal Society Interface", 2018, Responsible for reviewing articles
31. "PLOS ONE", 2017, Responsible for reviewing articles as invited by Dena L. Schanzer, Public Health Agency of Canada
32. "Advances in Difference Equations", 2017, Responsible for reviewing articles as invited by the Editorial Board Member, Elena Braverman, University of Calgary, Canada
33. "Bulletin of Mathematical Biology", 2017, Responsible for reviewing articles as invited by the Editorial Board Member, Meghan A. Burke, Kennesaw State University, USA
34. "Asian Journal of Control", Reviewer, 2016, Responsible for reviewing articles as invited by the Associate Editor, Dr. Bo Shen, School of Information Science and Technology, Donghua University, Shanghai, China
35. "Scientific Reports", Reviewer, 2015, 2016, Responsible for reviewing articles as invited by the Editor, Dr. Peter Freddolino, Columbia University, USA
36. "Mathematics and Computers in Simulation" (An Elsevier Journal), Reviewer, 2009, Responsible for reviewing articles as invited by the Editor, Dr. Joao Miguel de Costa Sousa
37. "Optimization" Journal, Reviewer, 2009, 2010. Responsible for reviewing articles as invited by the Associate Editor, Dr. Rosalind Elster

### **Service to Professional Association:**

38. Society for Industrial and Applied Mathematics, 2016-2017, Organizer of Workshop on “Optimal Control, Optimization, Inverse Problems and Numerical Simulations with Applications”, SIAM SEAS 2017, Florida State University, Tallahassee, FL, March 18-19, 2017
39. Society for Industrial and Applied Mathematics, 2015-2016, Co-Organizer of Workshop on “Mathematics in the medical field: theory, applications and numerical simulations”, SIAM SEAS 2016, University of Georgia, Athens, GA, March 12-13, 2016
40. Society for Industrial and Applied Mathematics, 2014-2015, Organizer of Workshop on “Optimal Control, Optimization, Inverse Problems and Numerical Simulations with Applications”, SIAM SEAS 2015, University of Alabama at Birmingham, March 20-22, 2015
41. Mathematical Association of America, 2011, Judge of Undergraduate Student Poster Session, Joint Mathematics Meeting, New Orleans, LA, January 8, 2011
42. American Mathematical Society, 2010-2011, Co-organizer of Special Session on Control and Inverse Problems for Partial Differential Equations (#33A), Joint Mathematics Meeting, New Orleans, LA, January 2011

### **Service to Other USG Institutions:**

43. Consultant, Savannah State University, NSF-funded Project "Targeted Infusion Project: Developing a Minor in Applied Mathematics at Savannah State University", July 1, 2017 – June 30, 2020

### **Manuscript or Proposal Reviewing Activities:**

44. Evaluator of Professional Performance for Promotion, University of Pittsburgh at Johnstown, August 2019
45. Reviewer Proposals, National Science Foundation, S-STEM Program, May 2019
46. Reviewer Proposals, Defense Threat Reduction Agency's Fundamental Research to Counter Weapons of Mass Destruction Broad Agency Announcement (FRBAA) and Fundamental Research Government Call (FRCALL), Department of Defense, May 2017
47. Reviewer Textbook, Macmillan Learning, “Calculus 2e” by Sullivan/Miranda, December 2016-January 2017
48. Panelist, CMMI Dynamics, Control, & System Diagnostics (DCSD) Program, National Science Foundation, April 20-21, 2016
49. Reviewer Textbook, McGraw-Hill Education, “College Algebra and Precalculus” by Julie Miller, September-October, 2015
50. Reviewer, Acrobatiq powered by Carnegie Mellon, Precalculus Online Course, July 1-December 31, 2015
51. Reviewer Proposal, PIRE Program, National Science Foundation, June 2-15, 2015
52. Reviewer for the 6<sup>th</sup> International Conference on Computing, Communications and Control Technologies: CCCT 2008, April, 2008
53. Panelist, IGERT Preliminary Proposal Panel Meeting, National Science Foundation, June 26-27, 2008

## **THE COMMUNITY**

### **Professionally-Related Service to the Community:**

54. Guest Speaker, A Career in Mathematics, McClure Middle School, GA, November 2018
55. Math Team Coordinator, Kennesaw Charter Science and Mathematics Academy, GA, Fall 2012-present
56. Evaluator, Romanian National Testing, Minister of Education and Romanian Academy, Cluj-Napoca, Romania, May 2008