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| Georges M. Arnaout | | |
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| Phone: (339) 927-3366 ♦ Email: [georgearnaout@gmail.com](mailto:georgearnaout@gmail.com)  *American Permanent Resident* | | |
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| Education | | |
| **Ph.D., Engineering Management and Systems Engineering** May 11  **Concentration: Modeling and Simulation**  Old Dominion University, Norfolk, VA, USA  Dissertation Title: Exploring the Effects of Cooperative Adaptive Cruise Control in Mitigating Traffic Congestion.  **Master’s Degree, Engineering Computer Science**  May 08  **Concentration: Information Technology**  Old Dominion University, Norfolk, VA, USA  **Bachelor of Science, Management Information Systems** Jun 06  University of Balamand, Koura, Lebanon | | |
| **Professional Experience** | | |
| **Simulation Tools Developer & Analyst** Jun 11 – Present  Research & Development Department – Kiva Systems (Amazon.com Subsidiary), North Reading, MA   * Helped design and architect a hybrid agent-based and discrete event simulator * Built and released a complete 3D animation and visualization tool * Improved existing simulation and visualization tools and optimized solutions * Simulation analysis, project planning, and reporting * Traveled to Amazon warehouses across the country to collect data and optimize processes * Researched and optimized the process of running simulation experiments on the AWS Cloud and created clusters for large batches of experiments   **Mobile Application Developer** Jun 08 – Jun 10  Freelance Developer - Vision Innovations Corporation **,** Virginia Beach, VA   * Developed Android based mobile applications and released two mobile prototypes (LoCode and University Maps) * Developed a client-side web application using Google Maps API for micro-navigation (refer to www.locode.com)   **Teaching Assistant** Jun 08 – Jun 11  Department Of Engineering Management – Old Dominion University, Norfolk, VA   * Originated and graded homework and exams for several classes * Substituted and lectured many sessions of several undergraduate and graduate courses * Acquired experience in teaching in a high technology, multimedia televised classroom | | |
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| Research Projects/Consulting/Skills | | |
| **Department of Engineering Management – Old Dominion University** Jun 09 – Aug 09  Project: Improving Customer Waiting Time at Norfolk/Widgeon Road DMV Center  Consultant   * Developed a discrete-event model of the DMV Center * Analyzed data and presented results and recommendations.   **National Center for Systems of Systems Engineering** Jan 09 – May 09  Project: Complex Situation Exploration for Strategic Decision Support  Research Associate   * Researched different feed technologies (Atom, RSS, etc) * Assisted in developing a web application using Twitter API and Google Maps API   **Office of Research at Old Dominion University** Jun 08 – May 11  Project: An agent based simulator of traffic to study cooperative adaptive cruise control  Research Assistant   * Developed an open source simulator of traffic to study CACC technology * Identified strengths and weaknesses of the technology using microscopic simulation * Participated in proposal writing (grant received) | | |
| **Academic and Professional Activities** | | |
| * Reviewer for the following journals and:   + Journal of Advanced Transportation, Journal of Industrial Engineering and Management. * Member on the 7th International Workshop on Enterprise & Organizational Modeling and Simulation (EOMAS) conference program committee, 2011, London, UK. | | |
| **Research Interests** | | |
| Operations Research  Automated Material Handling  Systems Engineering | | Simulation Modeling and Analysis  Optimization Techniques  Intelligent Transportation Systems |
| **Courses of Interest** | | |
| Agent-based Simulation  Systems Analysis and Design  Object Oriented Programming  Logistics and Supply Chain Management  System Dynamics  Discrete Event Simulation  Internet & Java Programming  Electronic Commerce | | Strategic Information Systems  Database Technologies  Project Management  Information Systems Management  Networks and Communication  Optimization Methods  Intelligent Transportation Systems  Materials Handling |
| **Programming and Software Skills** | | |
| **Programming Languages**  Java, C (C, C# and C++), SQL, XML, PHP, HTML, Java SWING, JavaScript, Matlab, Flash Actionscript, VBA, and SLX (simulation language).  **Research**  Nvivo, Atlas, SPSS, R, MS Office (Excel, Word, Powerpoint, Visio, etc), and End Note  **Database**  Microsoft Access, Power Builder, S3, and MySQL  **Cloud Computing**  Extensive knowledge in AWS cloud, StarCluster, EC2 instances, S3, and SQS.  **Bug Tracking & Team collaboration**  Accurev, JIRA (issue tracking), SharePoint (collaboration software), Agile Methodology and SCRUM  **Simulation & Graphical**  Modeling and Simulation (Netlogo, Anylogic, Simulink, Goldsim, Arena, and SLX)  Graphics and Animation (Adobe Photoshop, Blender, and jMonkey) | | |
