**CURRICULUM VITAE**

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| EDUCATION: | Ph.D., Industrial Engineering, Laval University, Canada  M.Sc.,Aerospace Engineering, Laval University, Canada  DESS., Industrial Engineering, Laval University, Canada | 2008  2000  1995 |

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| **PROFESSIONAL EXPERIENCE** | |  | | |
| Jan. 2013- | Assistant professor, King Fahd University of Petroleum and Minerals (KFUPM), Dhahran, Saudi Arabia | | |
| Sept. 2010-April 2012 | Postdoctoral fellow, Interuniversity Research Center on Enterprise Networks, Logistics and Transportation (CIRRELT), Quebec, Canada   * Performance evaluation of the A/D production networks. * Efficient optimization heuristics design (Tabu search, Genetic algorithm and Harmony Search Algorithm). | | |
| Jan. 2010-  April 2010 | Postdoctoral fellow, UQAT, Quebec, Canada   * Developing efficient heuristics for optimization of infrared heating in thermoforming. | | |
| Jan. 2009-  Dec. 2009 | Postdoctoral fellow, E.T.S., Montreal, Canada   * Efficient heuristics development of optimal discrete berth allocation problem. | | |
| Jan. 2008-  Dec. 2008 | Postdoctoral fellow, Laval University, Quebec, Canada   * Developing an efficient heuristic based on the extended great deluge algorithm to solve the Dynamic Layout Problem. | | |
| 2004-2007 | Research assistant, Laval University, Quebec, Canada | | |
| 2002-2003 | Research assistant, UQAT, Quebec, Canada   * Modeling and development of optimization models based on Quantized Hopfield neural networks for the optimal design of series systems and for Job-Shop optimal scheduling problem. | | |
| **TEACHING UNDER-GRADUATE COURSES** | | | |
| * ISE-201- Introduction to industrial engineering * ISE-325- Engineering Statistics * ISE-390- Seminars * ISE-391- Industrial Engineering Design * ISE-402-Production systems and inventory control * ISE-422- Facility Layout and Location * ISE-490- Senior Design Project   **RESEARCH AREAS**   * Optimal design of production systems. * Reliability and maintenance optimization. * Systems performance evaluation. * Heuristics and Metaheuristics. * Discrete optimization methods.   **FUNDED RESEARCH PROJECTS**   1. IN141043**. Nahas N** and Abouheaf M.*Metaheuristic approaches for Non-convex Economic Dispatch Problem*. King Fahd University of Petroleum and Minerals, Saudi Arabia**.** Starting date: September 2015, Duration: 18 months, budget: SR 76,120. 2. FT131006**. Nahas N**.*Buffer allocation and preventive maintenance optimization in unreliable production lines*. King Fahd University of Petroleum and Minerals, Saudi Arabia**.** Starting date: December 2013, Duration: 12 months, budget: SR 50,050. | | | |
| **AWARDS AND RECOGNITIONS** | | | |
| 2007 | Excellence award for Ph.D. students, Interuniversity Research Center on Enterprise Networks, Logistics and Transportation (CIRRELT), Laval University, Canada. | | |
| **PUBLICATIONS** | | | |
| **Papers published or accepted in scientific journals with peer review**   1. **Nahas. N.** (2014). [Buffer allocation and preventive maintenance optimization in unreliable production lines](https://scholar.google.com/citations?view_op=view_citation&hl=en&user=1hUkOYEAAAAJ&citation_for_view=1hUkOYEAAAAJ:M3ejUd6NZC8C). Journal of Intelligent Manufacturing, 1-9. 2. **Nahas N.,** Nourelfath M. and Gendreau M. (2014). Optimal design of A/D production networks with unreliable machines and finite buffers. *International Journal of Production Economics*, 154,113-126. 3. **Nahas N.** and Nourelfath M. (2014). Non-linear threshold accepting: a new meta-heuristic for combinatorial optimization problems. International Journal of Metaheuristics 3 (4), 265-290. 4. J. Fatisson, S. Hallé, S. Nadeau, B. Ateme-Nguema, **N. Nahas**, C. Viau, M. Camus, Y. Cloutier (2012). [Towards an Integrated and Adaptive Risk Assessment Tool for Engineered Nanoparticles](https://scholar.google.com/citations?view_op=view_citation&hl=en&user=1hUkOYEAAAAJ&cstart=20&citation_for_view=1hUkOYEAAAAJ:5nxA0vEk-isC). International Journal of Theoretical and Applied Nanotechnology, 1(1), 51-60. 5. Nourelfath M., Châtelet E. and **Nahas N.** (2012). Joint redundancy and imperfect preventive maintenance optimization for series-parallel multi-state degraded systems*.* *Reliability Engineering and System Safety*, accepted. 6. Erchiqui F., **Nahas N.,** Nourelfath M. and Souli M. (2011). Metaheuristic algorithms for optimization of infrared heating in thermoforming. *International Journal of Metaheuristics*, 1, 199-221. | | | |
