Abdallah Kassem

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Biography

Abdallah Kassem has previously worked as research assistant at Polystim Neurotechnologies Laboratory of the Ecole Polytechnique de Montreal, Canada. He still cooperates with this laboratory doing some researches. He received his B.S in Microelectronics from University of Quebec in Montreal in 1992, his M.Sc and Ph.D in microelectronic from Ecole polytechnique de Montreal in 1996 and 2004 respectively. From 1996 to 2000, he taught computer architecture, microprocessors and digital electronic courses and laboratories at AUB, LAU in Lebanon. Dr. Kassem joined Notre Dame University-Louaize in 2005 as an assistant professor in the Electrical and Computer Engineering department. He was promoted to the rank of associate professor in 2011. His research interests include microelectronics design and test, VLSI, semiconductor device modeling and simulation, microprocessors/microcontrollers, re-used system design, engineering education, m-Heath and biomedical engineering. Dr. Kassem is a Professional Engineer in Lebanon (Ordre des Ingénieurs du Liban). He is a senior member of the Institute of Electrical and Electronics Engineering (IEEE) and Organizer and TPC member of many IEEE International conferences.

Peer-reviewed Journals

- Charles Sawma, Ahmad Hassan, Abdallah Kassem, Mohamad Sawan, "Bidirectional Parallel Capacitive Data Links: Experimental Measurement and System Modeling", Submitted to IEEE Access Journal, 2017.
- Charles Sawma, Ahmad Hassan, Abdallah Kassem, Mohamad Sawan, "Bidirectional Parallel Capacitive Data Links: Experimental Measurement and System Modeling", Submitted to IEEE Access Journal, 2017.
- A Harb, C. Yaacoub, A. Kassem, C. Baena, "Assessment and Analysis of Factors Depicting the International Expansion Process of Mobile Network Operators: Case of Zain Telecom," Will appear in the Int. J. Technological Learning, Innovation and Development, Vol. 9, No 2. 2017.
- A. Kassem, M. Hamad, C. Bechara and M. Khattar, "An Educational Board for Teaching Microcontroller System Design laboratory", International Journal of Computing & Information Sciences, IJCIS, Vol. 12, pp. 1-9, 2016.
- Foulwa Ezzeddine, Ahmad Diab, Abdallah Kassem, Ahmad Rifai Sarraj,"Studying Mental Visual Imagery and Action Observation Using Electro-Oculogram (EOG)", Jacobs Journal of Physical Rehabilitation Medicine, Vol. 2, pp. 1-7, 2016.
- J. Issa, and A. Kassem, "Disk I/O Performance-per-Watt Analysis for Cloud Computing", International Journal of Computer Applications, Foundation of Computer Science, New York, USA, Volume 97(3), pp. 23-27, 2014.
- Marianne Khlat, Atef H. Harb and Abdallah Kassem, "Lean Manufacturing: Implementation and assessment in the Lebanese Pharmaceutical Industry", International Journal of Computing and Optimization (JCO), Vol. 1, no. 2, pp. 47-62, 2014.
- Atef H. Harb, Marianne Khlat, and Abdallah Kassem, "Relationship between the Application of Lean Tools on different employees' levels and productivity of Firms in Lebanon", International Journal of Arts and Commerce, Vol. 3, no. 5, pp. 151-165, 2014.
- David Semaan, Atef Harb and Abdallah Kassem, "Reliability and Accuracy of Neural Networks for Exchange Rate", the International Journal of Digital Information and Wireless Communications, (IJDIWC), Vol. 4, no. 4, pp. 447-457, 2014.
- A. Kassem, M. Sawan, M. Hamad, and A. Haidar, "Toward a Miniaturized Generation of Ultrasonic-based

Devices", World Scientific, Journal of Circuits, Systems, and Computers (JCSC), Vol. 16, pp. 1027-1044, December 2007.

- A. Kassem, M. Sawan, M. Boukadoum and A. Haidar "Perception SoC Based on an Ultrasonic Array of Sensors: Efficient DSP Core Implementation and Subsequent Experimental Results", EURASIP, Journal on Applied Signal Processing, Vol. 7, pp. 1071-1081, July 2005.
- A. Kassem, M. Sawan, and M. Boukadoum "A New Digital Scan Conversion Architecture for Ultrasonic Imaging Systems", World Scientific, Journal of Circuits, Systems, and Computers (JCSC), Vol. 4, pp. 367-382, April 2005.
- M. Sawan, R. Chebli, A. Kassem, "Integrated Front-End Receiver For A portable Ultrasonic System", Kluwer, Journal of Analog Integrated Circuits and Signal Processing, Vol. 36, pp. 57–67, July 2003.

