

# CURRICULUM VITAE

**Farid Touati**

Associate Professor  
College of Engineering  
Qatar University

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## PERSONAL INFORMATION

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## EDUCATION

- Habilitation Qualification for Research Leadership by the French Ministry of Higher Education and Research (#2005-61-05261150728) in Electrical Engineering, 2007.
- Ph.D. in Electrical Engineering, Nagoya Institute of Technology, Nagoya, Japan, 1995.
- M.Sc. in Electrical Engineering, Nagoya Institute of Technology, Nagoya, Japan, 1992.
- B.Sc. in Electrical Engineering, Monastir College of Engineering, ENIM, Tunisia 1988.

## Continuing Education:

- Regular seminars and workshops of the Office of Faculty and Instructional Development (OFID) Program.
- Workshop on “BIPV”, QEERI/QSTP, February 2016 (Won a poster award).
- Workshop on “Qatar Power System Transition to A Smart Grid”, January 2016, Qatar University.
- Online Assessment System (OAS) Workshop on “Hands On Training On The Online Assessment Management System”, Nov 2015, Qatar University.
- Seminar on HVAC and IAQ monitoring, by Gray Wolf sensing Solutions USA, Oct 2015, Doha.
- Seminar on “Intellectual Property” by QU Office of Academic Research, 19/23 March 2014.
- Workshop on “Program Assessment” by Dr. Mary Allen, September-2014, Qatar University.
- Workshop on “Program Assessment” by Dr. Ashley Ater Kranov, September-2014, Qatar University.
- Workshop on “Program Assessment” by Gloria Rogers, September-2014, Qatar University.
- Workshop on “Program Assessment”, February 12-13, 2014, Qatar University.
- Seminar on “Back to Basics RF Fundamentals”, September-2014, Qatar University.
- Seminar on “International Solar Car Challenges” by Mr. Hans Tholstrup, September-2014, Qatar University.
- Arranged a 4-day visit to Brescia University and GEFran SENSORI Spa and GEFran ELETTRONICA Spa in Italy (14-18 April 2013) with 3 students from the ELEC371 (Sensors and Instrumentation) course.
- Solar Qatar Summits, since 2013, Qatar.

- Workshop on “Refining Technology & Environment Management” by COSMO OIL CO., LTD, Japan, 22 January - 01 February 2012.
- Research visits to collaborating institutions in NPRP projects since 2012.

## EMPLOYMENT HISTORY

Date	Description
2010-present	Associate Professor, EE Department, College of Engineering, QU.
2002-2010	ECE Department, College of Engineering, Sultan Qaboos University Associate Professor (2008-2010), Assistant Professor (2002-2008)
Jan 2011-July 2002	Assistant Professor, ECE Department, Tuskegee University, AL, USA.
1997-2000	Assistant Professor, Dammam College of Technology, Saudi Arabia.
1995-1997	Research Associate, ECE Department, Nagoya Institute of Technology (NIT), Japan.
1993-1995	Teaching Assistant, ECE Department, Nagoya Institute of Technology (NIT), Japan.
1998-1999	Engineer, Gabes Industry of Cement (SCG), Tunisia.