| 1. **Nahas N.** and Dao T.-M. (2010). Harmony search algorithm: application to the redundancy optimization problem. *Engineering Optimization*, 42(9), 845-861. | | | |
| 1. **Nahas N.,** Nourelfath M. and Ait-Kadi D. (2008). Optimal design of series-parallel production lines with unreliable machines and finite buffers. *International Journal of Production Research*, 47(14), 3741-3774. | | | |
| 1. Khatab A., **Nahas N.** and Nourelfath M. (2009). Availability of K-out-of-N:G systems with non-identical components subject to repair priorities. *Reliability Engineering and System Safety*, 94(2), 142-151. 2. **Nahas N.,** Khatab A., Ait-Kadi D. and Nourelfath M. (2008). An extended great deluge algorithm for optimization of preventive maintenance for multi-state systems. *Reliability Engineering and System Safety*, 93(11), 1658-1672. 3. Nourelfath M., **Nahas N.** and Montreuil B. (2007). Coupling ant colony optimization and the extended great deluge algorithm for the discrete facility layout problem. *Engineering Optimization*, 39(8), 953-968. 4. **Nahas N.,** Nourelfath M. and Ait-Kadi D. (2007). Coupling ant colony and the degraded ceiling algorithm for the redundancy allocation problem of series-parallel systems. *Reliability Engineering and System Safety*, 92(2), 211-222. 5. **Nahas N.,** Ait-Kadi D. and Nourelfath M. (2006). A new approach for buffer allocation in unreliable production lines. *International Journal of Production Economics*, 103 (2), 873-881. 6. Nourelfath M., **Nahas N.** and Ait-Kadi D. (2005). Optimal design of series production lines with unreliable machines and finite buffers. *Journal of Quality and Maintenance Engineering*, 11(2), 121-138. 7. Nourelfath M. and **Nahas N.** (2005). Quantized Hopfield networks for reliability optimization under budget and weight constraints. *Journal of Quality and Maintenance Engineering*, 11(2), 139-151. 8. **Nahas N.** and Nourelfath M. (2004). Ant system for reliability optimization of series system with multiple-choice and budget constraints. *Reliability Engineering and System Safety*, 87, 1-12. 9. Nourelfath M. and **Nahas N.** (2003). Quantized Hopfield networks for reliability optimization. *Reliability Engineering and System Safety*, 81, 191-196. | | | |
| **Scientific Conferences (with proceedings)**   1. **N. Nahas** and Nourelfath M. (2015). Buffer allocation, machine selection and preventive maintenance optimization in unreliable production lines. 6th IESM Conference, October 2015, Seville, Spain. 2. **N. Nahas**, (2014). Buffer Allocation and Preventive Maintenance Optimization in Unreliable Production Lines. 20th Conference of the International Federation of Operational Research Societies (IFORS'14), July 13-18, 2014, Barcelona, Spain 3. Nourelfath M., **Nahas N**. (2013). Modèle d'intégration de la production, la maintenance et la qualité. ROADEF, 2013 April, Troyes, France. 4. **Nahas N**., Nourelfath M. and Gendreau M. (2012). Tabu search for assembly/disassembly network design*. 4th International Conference on Information Systems, Logistics and Supply Chain*, Quebec, August 26-29. 5. **Nahas N**. and Nourelfath M. (2012). Joint redundancy and imperfect preventive maintenance optimization*.4th International Conference on Information Systems, Logistics and Supply Chain*, Quebec, August 26-29*.* 6. **Nahas N**. and Nourelfath M. (2012)*.* A non-linear threshold accepting algorithm for the facility layout problem*.4th International Conference on Information Systems, Logistics and Supply Chain*, Quebec, August 26-29*.* 7. **Nahas N.** and Dao T.-M. (2009). Harmony search algorithm for the redundancy allocation problem: a case study. *The 20th IASTED International Conference on Modelling and Simulation*, Banf, Alberta, Canada, July 68. 8. **Nahas N.,** Nourelfath M. and Ait-Kadi D. (2007). A two-phase extended great deluge algorithm for the dynamic layout problem. *International Conference on Industrial Engineering and Systems Management* (*IESM 2007*), Beijing, China, 30 may - 2 June. 9. Nourelfath M., **Nahas N**. and Montreuil B. (2007). Ant colony optimization and the degraded ceiling algorithm for the discrete facility layout problem. *International Conference on Industrial Engineering and Systems Management (IESM 2007),* Beijing, China, 30 may - 2 June. 10. Khatab A., **Nahas N**. and Nourelfath M. (2006). Availability evaluation of multicomponent systems under repair policies: a generalized kronecker-based approach. *IEEE SSSM conference*, 2006, Troys (France), 25-27 october. 