| **Awards and Certificates** | | |
| * Alumni Association Scholarship (Alumnus) * Dean's Doctoral Fellowship Award - Batten College of Engineering and Technology (2009-2010) * Dean's Doctoral Fellowship Award - Batten College of Engineering and Technology (2010-2011) | | |
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| **Professional and Academic Memberships** | | |
| * Golden Key International Honor Society * Omicron Delta Kappa | | |
| **Publications** | | |
| **International Refereed Journal Publications** | | |
| 1. **Arnaout, Georges**, Arnaout,J-P "Exploring the effects of Cooperative Adaptive Cruise Control on Highway traffic flow", Transportation Planning and Technology (gTPT) ( Published ) 2. **Arnaout, Georges**, Arbabi, Hadi , Bowling, Shannon, “Effective Cooperative Adaptive Cruise Control algorithm for Intelligent Transportation Systems", International Journal of Robotics and Automation ( accepted ) 3. **Arnaout, Georges,** Bowling, Shannon "Towards Reducing Traffic Congestion using Cooperative Adaptive Cruise Control on a Freeway with a Ramp", Journal of Industrial Engineering and Management (Published) 4. **Arnaout, Georges,** Bowling, Shannon, "A Progressive Deployment Strategy for Cooperative Adaptive Cruise Control to Improve Traffic Dynamics", International Journal of Automation and Computing (Published) | | |
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| **International Refereed Conferences Publications** | | |
|  | 1. Harris Wu, **Georges M. Arnaout**, “A Web 2.0 Case Tool Supporting Packaged Software Implementation”, CEIS 2008: Barcelona, Spain (published) 2. Harris Wu, **Georges M. Arnaout**, Zubair, Maly, “Exploring Historical Image Collections with Collaborative Faceted Classification”, Digital Humanities 08 Oulu, Finland (published) 3. **Georges M. Arnaout**, Shannon Bowling, “An Agent –based Model for Reducing Illegal Immigration on the US-Mexican Borders” Virginia Council of Graduate Schools, Fourth Annual Graduate Student Research Forum, Library of VA, Richmond, VA. (poster) p.24, February 2009 4. **Georges M. Arnaout**, Shannon Bowling, “Validating a Social Science Theory using Agent-based Approach” Proceedings of the Modeling, Simulation and Gaming student Capstone conference VMASC (Suffolk, VA) April 9th 2009 (published) 5. **Georges M. Arnaout**, Shannon Bowling, “Improving Customer Waiting Time at a DMV Center Using Discrete-Event Simulation” MODSIM World 2009 NASA Conference (Virginia Beach, VA) (published) 6. **Georges M. Arnaout**, Shannon Bowling “LoCode-A Micro-Navigation Tool using Google Maps and Google Android” Graduate Research Conference 2010, Old Dominion University, Norfolk VA (published) 7. Elkin Rodriguez-Velasquez, **Georges M. Arnaout**, Ghaith Rabadi, Ph.D. and Rami Musa, Ph.D. “Modeling Cross-Dock Networks with Time Constraints using Simulation” Proceedings of the 2010 IEEE Systems and Information Engineering Design Symposium University of Virginia - Charlottesville, Virginia USA (Published) 8. **Georges M. Arnaout**, Mahmoud T. Khasawneh, Jun Zhang, Shannon R. Bowling, Ph.D. “An IntelliDrive Application for Reducing Traffic Congestions using Agent-Based approach” Proceedings of the 2010 IEEE Systems and Information Engineering Design Symposium University of Virginia - Charlottesville, Virginia USA (published) 9. **Georges Arnaout**, Elkin Rodriguez-Velasquez, Ghaith Rabadi, Rami Musa “Modeling Cross-Docking Operations using Discrete Event Simulation” 6th International Workshop on Enterprise & Organizational Modeling and Simulation (EOMAS 2010) June 7-8, 2010, Hammamet, Tunisia (published) 10. **Georges M. Arnaout**, Shannon Bowling “Reducing Traffic Congestions by introducing CACC-vehicles on a multi-lane highway using Agent-Based approach” MODSIM World 2010 Conference (Hampton, VA) (published) 11. Fadi Ayoub, **Georges M. Arnaout** “Reducing US Oil Dependence using Simulation” MODSIM World 2010 Conference (Hampton, VA) (published) | |

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| **Book Chapter** | |
|  | * **Georges M. Arnaout,** Bowling, S. R., “Markov Chains”, Chapter 10 in Bowling, S. R., Introduction to Management Science, OJISE. (to be published) * **Georges M. Arnaout**, Bowling, S. R., “Queuing Theory”, Chapter 12 in Bowling, S. R., Introduction to Management Science, OJISE. (to be published) |
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| **References** | |
| References Available upon Request | |