## AWARD AND RECOGNITION

- Recipient (LPI), **1<sup>st</sup> QU QF/QSTP Proof-of-Concept (PoC)**, QAR1,333,600.00, 2016-2107.
- Recipient of several grants for research from QNRF (NPRP, UREP, PDRA, GSRA) in Qatar
- Recipient of several grants for research at Qatar University, Sultan Qaboos University (Oman), and Tuskegee University at AL-USA.
- Poster award in BIPV workshop, by QEERI/QSTP, February 2016.
- Consultancy project for Daewoo Shipbuilding & Marine Engineering Co., Ltd. (DSME), “Renewable Energy Business Opportunities in Duqum-Oman”, 2008. Contract number: AS/ENG/ECED/08/04, \$73,500.
- My project (LPI) NPRP 4-1207-2-474 “Wireless Biotelemetry for Ubiquitous Healthcare Applications” has been presented in QNRF magazine as one of the “success stories” for research projects in Qatar in 2015.
- Supervised students participating and winning various competitions:
  - Always top 10 in Shell Ecomarathon competitions since 2011 (Lausitz, Germany) till 2016 (Manila, Philipines).
  - GCC Senior Design Project competition, 1<sup>st</sup> prize 2014 (Doha, Qatar), 2<sup>nd</sup> place 2013 (Riyad, KSA), and 1<sup>st</sup> prize 2012 (Duabi, UAE).
  - 2<sup>nd</sup> place in UREP/QNRF competition, Qatar, 2014
  - 2<sup>nd</sup> place in National Instruments MENA region Competition, Beirut, Lebanon, 2013.
- CENG Research Week, ICT, 30 March 2011, won 1<sup>st</sup> Prize.
- Poster competition, QU research forum 2011 (31-10-2011), won 1<sup>st</sup> Prize.
- Habilitation Qualification by the French Ministry of Higher Education and Research: (2005-61-05261150728).
- Outstanding contribution to ABET team visit for ABET accreditation of the Electrical Eng. Dept. of Qatar University.

- Certificate of recognition of outstanding efforts to students over 2002-2007 (Cohort 2002), Sultan Qaboos University, Oman.
- Certificate of quality teaching and service, college of Technology at Dammam, Saudi Arabia, 2000
- Certificate of appreciation, 6<sup>th</sup> Annual IEEE Technical Exchange Meeting April 20-21, 1999, King Fahd University of Petroleum & Minerals (KFUPM), Saudi Arabia.
- Recognition of superior service to Science Education, The New York Academy of Sciences (NYAS)
- Awarded a merit scholarship for 6 years in microelectronics leading to PhD from the Ministry of Higher Education (MONBUSHO) of Japan, 1989-1995.
- Founding member of TSC Tunisia (1994)
- The Tunisian Scientific Consortium (TSC, 1995-1999)
- Chairman of the Legislative Board (1995-1999)

### CONSULTING EXPERIENCE

Consultancy Project for Daewoo Shipbuilding & Marine Engineering Co., Ltd. (DSME), “Renewable Energy Business Opportunities in Duqum-Oman”, 2008. Contract number: AS/ENG/ECED/08/04, \$73,500.

### RESEARCH INTERESTS

- Sensors
- Embedded system design
- Biomedical systems (u-healthcare)
- Organic electronics

### TEACHING

Undergraduate Courses:

#	Semester/ Year	Course code and name	Class Size	Students’ evaluation scores
	Fall 2010	Electronics Engineering (ELEC333), Electronics Engineering Lab (ELEC334), Senior Design Project 1 (ELEC498)	>30 (ELEC333/334)	82.7
	SP 2011	Fundamentals of Electronics (ELEC231, embedded lab, with Honors), Senior Design Project 1 (ELEC499)	>26 (ELEC231)	87.00
	Fall 2011	Independent Study (ELEC495), ELEC333, ELEC334	>28 (ELEC333/334)	83.4
	SP 2012	Electrical Circuits 2 (ELEC202), Electrical Circuits 2 Lab (ELEC203), ELEC499	>31 (ELEC202/203)	85.6
	Fall 2012	Sensors & Instrumentation (ELEC371, embedded lab), Independent Study	>27 (ELEC371)	97.65

		(ELEC495), ELEC498, ELEC499		
SP 2013		ELEC231, ELEC498, ELEC499	>14 (ELEC231)	86.9
Fall 2013		ELEC371 (with Honors), ELEC499, GENG699	>12 (each section)	73.0
SP 2014		ELEC231, DENG699, GENG699, ELEC498	30 (ELEC231)	89.4
FL2014		ELEC371, 2xDENG699, 2xGENG699, ELEC498, ELEC499	35 (ELEC371)	92.3
SP2015		ELEC231 (with Honors), ELEC499, 2xDENG699, GENG699	>25 (ELEC231)	72.3
FL2015		ELEC371, ELEC498, 2xDENG699, GENG699	> 22 (ELEC371)	81.5
SP2016		ELEC231 (with Honors), ELEC499, ELEC498	>36 (ELEC231)	-