Peer-reviewed Conference Proceedings

- Bassil H, Moubarak H., Kassem A., Hamad, M., and El Moucary C., " Smart Real Time Portable Multichannel Data Loggers," will appear in the 29th IEEE International Conference on Microelectronics, ICM2017, 2017. Indexed IEEExplore
- Nawfal E., Aoun A., Hamad M., El Moucary C., and Kassem A., "MedBed: Smart Medical Bed", Will Appear in the 4th International Conference on Advances in Biomedical Engineering 2017 (ICABME'17), 2017. Indexed IEEExplore
- Kassem A., Hamad, M.; El Moucary, C. and Fayad, E., "A SMART DEVICE FOR THE DETECTION OF HEART ABNORMALITY USING R-R INTERVAL," 28th IEEE International Conference on Microelectronics, ICM2016, pp.263-296, 2016. Indexed IEEExplore
- Jamous G., Saad E., Geagea M., ElMurr S. and Kassem A., "A SMART LOCK SYSTEM USING WI-FI SECURITY," Proceeding of the International Conference on Advances in Computational Tools for Engineering Applications, ACTEA 2016, pp. 222-225, 2016. Indexed IEEExplore
- Harb A., Kassem A., Chartouni M. A. and Chaaya L. B., "Effects of Warehouse Management and engineering system on cost reduction and operations improvement," 2016 Sixth International Conference on Digital Information Processing and Communications (ICDIPC), pp. 8-12, 2016. Indexed IEEExplore
- Frewat G., Baroud C., Sammour R., Hamad M. and Kassem A., "Android Voice Recognition Application with Multi Speaker Feature", Proceedings of the 18th IEEE Mediterranean Electrotechnical Conference (MELECON 2016), pp. 1-5, 2016. Indexed IEEExplore
- Kassem, A., Hamad, M.; El Moucary, C.; "A Smart Spirometry Device for Asthma Diagnosis", 37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBS), pp. 1629-1632, 2015. Indexed IEEExplore
- Charles Sawma, Mohamad Sawan, Abdallah Kassem, "Capacitive Data Links Intended for Implantable Medical Devices: A Survey", the 3rd International Conference on Advances in Biomedical Engineering 2015 (ICABME'15), pp. 266-269, 2015. Indexed IEEExplore
- Christelle Nasrany, Riwa Bou Abdou, Abdallah Kassem and Mustapha Hamad, "S2LV–A Sign to Letter and Voice Converter", the 3rd International Conference on Advances in Biomedical Engineering 2015 (ICABME'15), pp. 189-192, 2015. Indexed IEEExplore
- Harb, A.; Yaacoub, C.; Kassem, A.; Baena, C., "Internationalization process of a mobile operator: Case of Zain Telecom," 2015 Fifth International Conference on Digital Information and Communication Technology and its Applications (DICTAP), pp.159-164, 2015. Indexed IEEExplore
- Karami, N.; Moubayed, N.; Kassem, A., "Autonomous water heater current optimizer," 2015 Third International Conference on Technological Advances in Electrical, Electronics and Computer Engineering (TAEECE), pp.1-6, 2015. Indexed IEEExplore
- David Semaan, Atef Harb and Abdallah Kassem, "Forecasting Exchange Rates: Artificial Neural Networks Vs Regression", the Third International Conference on e-Technologies and Networks for Development (ICeND2014), pp.156-161, April 2014 (Selected paper to publish in an International Journal of Digital Information and Wireless Communications). Indexed IEEExplore
- Hanine El Hayek and Jessica Nacouzi, Abdallah Kassem, Mustapha Hamad and Sami El-Murr, "Sign to Letter Translator System using a Hand Glove", the Third International Conference on e-Technologies and Networks for Development (ICeND2014), pp.146-150, April 2014. Indexed IEEExplore
- A. Kassem, M. Hamad, C. El-Moucary, G. Bou Jaoude, E. Neghawi and C. Merhej, "Asthma Care Apps," the 2nd International Conference on Advances in Biomedical Engineering 2013 (ICABME'13), pp. 42-45, 2013. Indexed IEEExplore
- G. Daou, A. Kassem, M. Hamad and C. El-Moucary, "FPGA Implementation of a Three-Way Asynchronous DDR2 Memory Controller," 2nd International Conference on Advances in Computational Tools for Engineering Applications (ACTEA), 2012, pp.334-337, Dec. 2012. Indexed IEEExplore
- C. El Moucary, B. El Hassan, A. Kassem, S. Mitri, J. Rehban, Y. Nemer, "Multiplexing stereo signals using digital watermarking," 2nd International Conference on Advances in Computational Tools for Engineering Applications (ACTEA), 2012, pp.24-28, Dec. 2012. Indexed IEEExplore
- Nayif Saleh, Ali Massoud Haidar, Abdallah Kassem and Lina Nimri "Neuro-SRAM Technology", Proceedings of the 10th IEEE International NEWCAS Conference, pp.89-92, July 2012. Indexed IEEExplore

