



### Joseph Issa

Associate Professor

**O:** FE 0.66

**T:** 09.218950, Ext. 2938

**E:** joseph.issa@ndu.edu.lb

## Biography

Joined the faculty of engineering at Notre Dame University (NDU) in spring 2014 as an assistant professor in the department of Electrical, Computer and Communication Engineering (ECCE). Research areas of interest include processor architecture, performance, and power modeling for different processor architectures using different cloud computing and high-performance computation workloads. Conducted research in processor architecture, performance and power modeling for different processor architectures using different Cloud Computing (Hadoop and Memcached) and high-performance Computation workloads. Published several journal and conference papers related to my research area (refer to publication list below for details). Taught a number of undergraduate courses including computer processor architecture such as MIPS, GPU and ARM processors, microprocessors using x86 architecture, microcontrollers using PIC/MPLAB programming for embedded systems, computer networks using Java, and digital logic design using VHDL/FPGA. I also taught several software programming courses for engineering applications such as MatLab and Labview

## Peer-reviewed Journals

- Issa, J. (2016) Performance Characterization and Analysis for Hadoop K-means Iteration. Journal of Cloud Computing: Advances, Systems, and Applications, Springer Publisher. Volume 5, Issue 1 . ISSN: 2192-113X
- Issa, J. (2015) Performance Evaluation and Estimation Model using Regression Method for Hadoop WordCount, IEEE Access Journal (Impact Factor = 3.2), Volume 3.Pages 2784-2793. ISSN: 2169-3536
- Issa, J. (2014) Processing Time Analysis and Estimation for 3D Applications, IEEE Access Journal (Impact Factor = 3.2), Volume 2, Issue 1, Pages 1177-1186. ISSN: 2169-3536
- Issa, J., & Kassem, A. (2014) Disk I/O Performance-per-Watt Analysis for Cloud Computing. International Journal of Computer Applications. Published by Foundation of Computer Science, New York, USA. Volume 97(3), pages 23-27
- Issa, J. (2014) Hybrid Implementation and Performance Analysis for High-Performance Computation Workload. Journal of Computer Science, Science Publications Publisher. Volume 10, Issue 11, pages 1811-1818. ISSN: 1549-3636
- Issa, J. (2013) Performance and Power Analysis for High-Performance Computation Benchmarks. Central European Journal of Computer Science, Springer-Versita Publisher. Volume 3, Issue 1, pages 1-16 ISSN: 1896-1533
- Issa, J. (2012) Display Power Analysis and Design Guidelines to Reduce Power Consumption. Journal of Information Display, Taylor and Francis Publisher. Volume 13, Issue 4, pages 167-177. ISSN 1598-0316
- Issa, J., & Figueira, S. (2012) Hadoop and Memcached: Performance and Power Characterization and Analysis. Journal of Cloud Computing: Advances, Systems, and Applications, Springer Publisher. Volume 1, Pages 1-10. ISSN: 2192-113X
- Issa, J. (2012) Characterization and Performance Analysis for 3-D Benchmarks. Journal of Computers, Academy Publisher, Volume 7. No 11, Pages 2702-2710. ISSN 1796-203X.

## Peer-reviewed Conference Proceedings

- Issa, J., & Thoumy, M. (2017) Project Management Implementation for Telecommunication Networks. 30th International Business Information Management Association (IBIMA), Madrid, Spain.
- Issa, J. (2016) A Performance Estimation Model for LS-DYNA Computation Workload. Proceeding of 3rd IEEE Future Technology Conference (IEEE/FTC 2016), San Francisco, California, USA, Pages:1217 - 1222
- El Achkar, H, Zebian, M, & Issa, J. (2016) C-Thru: The Intelligent Device for Autonomous Visually Impaired Individuals. IEEE/ACTEA, 3rd International Conference on Advances in Computational Tools for Engineering Applications, Notre Dame University, Pages 241-244.
- Issa, J. (2016) Processor Performance Modeling using Regression Method. Proceeding of 18th IEEE Mediterranean Electrotechnical Conference (IEEE/MELECON 2016), Limassol, Cyprus. Pages 1-6
- Issa, J. (2015) Performance Analysis for a Cloud Computing Application. Proceeding of 15th IASTED International Conference on Software Engineering and Applications (SEA 2015), ACTA Press, Marina Del Rey, California, USA.
- Issa, J. (2014) A Novel Method to Estimate Performance for a High-Performance Computation Workload. 33rd IEEE International Performance Computing and Communications Conference (IPCCC 2014), Austin, Texas, USA. (Acceptance rate ~30%)
- Issa, J., & Figueira, S. (2012) A Performance Estimation Model for GPU-based systems. IEEE/ACTEA, 2nd International Conference on Advances in Computational Tools for Engineering Applications, Notre Dame University, Pages 279-283.
- Issa, J., & Figueira, S. (2012) Graphics Processor Performance Analysis for 3D Applications. IEEE/ACTEA, 2nd International Conference on Advances in Computational Tools for Engineering Applications, Notre Dame University, Pages 269-272.
- Issa, J. & Figueira, S. (2011) Performance and Power-Consumption Analysis of Mobile Internet Devices. 30th IEEE International Performance Computing and Communications Conference (IPCCC 2011), Orlando, Florida, USA. Pages 1-6. (Acceptance rate ~28%)
- Issa, J. & Figueira, S. (2011) Typical Mobile Applications Benchmark. MoBS-7: 7th Workshop on Modeling, Benchmarking, and Simulation, 38th International Symposium on Computer Architecture (ISCA 2011), San Jose, California, USA. (Acceptance rate ~20%)
- Issa, J., & Figueira, S. (2010) Graphics Performance Analysis and Modeling. IEEE/SCS SPECTS, International Symposium on Performance Evaluation of Computer and Telecommunication Systems, Ottawa, Canada. Pages 127-132. (Acceptance rate ~37%)

## CV

<http://www.ndu.edu.lb/Library/Assets/Files/Documents/NDUFacultyProfiles/NDUFacultyCVs/Joseph%20Issa.pdf>