**Sensors & Instrumentation (ELEC371)** course has been offered at the first time at The Electrical Engineering Department of QU since Fall 2012. These courses are proposed by myself to bridge to fill a gap. This new course is a pre-requisite for new upper biomedical engineering courses.

#### Graduate Courses:

Course	Level/Place	Year	Comment
Selected Topics in Communications ECCE6134	Graduate/Sultan Qaboos University	FL2006	Topic: Ultra-wideband technology 3.1-10.6 GHz
Optical Fiber Communications (EE 590)	Graduate/ Tuskegee University, AL, USA	SP2002	
CMOS Analog Design (EE 586)	Graduate/ Tuskegee University, AL, USA	FL2001	

#### Project Supervision:

- 1- PhD Supervision (Mallick Shoaib, “*Organic Sensors for gas salinity measurement*”), since Fall 2014, EE Dept., CENG of QU.
- 2- PhD Supervision (Ali Shikoh, “*High performance electrodes for solar cells*”), since Spring 2014, EE Dept., CENG of QU.
- 3- MS Supervision (Muhammad Arshad, “*Energy harvesting for WSN* ”, since Fall 2014.
- 4- MS Supervision (Sami Suliman Abueida, “*Towards Safe Indoor Air Quality in View of the On-Going Massive development in the State of QATAR* ”, since Fall 2013, EE Dept., CENG of QU.
- 5- MS Supervision (Vinod Villoth, “*Design and Simulation of Transceivers for Chip-to-Chip Optical Interconnects and Optical Communications* ”, April 2002, ECE Dept., College of Eng., Tuskegee University (Alabama, USA).

- 6- MS Supervision (Bouزيد Mohamed, “*Conception et Simulation des Amplificateurs CMOS et BiCMOS à Faible Bruit pour les systèmes UWB*”, 2007, EE Dept., ENIS, Sfax, Tunisia).
- 7- MS Supervision (Al-Zidi Khaled, “*Design of a Low-Supply Voltage SiGe LNA for 3.1-10.6 GHz Ultra-Wideband Front-end Applications*”, 2007, ECE Dept., College of Eng., SQU (Oman).
- 8- PhD Supervision (Skander Douss, “*Desing of 3.1-4.8-GHz CMOS TFI-OFDM UWB Mixer*”), 2009, The National School of Engineering at Sfax (ENIS), Tunisia.
- 9- Senior Design Project: 11 projects (at QU)

**Awards from SDP:**

- 2<sup>nd</sup> award in GCC senior design engineering competition, Ryadh 2013
- 2<sup>nd</sup> award in National Instrument competition, Beirut 2013.
- Shell Eco-Marathon Asia/Manila 5-9 Febr 2014, top 9.
- UREP12 top 3 projects, QNRF competition 2014.

## SERVICE

### Committees (at Qatar University):

#### University:

- Fall 2011-SP2012 Member, Academic Program Review & Curriculum Enhancement, Qatar University.
- Organized seminars on “Imaging in the infrared and UV” and “How CD and `DVD work”, Female Eng. Bldg. 0171 auditorium, 16 Nov 2015.
- Evaluated proposals for QU grants, Nov 2014 - Nov 2015
- Ad-hoc; Our NPRP 6 - 203 - 2 - 086 was selected by the CENG Research and Postgraduate Studies to be presented as one of the success stories by the VP for Research in May 2015 QNRF forum (prepared materials).