- J. Farjo, M. Hamouche, J. Aoun, M. Hamad and A. Kassem, "Speaker Identification on compactRIO", Proceedings of the 16th IEEE Mediterranean Electrotechnical Conference (MELECON 2012), pp. 399–403, March 2012. Indexed IEEExplore
- A. Kassem, M. Hamad, "A Microcontroller-Based Multi-Function Solar Tracking System", Proceedings of the 5th IEEE International Systems Conference (SysCon 2011), pp. 13-16, April 2011. Indexed IEEExplore
- A. Kassem, M. Hamad, Z. Chalhoub, and S. El Dahdaah "An RFID Attendance and Monitoring System for University Applications", Proceeding of the 17th IEEE International Conference on Electronics, Circuits, and Systems, ICECS 2010, pp. 853-856, Dec. 2010. Indexed IEEExplore
- A. Kassem, M. Hamad and J. Haddad "Real Time Video Streaming over Bluetooth using Software Technique", Proceeding of the International Conference on Advances in Computational Tools for Engineering Applications, ACTEA 2009, pp. 225-229, 2009. Indexed IEEExplore
- A. Kassem, M. Hamad and E. Haidamous "Image Compression on FPGA using DCT", Proceeding of the International Conference on Advances in Computational Tools for Engineering Applications, ACTEA 2009, pp. 320-323, 2009. Indexed IEEExplore
- H. Osseily, A.M. Haidar and A. Kassem "Implementation of RSA Encryption Using Identical Modulus", Proceeding of the International Conference on Information & Communication Technologies, pp. 463-468, 2008.
- A. Haidar, M. J. Hamdan, M. B. Rashid, H. Hamieh, A. Issa, and A. KASSEM, "A Novel Neural Network Ternary Arithmetic Logic Unit", Proceeding of the International Conference on Information & Communication Technologies, pp. 593-596, 2008
- A. Kassem, R. Jabr, G. Salamouni and Z. K. Maalouf, "Vehicle Black Box System ", Proceedings of the 2nd IEEE International Systems Conference, 2008. Indexed IEEExplore
- A. Kassem, M. Hamad, and M. Sawan, "An Efficient SoC Dedicated to Ultrasonic Digital Imaging Systems", Proceedings of the 6th IEEE International Workshop on SoC for Real-Time Applications, 2006. Indexed IEEExplore
- M. Hamad, A. Kassem, R. A. Jabr, C. Bechara and M. Khattar, "A PIC-Based Microcontroller Design Laboratory", Proceedings of the 6th IEEE International Workshop on SoC for Real-Time Applications, 2006. Indexed IEEExplore
- A. Kassem, J. Wang, A. Khouas, M. Boukadoum, and M. Sawan, "Pipelined Sampled-Delay Focusing CMOS Implementation for Ultrasonic Beamforming", Proceedings of the 3rd IEEE International Workshop on SoC for Real-Time Applications, pp. 247-250, 2003. Indexed IEEExplore
- A. Kassem, M. Sawan, and M. Boukadoum "A Scan Conversion CMOS Implementation for a Portable Ultrasonic System", CCECE, 2003, pp. 1461-1464. Indexed IEEExplore
- A. Kassem, J. Wang, A. Khouas, M. Sawan, and M. Boukadoum, "Variable Delay CMOS Implementation for Ultrasonic Beamforming", the 14th International Conference on Microelectronics, pp. 127-130, 2002. Indexed IEEExplore
- K. El-Sankary, A. Kassem, R. Chebli, M. Sawan, "Low Power/Voltage 10bit-50MSPS Pipeline ADC dedicated to ultrasonic receivers", the 14th International Conference on Microelectronics, pp. 219-222, 2002. Indexed IEEExplore
- R. Chebli, A. Kassem, M. Sawan, "Logarithmic Programmable Preamplifier Dedicated to Ultrasonic Receivers", the IEEE, ISCAS, Vol. I, pp. 673-676, 2002. Indexed IEEExplore
- R. Chebli, A. Kassem, M. Sawan, "Integrated Front-End Preamplifier Dedicated to a Portable Echograph", the 8th IEEE International Conference on Electronics, Circuits and Systems, pp. 1103-1106, 2001. Indexed IEEExplore
- A. Kassem, J. Davidson, J-L. Houle, Y. Kayssi, M. Mansour, "Simulation and Implementation of DCT for Image Processing Applications", Second LAAS International Conference on Computer Simulation, 1997.
- A. Kassem, J. Davidson, J-L. Houle, "FPGA Implementation of Discreet Cosine Transform 4x4, 8x8 and 16x16", WORKSHOP on Field-Programmable Devices FPD'96.
- A. Kassem, J. Davidson, J-L. Houle, "FPGA Implementation of Discreet Cosine Transform (DCT) Algorithm", WORKSHOP on Field-Programmable Devices FPD'95.

