



Name: Dr. Leila Borvayeh
Rank: Assistant Professor – Mathematics & Physics

Personal Information

Nationality:	Canadian
ACK Joining Date:	23 Aug 2015
E-Mail Address:	l.borvayeh@ack.edu.kw

Professional Information

Education:	<ul style="list-style-type: none"> - Ph.D. (2005 – 2009) Physics – Molecular Spectroscopy Department of Physics and Astronomy, University of Calgary, Calgary, Canada - Master of Science (1999 – 2002) Solid-state Physics Department of Physics, Chamran University of Ahwaz, Ahwaz, Iran - Bachelor of Science (1995 – 1999) Solid-state Physics Department of Physics, Chamran University of Ahwaz, Ahwaz, Iran
Specialization:	Solid State Physics (Atomic molecular Spectroscopy)
Current Academic Position:	Assistant Professor
Current Professional Positions:	N/A
Previous Administrative Position Held:	N/A
Previous Academic Positions Held:	<p>Adjunct Faculty May 2014 – Present Department of Sciences and Health Careers ,Cuyahoga Community College (Tri-C), Eastern Campus, OH, USA</p> <p>Research Associate II / Post-Doctoral Fellow June 2009 – May 2011 Department of Chemistry, University of Miami, Miami, Florida, USA Field: Nuclear Magnetic Resonance Spectroscopy</p>
Fellowships And Honors:	<p>ACK Teaching Excellence Award, 2016/2017 ACK</p> <p>Level 3 IVQ Advanced diploma in Teaching, Training and Assessing Learning, City & Guilds (Corporate college ACK) 2016</p> <p>Workshop on “Energy Harvesting and Nonlinear Dynamic Techniques” by Prof. Ali H. Nayfeh, Virginia Tech, Oct 22, 2015.</p>

	<p>Instructional Skills Workshop (ISW) Certificate, 2008 Learning Commons, University of Calgary</p> <p>Best Student Poster Award, 2008 Canadian Association of Physicists (CAP) Annual Congress, Quebec City, Quebec, Canada</p>
Teaching Experience:	<p>Adjunct Faculty May 2014 – Present Department of Sciences and Health Careers ,Cuyahoga Community College (Tri-C), Eastern Campus, OH, USA</p> <p>Teaching Assistant / Instructor Sept 2005 – Dec 2008 Department of Physics and Astronomy, University of Calgary, Calgary, Canada</p> <p>University Instructor Sept 2001 – Jan 2004 Department of Physics, Chamran University of Ahwaz, Ahwaz, Iran</p> <p>High School and Pre-university Physics and Math Teacher Sept 2001 – Aug 2002</p>
Industrial And Technical Experience:	N/A
Research Interest:	My research activities have included far-infrared spectroscopy, NMR spectroscopy, superconductivity and experimental data analysis. In general, I am interested in applied physics and experimental data analysis and their applications in engineering and multidisciplinary fields.
Research Grants:	CO-PI on ACK research fund (1200 KWD) “Design and manufacturing a miniature Reynolds apparatus for measuring skin friction reduction of nanofluids and testing and modelling precipitation and deposition of nanoparticles on pipe surfaces”.
Research and Publications including Journals and Books:	<ul style="list-style-type: none"> - M. Hassanaliana, V. Pelleritoa, A. Sedaghat, F. Sabri, L. Borvayeh, S. Sadeghi,” Aerodynamics loads variations of wings with novel heating of top surface: Bioinspiration and experimental study”, <i>Journal of Experimental Thermal and Fluid Science</i> 109; July 2019;109884. - A. Sedaghat, F. Alkhatib, A. Eilaghi, M. Sabati, L. Borvayeh, A. Mostafaeipour,” A New Strategy for Wind Turbine Selection Using Optimization Based on Rated Wind Speed”, <i>Energy Procedia</i>. 2019; 160: 582-589. - L Borvayeh, M Sabati, R Mbarki, “ An Optimization Method for Quantifying Magnetization Vectors in Magnetic Resonance Measurements”, <i>IJSRSET</i>, May- June 2018, PP.162-169, Volume 4, Issue 8. Print ISSN: 2395-1990, Online ISSN: 2394-4099. - M Sabati, L Borvayeh, “Rapid Magnetic Resonance Imaging Using Undersampled Projection-Onto-Convex-Sets Reconstruction” <i>IJSRSET</i>, September-October 2017, PP. 704-709, Volume 3, Issue 6. Print ISSN: 2395-1990, Online ISSN: 2394-4099.