#### College of Engineering:

- Fall 2015-present: Member, Strategic Planning Committee
- Fall 2013-Spring 2015: **Chair**, Facilities and Safety committee
- Fall 2011- SP2012 Member, Quality Assurance & Curriculum
- 2015-Present: Jury of MSc. And PhD theses
- 2011-Present: Supervisor of CENG students for Shell Eco-Marathon (SEM) Competition, Lausitz/Germany 2011 till Manila/Philipines 2016, with CENG solar car “GERNAS”.
- 2011-Present: Member, CENG Gas Processing Centre.
- **Chaired** a Workshop on First Aid for the College of Engineering, Monday 24th February 2014, Room# (F 101) G248 next to the GPC Office at the New Research Building.

#### Department:

- Fall 2011-SP2013 **Chair**, Curriculum Committee
- Fall 2013-2015: Member/**Chair** (2014-2015), Strategic Planning Committee
- Fall 2015-Present: Member, Curriculum Committee
- Fall 2013-Spring 2015: **Chair**, Facilities and Safety committee
- February 2015-June 2015, **Chair**, ad-hoc Promotion Committee

- Fall 2014-Present: Honors students teaching (**supervisor**)
- Spring 2014-Present: **Reviewer** of SSR for ABET Accreditation

#### **Committees (Outside Qatar University):**

- IEEE RAMCOM 2016 Program Committee, Member, Madrid Spain (<http://cs-conferences.acadiau.ca/ant-16/>)
- Reviewer for several high-tier journals: International Journal of Green Energy, Applied Surface Science, Elsevier Organic Electronics, Elsevier Microelectronics, Elsevier International Journal of Wireless Personal Communications, Springer International Journal of Biomedical Sciences, USA International Association of Science and Technology (IASTED), IST Transactions of Biomedical Sciences and Engineering, and IST Transactions of Renewable and Sustainable Energy.
- Consistent TPC member of several flagship conferences since 1999: IEEE RAMCOM 2016, IEEE GCC conference, SETIT, ICCCP, IEEE IDT, E-MediSys, DTIS, ICSPC, IEEE MWSCAS-NEWCAS, IEEE IFIP (WOCN, NetCon), ICM.
- Reviewer of RSC2014 book chapters and TPC member of The International Workshop on Robots and Sensor Clouds
- TPC member and session chair in 2013 7th IEEE GCC Conference and Exhibition (GCC).

#### Professional Societies:

- Member of Institute of Electrical and Electronics Engineers (IEEE).

#### Regional/Local Professional Service:

- Since 2012: Tutor for Stars of Sciences program of QSTP (appreciation certificate).

## **SCHOLARLY ACHIEVEMENTS**

#### **Papers under review:**

1. Zubair Ahmad, Khasan S. Karimov, Farid Touati, S.A.Moiz, Rashid Ali, R.A. Shakoor, and N. J. Al-Thani, "Impact of moisture contents on the performance of organic bi-layer ITO/OD thermo-electric cells", submitted to Journal of material science: materials in electronics (Springer, IF=1.57, Q2), 15 April 2016.
2. Hatf Nouri, Farid Touati and Murat Uysal, "Diversity-Multiplexing Tradeoff for Log-Normal Fading Channels", submitted to the IEEE Transactions on communications (IF=2.00, 2014), revision submitted April 2016.
3. Zubair Ahmad, Farid Touati, R. A. Shakoor, and N. J. Al-Thani, "Study of a ternary blend system for bulk heterojunction thin film solar cells", revision submitted to Chinese Physics B (IOP Publishing- Institute of Physics, IF=1.603, 2014, Q2), 6 April 2016.
4. Farid Touati, Alessio Galli, Damiano Crescini, Paolo Crescini, Davide Alghisi, Adel Ben Mnaouer, "A Novel Multi-Parametric Wireless Sensor Node Design for Efficient Environmental Energy Harvesting", submitted to Remote Sensing of Environment (IF=6.393, 2014) (on 20 Febr16).
5. Ali Shikoh, Zubair Ahmad, and Farid Touati, "Integration of the inexpensive CuNWs based transparent counter electrode with Dye Sensitized Photo Sensors", submitted to RSC Advances (IF=3.84, 2015), 5 April 2016.
6. Zubair Ahmad, Jolly Bhadra, Farid Touati, Abdullah Alashraf, RA Shakoor, and NJ Al-Thani, "Flexible thermo-electro chemical cells using iodolyte HI-30 for conversion of low-grade heat to electrical energy", submitted to Journal of Power Sources (IF=6.227, 2014), March 2016