Exhibitions, Competitions and Creative Work

- Advisor of the 1st price award of the best project during the competition organized by the IEEE Communications Society Lebanon Chapter. It was the 3rd IEEE Lebanon Communications Student Competition 2013 (IEEE LCSC'13) that took place at the Lebanese American University LAU - Byblos campus, on Saturday June 29, 2013. This project entitled "Asthma Care Apps", realized by students Gilles Abou Jaoude, Cesar Merhej and Elie Neghawi.
- Jury member of the Final Year Project organized by the order of Engineers North Lebanon since 2011.
- Senior Member of IEEE
- Member of the order of Engineers and Architects of Lebanon

Esteemed indicators

- Organization member and a Technical Program Committee Chair of the IEEE EBECEGC2018, Lebanon, April 2018.
- Organization member and a Technical Program Committee Chair of the IEEE DINWC2018, Lebanon, April 2018.

- Organization member and a Technical Program Committee Chair of IEEE ICM 2017, Lebanon, Dec. 2017.
- Organization member and a Technical Program Committee Chair of IEEE ICABME 2017, Lebanon, Oct. 2017.
- Organization member and a Technical Program Committee Chair of the IEEE CSCEET2017, Lebanon, April 2017.
- Organization member and a Technical Program Committee Chair of the IEEE EECEA2016, Lebanon, April 2017.
- Organization member and a Technical Program Committee Chair of the IEEE EEETEM2017, Lebanon, April 2017.
- Member of the Steering Committee and Organization Member of IEEE ICCA 2016-17.
- Member of the Executive Steering Committee of IEEE ICM since 2015.
- Organization member and a Technical Program Chair of the 3rd IEEE MECBME 2016, Lebanon, Oct. 2016.
- Organization member and a Technical Program Publication Chair of the 3rd IEEE ACTEA 2016, Lebanon, July. 2016.
- Organization member and a Technical Program Committee Chair of the 6th IEEE ICDIPC 2016, Lebanon, April. 2016.
- Organization member and a Technical Program Committee Chair of the 3rd IEEE EECEA 2016, Lebanon, April. 2016.
- Organization member and a Technical Program Committee Chair of the 5th IEEE DICTAP 2015, Lebanon, April. 2015.
- Organization member and a Technical Program Committee Chair of the 3th IEEE TAEECE 2015, Lebanon, April. 2015,
- Organization member and a Technical Program Committee Chair of IEEE ICABME 2015, Lebanon, Sept. 2015,
- Organization member and a Technical Program Committee Chair of the 3rd IEEE ICeND2014, 3rd CyberSec2014, Lebanon, April. 2014,
- Organization member and a Technical Program Committee Chair of LAAS 2014, Lebanon March 2014,
- Technical Program Committee Chair of the Special Session - Emerging biomedical wearable IEEE ICM 2014
- Organization member and a Local Arrangements Chair of the 17th IEEE MELECON 2014, Lebanon, April. 2014,
- Organization member and a Technical Program Committee Chair of IEEE ICABME 2013, Lebanon, Sept. 2013,
- Special Topics Chair of the 25th IEEE ICM 2013 Lebanon, Dec. 2013,
- Organization member and a Technical Program Committee Chair of IEEE ICABME 2013, Lebanon, Sept. 2013,
