



**Name: Dr. Rasha Al Jamal**  
**Rank: Assistant Professor – Mathematics & Physics**

**Personal Information**

<b>Nationality:</b>	Canadian
<b>ACK Joining Date:</b>	16 Aug 2015
<b>E-Mail Address:</b>	r.aljamal@ack.edu.kw

**Professional Information**

<b>Education:</b>	<ul style="list-style-type: none"> <li>- Ph.D. in Applied Mathematics, University of Waterloo, Waterloo, ON, Canada. [Sept. 2009 – Oct. 2013]</li> <li>- Master's in Applied Mathematics, Kuwait University, Kuwait. [Sept. 2003 – Jul. 2006]</li> <li>- Bachelor in Mathematics minoring Computer Science, Kuwait University, Kuwait. [Feb. 1999 – Jul. 2003]</li> </ul>
<b>Specialization:</b>	Applied Mathematics (Stability and control of dynamical systems)
<b>Current Academic Position:</b>	Assistant Professor - Mathematics
<b>Current Professional Positions:</b>	N/A
<b>Previous Administrative Position Held:</b>	N/A
<b>Previous Academic Positions Held:</b>	<ul style="list-style-type: none"> <li>- Lecturer, Australian College of Kuwait, Kuwait. [Aug. 2015 – Aug. 2017]</li> <li>- Sessional Instructor, University of Waterloo, Canada. [May 2013 – Sept. 2013]</li> <li>- Teaching Assistant, University of Waterloo, Canada. [Sept. 2009 – Sept. 2013]</li> <li>- Adjunct Lecturer, American University of Kuwait, Kuwait. [Feb. 2007 – Jul. 2009]</li> <li>- Part time Lecturer, Arab Open University of Kuwait, Kuwait. [Feb. 2007 – Jul. 2007]</li> <li>- Teaching Assistant, Kuwait University, Kuwait. [Sept. 2003 – Jul. 2006]</li> </ul>
<b>Fellowships And Honors:</b>	N/A

<b>Teaching Experience:</b>	Australian College of Kuwait - Kuwait [Aug. 2015 – Present] Assistant Professor [Aug. 2015 – Aug 2017] Lecturer [Sep. 2017 – Present]
	<ul style="list-style-type: none"> <li>- Courses: Pre-calculus, Calculus, Differential &amp; Integral Equation.</li> <li>- Enrich Engineering students with reading and writing mathematical statements properly.</li> <li>- Design teaching material including course outline, lesson plans and all evaluations such as assignments, midterm and final exam.</li> <li>- Obtained a high average rating from students in course evaluations.</li> </ul>
	University of Waterloo - Waterloo, ON (Canada) [May 2013 - Sept. 2013]
	Sessional Instructor Calculus 1 for the Sciences
	<ul style="list-style-type: none"> <li>- Topics: Introduction to different types of functions and its inverse. Limits, continuity, differentiation and integration of functions.</li> <li>- Enriched students experience in reading and writing mathematical statements properly.</li> <li>- Designed teaching material including course outline, syllabus, lesson plans and all evaluations such as assignments, midterm and final exam, managed TAs.</li> <li>- Lectured a class of 140 students three times a week.</li> <li>- Obtained a high average rating from students in course evaluations.</li> </ul>
University of Waterloo - Waterloo, ON (Canada) [Sept. 2009 - Sept. 2013]	
Teaching Assistant	
<ul style="list-style-type: none"> <li>- Different undergraduate Math courses for math, engineering and science students.</li> <li>- Delivered in-class instruction and tutorials.</li> <li>- Delivered large-class tutorials (around 200 students).</li> </ul>	
American University of Kuwait - Kuwait [Feb. 2007 - Jul. 2009]	
Adjunct Lecturer	
<ul style="list-style-type: none"> <li>- Topics: Graphs of different types of functions and its inverse. Trigonometric functions. Limits, continuity, differentiation and Integration of functions.</li> <li>- Lectured several classes of around 30 students five times a week.</li> <li>- Prepared all teaching material including course outline, syllabus, lesson plans and all evaluations such as weekly assignments, quizzes, midterm and final exam.</li> <li>- Obtained a high average rating from students in course evaluations.</li> </ul>	
Arab-open University of Kuwait - Kuwait [Feb. 2007 - Jul. 2007]	