7. Asiya M. Al-Busaidi, Lazhar Khriji, Farid Touati, Mohd Fadlee Rasid, Adel Ben Mnaouer, "A Dynamic ECG Compression Scheme using Wavelet to Control the Size of the Payload Packets in Telecardiology Systems", submitted to The Journal of Signal Processing Systems (IF=0.6, 2014), Springer, April 2016.
8. Mohamad Izzat Azmer, Zubair Ahmad\*, Khaulah Sulaiman and Farid Touati, "Improvement of the VOPcPhO:P3HT composite based humidity sensor using electrospinning technique", submitted to Organic Electronics-Elsevier (IF=1.25) 2 Nov15.
9. Zhaozhao Zhu, Trent Mankowski; Kaushik Balakrishnan; Ali Sehpar Shikoh; Farid Touati; Mohieddine A Benammar; Masud Mansuripur; Charles M Falco, "Improved conductivity and stability of doped and undoped zinc oxide transparent conductive electrodes prepared by the sol-gel process followed by plasma treatment and protected by a reduced graphene oxide coating layer", submitted to Thin Solid Films (IF=1.9) 31 Oct 2015.
10. Farid Touati, Adel Mnaouer, Ochirkhand Erdene-Ochir, Waiser Mehmood, Ammad Hassan, and Brahim Gaabab, "A Novel Lightweight Encryption and Security Mechanisms for 6LowPAN-Enabled Ubiquitous Healthcare Monitoring", Journal of Network and Computer Applications (IF=2.23, 2014), submitted Dec 2015.
11. Farid Touati, Adel Mnaouer, Ochirkhand Erdene-Ochir, Waiser Mehmood, Ammad Hassan, and Brahim Gaabab, "Mobility Supported a Real-Time Ubiquitous Healthcare Testbed with Cloud-Based Data Logging" submitted to JOMS (IF=2.21, 2014) (Springer), 8 June 2015.
12. Khriji L., Al-Busaidi A.M., Touati F., Rasid M.F.A., Ben Mnaouer A. "Dynamic ECG Compression Technique for Low Power Telecardiology Systems", submitted to Biomedical Engineering Letters (IF=1.43, 2014), Springer, June 2015.