	<ul style="list-style-type: none"> - R Mbarki, L Borvayeh, M Sabati, "Investigation of the Flexoelectric Coupling Effect on the 180° Domain Wall Structure and Interaction with Defects", <i>J Material Sci Eng</i> 2016; 5: 264-9 .http://dx.doi.org/10.4172/2169-0022.1000264 http://dx.doi.org/10.4172/2169-0022.1000264 - C.D. Ridge, L. Borvayeh, J.D. Walls, "Spatially encoded multiple-quantum excitation", <i>Journal of Chemical Physics</i>, 2013 May 28; 138(20): 204202. doi:10.1063/1.4807681. http://www.ncbi.nlm.nih.gov/pubmed/23742468) - L. Borvayeh, N. Moazzan-Ahmadi, and V. –M. Honerman, "Torsional spectrum of 12CH₃13CH₃: A 2-state frequency analysis of the torsional bands and the ν_{12} vibrational fundamental", <i>Journal of Molecular Spectroscopy</i>, Volume 255, Issue 2, June 2009, pp 157-163. - L. Borvayeh, I. Ozier, A. Bauder, N. Moazzan-Ahmadi, "High resolution infrared spectrum and global analysis ν_5, ν_{12}, and $\nu_{12}+\nu_6-\nu_6$ in CH₃SiH₃", <i>Journal of Molecular Spectroscopy</i>, Volume 255, Issue 2, June 2009, pp 122-133. - L. Borvayeh, N. Moazzan-Ahmadi, and V. –M. Honerman, "The $\nu_{12}-\nu_9$ band of ethane: A global frequency analysis of data from the four lowest vibrational states", <i>Journal of Molecular Spectroscopy</i>, Volume 250, Issue 1, July 2008, pp 51-56. - L. Borvayeh, N. Moazzan-Ahmadi, and V. –M. Honerman, "The $\nu_3-\nu_9$ band of CD₃CD₃: A global frequency analysis of data from the three lowest vibrational states", <i>Journal of Molecular Spectroscopy</i>, Volume 249, Issue 2, June 2008, pp 113-116. - L. Borvayeh, N. Moazzan-Ahmadi, and V. –M. Honerman, "The lowest frequency vibrational fundamental of disilane: A three-band analysis", <i>Journal of Molecular Spectroscopy</i>, Volume 242, Issue 2, April 2007, pp 77-82. - Z. Abusara, L. Borvayeh, N. Moazzan-Ahmadi, and A.R.W. Mackellar, "Isotope effects in the infrared spectra of OCS-He complexes and clusters", <i>Journal of Chemical Physics</i>, Volume 125, Issue 14, October 2006. 144306 (6 pages). - M. Zargar, L. Borvayeh, M. Farbod, "Structural Study of HoBa₂Cu₃O_x Ceramic Superconductor", <i>Iranian Journal of Crystallography and Mineralogy</i>, Volume 11, Issue 2, 2003, pp 185-194.
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<p>Paper Presentations at Professional Conferences:</p>	<ul style="list-style-type: none"> - M Sabati, A Sedaghat, SAA Oloomi, L Borvayeh, F Sabri, WJ Zafar, H Salem, F Alkhatib, "Temporal and Spectral Analysis on the Performance of Solar Windows Film in Office Buildings in a Hot-Dry Climate", The 15th International Conference on Ecological Vehicles & Renewable Energies, EVER2020, 10-12th September 2020, Grimaldi Forum, Monaco. (accepted) - A Sedaghat, H Salem, SAA Oloomi, L Borvayeh, M Rashid, A Amini, S Ghafoori, JC Lopez, GK Mohanan," Design and Manufacturing a Miniature Reynolds Apparatus for Testing Nanofluids" The Gulf Conference on Sustainable Built Environment, GCSBEKW-2019, 10-13 March 2019, Kuwait. - Victoria Pellerito, Mostafa Hassanalian, Ahmad Sedaghat, Farhad Sabri, Leila Borvayeh, Shiva Sadeghi, "Performance Analysis of a Bioinspired Albatross Airfoil with Heated Top Wing Surface: Experimental Study" American Institute of Aeronautics and Astronautics (AIAA Propulsion and Energy Forum), August 2019, Indianapolis, IN, USA. - A. Sedaghat, F. Alkhatib, A. Eilaghi, M. Sabati, L. Borvayeh, A. Mostafaeipour," A New Strategy for Wind Turbine Selection Using Optimization Based on Rated Wind Speed", The 2nd International Conferences on Energy and Power, ICEP 2018, 13-15 December 2108, Sydney, Australia. - Leila Borvayeh, Raouf Mbarki , Fadi Alkhatib , Ahmad Sedaghat, Arash Hassanzadeh, Jamaloddin Jamali, Ali Mostafaeipour, "A New Capacity Factor Based on Rated Wind Speed for Optimal Selection of Wind Turbines" International