- Organization member and a Technical Program Committee Chair of IEEE ACTEA 2012, NDU, Dec. 2012,
- Publication chair IEEE ACTEA 2009,
- Member of the Technical Program Committee, IEEE ACTEA 2009, NDU, July 2009.
- Member of the Organizing Committee for the CTTACS held at NDU in 2007.
- Sessions Chair: (4) IEEE ACTEA 2012 and 2009, (3) IEEE MELECON 2012, 2014 and 2016, (1) IEEE SysCon 2011, (1) IEEE ICECS 2011,
- Technical Committee Member, Reviewer and Track Chair of The First Middle East Conference on Biomedical Engineering, 2011.
- Member of the Technical Program Committee IJEE,
- Member of the Technical Program Committee IJCDS-4,
- Technical Committee Member and Reviewer of IEEE ICEAC 2010 till 2013,
- Member of the Technical Program Committee IEEE SysCon 2013,
- Member of the Technical Program Committee ISWTA 2013,
- Member of the Technical Program Committee ICCVE 2013,
- Member of the Technical Program Committee ICEIT'2013,
- Member of the Technical Program Committee IEEE SysCon 2014,
- Member of the Technical Program Committee ICASNAM'2014,
- Member of the Technical Program Committee SIRS-2014,
- Member of the Technical Program Committee IEEE MELECON2014,
- Member of the Technical Program Committee ISWTA 2014,
- Member of the Technical Program Committee ICCVE 2014,
- Member of the Technical Program Committee ICESA'2014,
- Member of the Technical Program Committee ICCAAM' 2015,
- Member of the Technical Program Committee ICETES'2015,
- Member of the Technical Program Committee ICTAEECE'2015,
- Member of the Technical Program Committee IBMSGS' 2015,
- Member of the Technical Program Committee WSCNIS'2015,
- Member of the Technical Program Committee CITEF'14,
- Member of the Technical Program Committee DPNoC 2015,
- Member of the Technical Program Committee ICACCI Special Session on Advances in Satellite, Communications and Networking,
- Member of the Technical Program Committee ICTEL'2014,
- Member of the Technical Program Committee ICAET'2014,
- Member of the Technical Program Committee ICEEE'2014,
- Member of the Technical Program Committee SatComNet'14,
- Member of the Technical Program Committee MobiApps 2015,
- Member of the Technical Program Committee ICEPIT 2014,
- Technical Committee Member and Reviewer of The IEEE International Systems Conference SysCon since 2011,
- Designed Reviewer of The Microelectronics Journal, Elsevier, 2008,
- Reviewer of The International Journal of Circuit Theory and Applications, Wiley, 2010,
- Reviewer of The 6th FEA (AUB) Student Conference, 2009,
- Designed Reviewer of The ASCC2015, ICCSII 2012 till 2013, IEEE SysCon since 2012, SCOReD 2012,

ISIEA 2012, ICCSII 2013, ISIEA 2013, ROBIONETICS 2013, TIME-E 2013, TIME-E 2014, I4CT'2014, ICOCOE'2015, ROBIONETICS 2015, AR4MET'2015, IEEE SPICES 2015, I4CT'2015, IMACSI 2015, ISTMET 2015, PIAMSE'2015, ADVCIT'2014, REDEC2014, REEGETECH'2015, WSWAN'2015, ICITeS'2013, APMediaCast 2015, ICCEREC 2015, IAICT 2014, NEWCAS 2009 till 2015, IEEE ISCAS 2009, NEWCAS 2009 till 2015, ICECS 2009 till 2013.

Patents

- A. Kassem, M. Hamad, C. El-Moucary, G. Bou Jaoude, and C. Merhej, "Asthma Care Apps," 2014.