### Refereed Journal Papers:

1. Mansoor Ani Najeeb, Shahino Mah Abdullah, Fakhra Aziz, Zubair Ahmad, Saqib Rafique, S. Wageh, Ahmed A. Al-Ghamdi, Khaulah Sulaiman, Farid Touati, R.A. Shakoor and N. J. Al-Thani, "Structural, morphological and optical properties of PEDOT:PSS/QDs nano-composite films prepared by spin-casting Physica E: Low-dimensional Systems and Nanostructures, pp..., vol..., 2016, April 2016 (under press).
2. Zhaozhao Zhu, Trent Mankowski; Kaushik Balakrishnan; Ali Sehpar Shikoh; Farid Touati; Mohieddine A Benammar; Masud Mansuripur; Charles M Falco, "Sol-gel deposited aluminum-doped and gallium-doped zinc oxide thin-film transparent conductive electrodes with a protective coating of reduced graphene oxide", Journal of Nanophotonics (JNP) (IF=1.686, 2014, Q2), vo. 10 (2), pp. 026001-1 – 026001-7, 2016.
3. Zubair Ahmad, Farid Touati, Qayyum Zafar and Mutabar Shah, "Integrated Capacitive and Resistive Humidity Transduction via Surface Type Nickel Phthalocyanine Based Sensor", International Journal of ELECTROCHEMICAL SCIENCE (IF=1.5), 11 (2016), (under press).
4. Zhaozhao Zhu, Trent Mankowski; Kaushik Balakrishnan; Ali Sehpar Shikoh; Farid Touati; Mohieddine A Benammar; Masud Mansuripur; Charles M Falco, "Hybrid transparent conductive electrodes with copper nanowires embedded in a zinc oxide matrix and protected by reduced graphene oxide platelets", Journal of Applied Physics (IF=2.27, Q2), 119, 085303 (2016); doi: 10.1063/1.4942213.
5. Zubair Ahmad, Qayyum Zafar, Farid Touati; R. A. Abdul Shakoor; N.J. Al-Thani, "Study of  $\pi$ -conjugation effect of organic semiconductors on their optical parameters", Optical Materials (Elsevier, IF=1.981, 2014, Q2), 54 (2016), 94-97.
6. Farid Touati, M. A. Al-Hitmi, Noor Alam Chowdhury, Jehan Abu Hamad, and Antonio JR. San Pedro Gonzales, "Investigation of Solar PV Performance Under Doha Weather Using A Customized Measurement and Monitoring System", Renewable Energy (RE-Elsevier) (IF=3.476, 2014, Q1), 89, pp. 564-577, 2016.
7. Farid Touati, Alessio Galli, Damiano Crescini, Paolo Crescini, Adel Ben Mnaouer and Davide Alghisi, "Wireless Sensor Network dedicated to environmental monitoring", accepted for publication in "Tutto misure" Journal (IF=0.5), will appear 2016, ISSN 2038-6974. <http://www.affidabilita.eu/tuttomisura/Telematico.aspx?idNum=86>
8. Mohamad Izzat Azmer, Zubair Ahmad\*, Khaulah Sulaiman and Farid Touati, "Morphological and structural properties of VoPcPhO:P3HT composite thin films", Materials Letters-Elsevier (IF=2.49, Q1), vol. 164, (2016) pp. 605-608.
9. Karwan Wasman Qadir, Zubair Ahmad, Khaulah Sulaiman, Yap Chi Chin and Farid Touati, "Binary blend based Dye Sensitized Photo Sensor using PCPDTBT and MEH-PPV composite as a light sensitizer", Synthetic Metals (Elsevier, IF=2.25, Q2), vol. 210, pp. 392-397, 2015.