	<p>Part-time Lecturer</p> <ul style="list-style-type: none"> <li>- Courses: Linear Algebra, Introduction to Advanced Mathematics and Statistics.</li> <li>- Developed the curriculum for Linear Algebra course.</li> <li>- Lectured large-classes of around 100 students at a time.</li> <li>- Delivered all teaching material including course outline, syllabus, lesson plans and evaluations.</li> <li>- Obtained a high average rating from students in course evaluations.</li> </ul> <p>Kuwait University - Kuwait [Sept. 2003 - Jul. 2006]</p> <p>Teaching Assistant</p> <ul style="list-style-type: none"> <li>- Five different courses (Calculus I, II &amp; III, Linear Algebra and Ordinary Differential Equations to math, engineering and science students).</li> <li>- Delivered over 150 hours of in-class instruction and tutorials.</li> <li>- Designed weekly evaluations quizzes and assignments.</li> <li>- Obtained a high average rating from students in course evaluations.</li> </ul>
<p><b>Industrial And Technical Experience:</b></p>	<p>Air Canada - Brampton,ON (Canada) [Jun. 2014 - Feb. 2015]</p> <p>Business Analyst</p> <ul style="list-style-type: none"> <li>- Analyze and assess the reliability of Air Canada's block times (Flight duration) by analyzing all related variables to improve arrival performances.</li> <li>- Gather and analyze data regarding all facets of block time calculation methodology and actual performance.</li> <li>- Design, test and validate a predictive mathematical model to calculate Air Canada's block times and improve operational reliability.</li> <li>- Design, develop and execute small to medium scale Continuous Improvement projects on behalf of the Operations Excellence organization.</li> <li>- Facilitate problem-solving and decision making at the project level to ensure quality throughout the project life cycle.</li> </ul>
<p><b>Research Interest:</b></p>	<p>My research interests are in applied mathematics. It includes stability analysis and control of infinite-dimensional systems. In particular analyzing the stability of nonlinear partial differential equations as well as designing controllers for unstable systems. In addition to estimating the solution of systems modelled by partial differential equations.</p>
<p><b>Research Grants:</b></p>	<ul style="list-style-type: none"> <li>- Ontario Graduate Scholarship [Sept. 2010 - Aug. 2013] Awarded \$15,000 CAD each year for three years, by the government to fund research for Doctorate degree.</li> <li>- President's Graduate Scholarship [Sept. 2010 - Aug. 2013] Awarded \$10,000 CAD each year for three years, by the University of Waterloo in support of research for Doctorate degree.</li> </ul>

<p><b>Research and Publications including Journal s and Books:</b></p>	<ul style="list-style-type: none"> <li>- Rasha Al Jamal and Kirsten Morris, "Output-feedback control of Linearizable Infinite-dimensional Systems", In progress.</li> <li>- Nejb Smaoui and Rasha Al Jamal, "Dynamics and Control of the Modified Generalized Korteweg-de Vries-Burgers Equation with Periodic Boundary Conditions", Submitted 2020.</li> <li>- Rasha Al Jamal and Nejb Smaoui, "The Well-posedness and Stability Analysis of the Modified Generalized Korteweg-de Vries-Burgers Equation with Periodic Boundary Conditions", Submitted.</li> <li>- Samira Ghafoori, Mohsen Nasirian, Rasha Al Jamal, Fahad Abu Mallouh and Mehrab Mehrvar , " Statistical parameter optimization and modeling of photodegradation of methyl orange using a composite photocatalyst prepared by thermal synthesis", Environmental Science and Pollution Research, ISSN 0944-1344, DOI 10.1007/s11356-020-10301-5, 2020</li> <li>- Rasha Al Jamal and Kirsten Morris, "Linearized Stability of Partial Differential Equations with Application to Stabilization of the Kuramoto-Sivashinsky Equation", SIAM Journal on Control and Optimization, vol. 56, no. 1, pp. 120 - 147, Jan. 2018.</li> <li>- Mamoon Alameen and Rasha Al Jamal and Sadeq Damrah, March 2016, "A Clark and Wright improved algorithm to solve the vehicle routing and travelling salesman problem", Global Journal for Enterprise Information System.</li> <li>- Nejb Smaoui and Rasha H. Al-Jamal, May 2008, "Distributed Control of the Generalized Korteweg-de Vries-Burgers Equation", Hindawi Publishing Corporation, Mathematical Problems in Engineering, volume 2008, Article ID 621672.</li> <li>- Nejb Smaoui and Rasha Al-Jamal, Dec. 2007, "A Nonlinear Boundary Control for the Dynamics of the Generalized Korteweg-de Vries-Burgers Equation", Kuwait journal of sciences and engineering, volume 34, no. 2A, ISSN: 1024-8684.</li> <li>- Nejb Smaoui and Rasha H. Al-Jamal, Feb. 2007, "Boundary Control of the Generalized Korteweg-de Vries-Burgers Equation", Nonlinear Dynamics (2008), volume 51: 439 446.</li> </ul>
<p><b>Paper Presentations at Professional Conferences:</b></p>	<ul style="list-style-type: none"> <li>- Rasha Al Jamal and Nejb Smaoui, "Input-feedback control of the generalized Kuramoto-Sivashinsky equation", 2021 (accepted), 24th International Symposium on Mathematical Theory of Networks and Systems, Cambridge, UK.</li> <li>- Rasha Al Jamal and Kirsten Morris, "Output feedback control of the Kuramoto-Sivashinsky equation," 2015, 54th IEEE Conference on Decision and Control (CDC), Osaka, 2015, pp. 567-571.</li> <li>- Rasha Al Jamal and Kirsten Morris, "Distributed control of the Kuramoto-Sivashinsky equation using approximations", 2015, IEEE American Control Conference (ACC), Chicago, IL, pp. 3322-3327.</li> <li>- Rasha Al Jamal and Amenda Chow and Kirsten Morris, July 2014, "Linearized Stability Analysis of Nonlinear Partial Differential Equations", 21st International Symposium on Mathematical Theory of Networks and Systems, Groningen, The Netherlands.</li> </ul>

<b>College Service including committee Membership:</b>	<ul style="list-style-type: none"><li>- Student Advising Group.</li><li>- Appeal Committee.</li><li>- Auditing Committee.</li><li>- Credit transfer Committee.</li><li>- Math Committee.</li><li>- Scheduling Committee.</li></ul>
<b>National Service:</b>	N/A
<b>School Committees:</b>	N/A