Journal of Mechanical and Production Engineering (IJMPE). pp. 64-69, Volume-6, Issue-5, May 2018. - M Sabati, L Borvayeh. Highly Accelerated MRI Using Undersampled POCS Reconstruction.Proceedings of the 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, p. FrCT6.28, 17-20 August 2016, Orlando, FL, USA. - R.I. Thompson, D. Ahrensmeier, L. Borvayeh, J.M.K.C. Donev, P. Gimby, H. Graumann, P. Irwin, R. Stafford, "Reflective Sails for Air-track Carts – Design and Testing of an Inexpensive and Effective Design", Contributed Talk, 65th CAP Annual Congress, Toronto, ON, June 2010. - J.M.K.C. Donev, Daria Ahrensmeier, A. Louro, R. Stafford, L. Borvayeh, R.I. Thompson, "A Pre-test / Post-test Approach to Evaluating the Effectiveness of Individual Instructional Sessions", Contributed Talk, 64th CAP Annual Congress, Moncton, NB, June 2009. - Daria Ahrensmeier, J.M.K.C. Donev, R.B. Hicks, A. Louro, R. Stafford, L. Borvayeh, R.I. Thompson, "Laboratorials - a step towards concept-
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	<p>based instruction using blended learning”, Contributed Talk, 64th CAP Annual Congress, Moncton, NB, June 2009.</p> <ul style="list-style-type: none"> - L. Borvayeh, N. Moazzan-Ahmadi, and V. –M. Honerman, “Torsional spectrum of $12\text{CH}_3^{13}\text{CH}_3$: A 2-State frequency analysis of the torsional bands and the ν_{12} vibrational fundamental”, International Symposium on Molecular Spectroscopy, Columbus, Ohio, USA, June 23-26, 2009. - L. Borvayeh, I. Ozier, A. Bauder, N. Moazzan-Ahmadi, “High resolution infrared spectrum and global analysis ν_{12}, ν_5, AND $\nu_{12}+\nu_6$- ν_6 in CH_3SiH_3”, International Symposium on Molecular Spectroscopy, Columbus, Ohio, USA, June16-20, 2008. - L. Borvayeh, N. Moazzan-Ahmadi, and V. –M. Honerman, “The $\nu_9+\nu_4$-ν_4 Band of Disilane: A Three Band Analysis”, The Canadian Association of Physicists (CAP) Annual Congress, Quebec City, Quebec, Canada, June8-11, 2008. - L. Borvayeh, I. Ozier, A. Bauder, N. Moazzan-Ahmadi, “High resolution infrared spectrum and global analysis ν_{12}, ν_5, and $\nu_{12}+\nu_6$- ν_6 in CH_3SiH_3” The Canadian Association of Physicists (CAP) Annual Congress, Quebec City, Quebec, Canada, June8-11, 2008. - L. Borvayeh, N. Moazzan-Ahmadi, and V. –M. Honerman, “ A global fit analysis of data in the four lowest vibrational states of ethane”, The Annual Meeting of the Division of Atomic, Molecular, and Optical Physics (DAMOP), Calgary, Alberta, Canada, June 5-9, 2007. - L. Borvayeh, N. Moazzan-Ahmadi, and V. –M. Honerman, “The lowest frequency vibrational fundamental of disilane: A three band analysis”, The Canadian Association of Physicists Annual Congress (CAP) Annual Congress, Saskatoon, Saskatchewan, Canada, June17-20, 2007. - L. Borvayeh, N. Moazzan-Ahmadi, and V. –M. Honerman, “Global fit analysis of the four lowest vibrational states of ethane: The lowest $\nu_{12} - \nu_9$”, International Symposium on Molecular Spectroscopy, Columbus, Ohio, USA, June18-22, 2007. - M. Zargar and L. Borvayeh, “A study on structure of $\text{HoBa}_2\text{Cu}_3\text{O}_x$ ceramic superconductor”, In Proceeding of International ICMC Material Workshop, Wollongong, Australia, Feb 10-13, 2004, p 70. - L. Borvayeh and M. Zargar, “Study of $\text{HoBa}_2\text{Cu}_3\text{O}_x$ structure in producing with XRPD measuring”, In Proceeding of the 9th Symposium of the Society of Crystallography and Mineralogy of Iran, Mazanderan, Iran, Nov 13-14, 2001, pp123-124.
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الكلية الأسترالية في الكويت
Australian College of Kuwait

FACULTY MEMBERS CURRICULUM VITAE

College Service including committee Membership:	Physics committee, Appeal committee, Curriculum committee, Credit Transfer committee,
National Service:	N/A
School Committees:	N/A