10. Kh.S.Karimov, Zubair Ahmad, and Farid Touati, "Flexible impedance and capacitive tensile load sensor based on CNT composite", *Chinese Physics B* (IOP Publishing- Institute of Physics, IF=1.603, 2014, Q2), vol. 25, no. 2, pp. 028801-1 - 028801-5, 2016.
11. Zubair Ahmad, Khasan S. Karimov, Noshin Fatima, Khaulah Sulaiman, and Farid Touati, "Flexible organic thermogalvanic cell with high Seebeck coefficient", *Journal of material science: materials in electronics* (Springer, IF=1.57, Q2), pp. 1-6, 2015.
12. Khasan S. Karimov, Zubair Ahmad, Farid Touati, M.Mahroof-Tahir, M. Muqet Rehman and S.Zameer Abbas, "Surface-Type Nonvolatile Electric Memory Elements Bases on Organic-on-Organic CuPc-H2Pc Heterojunction", *Chinese Physics B* (IOP Publishing- Institute of Physics, IF=1.603, 2014, Q2), vol 24, issue 11, pp. 10-18, 2015.
13. Farid Touati, Adel Mnaouer, Ochirkhand Erdene-Ochir, Waiser Mehmood, Ammad Hassan, Brahim Gaabab, Mohd Fadlee A Rasid, and Lazhar Khriji, "An Experimental Performance Evaluation and Compatibility Study of the Bluetooth Low Energy Based Platform for ECG Monitoring in WBANs", *the International Journal of Distributed Sensor Networks-Hindawi* (IF=0.67, 2014, Q4), vol. 2015, pp 1-12, 2015.
14. Zhu, Zhaozhao; Mankowski, Trent; Balakrishnan, Kaushik; Shikoh, Ali Sehpar; Touati, Farid; Benammar, Mohieddine; Mansuripur, Masud; Falco, Charles, "Ultra-high aspect ratio copper-nanowire-based hybrid transparent conductive electrodes with PEDOT:PSS and reduced Graphene Oxide exhibiting reduced surface roughness and improved stability", *ACS Applied Materials & Interfaces* (IF=6.723, 2015, Q1), vol. 7, No. 30, pp. 16223-16230, 2015.
15. F. Touati, A. Mnaouer, W. Mehmood, O. Erdene-Ochir, A. Hassan, and B. Gaabab, "Feasibility and Performance Evaluation of a 6LoWPAN-enabled Platform for Ubiquitous Healthcare Monitoring", *Wireless Communications and Mobile Computing* (IF=0.86, 2014, Q3), vol. 2015, pp. 1-11, 2015.
16. Farid Touati, Claudio Legena, Alessio Galli, Damiano Crescini, Paolo Crescini, Adel Ben Mnaouer, "Environmentally Powered Multi-Parametric Wireless Sensor Node for Air Quality Diagnostic", *Sensors and Materials* (IF=0.461, 2014, Q4), Vol. 27, No. 2, pp. 179-191, 2015.
17. Farid Touati, Mohamed Al-Hitmi, Kamel Benhmid, Rohan Tabish, "A fuzzy logic based irrigation system enhanced with wireless data logging applied to Qatar", *the Journal of Computers and Electronics in Agriculture* (IF=1.486, 2013, Q1) (Elsevier), Volume 98, pp. 233–241, Oct. 2013.
18. Farid Touati and Rohan Tabish, "U-Healthcare System: State-of-the-Art Review and Challenges", *Journal of Medical Systems* (IF=2.213, 2014, Q2) (Springer), Volume 37, Issue 3, pp. 9949-9969, May 2013 (<http://link.springer.com/article/10.1007%2Fs10916-013-9949-0>).
19. Farid Touati, Mohammed Al-Hitmi, and Hamdi Bouchech, "Study of the Effects of Dust, Relative Humidity and Temperature on Solar PV Performance in Doha: Comparison Between Mono-Crystalline and Amorphous PVs", *the Int. Journal of Green Energy* (IF=1.469, 2014, Q2) (Taylor's and Francis), Volume 10, issue 7, pp. 680-689, May 2013.
20. F. Touati; M. Al-Hitmi; K. Benhmed, "A Fuzzy Logic Based Irrigation Management System in arid Regions Applied to the State of Qatar", *WIT Transactions on Ecology and the Environment*, Volume 168, pp. 189-199, 2012.
21. Lazhar Khriji, Farid Touati, Kamel Benhmed and Amur Al-Yahmedi, "Mobile Robot Navigation Based on Q-Learning Technique", *The International Journal of Advanced Robotic Systems* (IF=0.53, 2014), Volume 8, Number 1 (2011), pp. 45-51.
22. Z. Nadir and F. Touati, "Class-E Amplifier Design Improvements for GSM Frequencies", *The Journal of Engineering Research (TJER)*, pp. 74-82) Vol. 8, # 1, 2011.
23. N. Hamza, F. Touati, L. Khriji, "Wireless healthcare monitoring system with ZigBee communication link support", *The Int. J. Networking and Virtual Organizations (IJNVO)*, Inderscience Publishers, Vol. 9, No. 2, pp. 169-183, 2011.
24. Farid Touati, Skandar Douss, and Mourad Loulou, "A 3.1-4.8-GHz Direct-Conversion Mixer in 0.35- $\mu$ m CMOS for mode 1 MB-OFDM UWB Systems", *The Analog Integrated Circuits and Signal Processing (AICSP, Springer)* (IF=0.47, 2014), vol. 63, no3, pp. 369-379, 2010.
25. N. Hamza, L. Khriji, F. Touati, "Multi-purpose healthcare telemedicine system with ISM band communication link support", *The Int. J. Healthcare Technology and Management (IJHTM)*, Vol. 11, No. 3, pp. 176-192, 2010.
26. Lazhar Khriji, Farid Touati and Nabil Hamza, "ZigBee-Based Telemetry System", *The Journal of Engineering Research (TJER)*, Vol. 7, No. 2, pp. 32-39, 2010.