11. **Nahas N**., Nourelfath M. and Ait-Kadi D. (2006). Selecting machines and buffers in unreliable series-parallel production lines. *IEEE SSSM conference*, 2006, Troys (France), 25-27 october. 12. **Nahas N**., Nourelfath M. and Ait-Kadi D. (2006). Efficiently solving the redundancy allocation problem by using ant colony optimization and the extended great deluge algorithm. *International Conference on Probabilistic Safety Assessment and Management (PSAM) and ESREL*, New Orleans, USA, May 14-19. 13. Nourelfath M., **Nahas N**. and Montreuil B. (2006). Ant colony optimization and the extended great deluge algorithm for the discrete facility layout problem. *SCRO/Optimization Days Conference*, Montréal, 8-10 may. 14. **Nahas N.,** Nourelfath M. and Ait-Kadi D. (2005). Ant colonies for structure optimization in a failure prone production system. Marrakech, Morocco, *IESM 2005*, 16-19 May. 15. **Nahas N.,** Ait-Kadi D. and Nourelfath M. (2005). A new approach for buffer allocation in unreliable production lines. *Sixième congrés international de genie industriel*, Besanon, France, 7-10 June. 16. Nourelfath M., **Nahas N.** and At-Kadi D. (2005). An efficient Heuristic for the Redundancy Allocation Problem. *Journées de l'Optimisation,* Montréal, 09-11 may*.* 17. Nourelfath M. and **Nahas N.** (2004). Ant Colony Optimization to Redundancy Allocation for Multi-state Systems. *Fourth International Conference on Mathematical Methods in Reliability Methodology and Practice*, Santa Fe, New Mexico, 21-25 June. 18. **Nahas N**. and Nourelfath M. (2004). Ant system for optimal design of series production lines with unreliable machines and finite buffers. *5eme Confrence Internationale de Modelisation et de SIMulation (MOSIM'04),* Nantes, France, 1-3 September. 19. Nourelfath M. and **Nahas N**. (2004). Ant colonies in optimization of system reliability. *International Conference on Probabilistic Safety Assessment and Management* *(PSAM – ESREL)*, Berlin, 14-18 June, Springer Verlag, Volume 3, 1636-1641. 20. **Nahas N**., Nourelfath M. and Dao T.-M. (2003). Quantized Hopfield networks for job-shop scheduling. *5th International industrial engineering conference*, Quebec, 26-29 October. 21. **Nahas N.** and Nourelfath M. (2003). Ant System for reliability optimization. *5th International industrial engineering conference*. Quebec, 26-29 October. 22. Nourelfath M., Zeblah A., **Nahas N.** and Ait-Kadi D. (2003). Optimal design for series-parallel production lines with unreliable machines and finite buffers. *International conference on industrial engineering and production management (IEPM'03)*. Porto, 26-28 May. 23. Nourelfath M., **Nahas N**. and Zeblah A. (2003). Ant Colony approach to redundancy optimization for multi-state systems. *International conference on industrial engineering and production management (IEPM'03).* Porto, 26-28 May. 24. Nourelfath M. and **Nahas N.** (2003). Artificial neural networks for reliability optimization under budget constraints. International *conference on industrial engineering and production management (IEPM'03).* Porto, 26-28 May. 25. Nourelfath M. and **Nahas N.** (2002). Artificial neural networks for reliability optimization. *9th international multi-conference on Advanced Computer Systems, conference on production system design, supply chain management and Logistics*. Poland, 23-25 October. | | |
| **Book chapters**   1. **N. Nahas**, M. Nourelfath (2015). Iterated great deluge for the dynamic facility layout problem. In *Metaheuristics for Production Systems*. Springer, in press, 2015 2. **Nahas N**., Nourelfath M. and Ait-Kadi D. (2007). Ant colonies for performance optimization of multi-components systems subject to random failures. In *Swarm Intelligence: Focus on Ant and Particle Swarm Optimization*: 475-504, edited by Felix T. S. Chan and Manoj Kumar Tiwari, ISBN 978-3-902613-09-7. | | |
| **Technical report**   1. Nahas N., At-Kadi D. and Nourelfath M. (2005). A new approach for buffer allocation in unreliable production lines. *CENTOR centre, Laval University*, Technical report. | | |