27. Farid Touati; Skander Douss; Mourad Loulou, "A high-performance doubly-balanced mixer in 0.35- $\mu\text{m}$  CMOS for mode-1 MB-OFDM UWB receivers", *Wireless Personal Communications* (IF=0.65, 2014), 46(3): 351-363, 2008.
28. Skandar Douss, Farid Touati, Mourad Loulou, "An RF-LO current-bleeding doubly balanced mixer for IEEE 802.15.3a UWB-MB-OFDM standard receivers", *The International J. of Electronics and Communications* (AEUE, Elsevier Science), Vol. 62, pp. 490-495, August 2008.
29. Farid Touati, S. Douss, N. Elfadil, Z. Nadir, M. B. Suwailam and M. Loulou, "High-Performance Optical Receivers Using Conventional Sub-Micron CMOS Technology for Optical Communication Applications", *Journal of Applied Sciences (ANSI Journals)*, Vol. 7, No. 4, pp. 559-564, 2007.
30. Farid Touati, Skandar Douss, Zia Nadir, Mohammed Bait Suwailam and Mourad Loulou, "A 3 to 5 GHz UWB SiGe HBT Low Noise Amplifier for WPANs IEEE 802.15.3a Standard", *The Information Technology Journal* (ANSI Journals), pp. 579-583, Vol. 6, No. 4, 2007.
31. S. Douss, F. Touati and Mourad Loulou, "Design Optimization Methodology of CMOS Active Mixers for Multi-Standard Receivers", *The International Journal of Electronics, Circuits and Systems (IJECS)*, World Academy of Science, Engineering and Technology, Vol. 2, No. 1, pp. 21-29, 2007.
32. Farid Touati and Mourad Loulou, "High-Performance BiCMOS Transimpedance Amplifiers for Fiber-Optic Receivers", *The Journal of Engineering Research (TJER)*, Vol. 4, No. 1, pp. 69-74, 2007.
33. Farid Touati, Faical Mnif, Ali Lawati, "High-Temperature Electronics: Status and Future Prospects in the 21st Century", *The Journal of Engineering Research (TJER)*, Vol. 3, No. 1, pp. 48-59, January 2006.
34. Faical Mnif and Farid Touati, "An Adaptive Control Scheme for Nonholonomic Mobile Robot with Parametric Uncertainty", *The International Journal of Advanced Robotic Systems* (IF=0.53, 2014), Volume 2, no. 1, pp. 059-063, 2005.
35. Farid Touati and Faical Mnif, "Low-noise low-power 0.35 $\mu\text{m}$  SiGe amplifiers for 3.1–10.6 GHz UWB radio receivers", *Journal of the Institute of Electronics, Information and Communication Engineers* (IF=0.32, 2014) (IEICE, Japan), Vol. 1, No. 11, pp. 317-321, 2004.
36. Farid Touati, Kiminori Takemasa, Manabu Saji, "Electrical Properties and Interface Chemistry in Ti/3C-SiC System", *IEEE Transactions on Electron Devices* (IF=2.47, 2014), Vol. 46, No. 3, pp. 444-448, 1999.
37. Farid Touati and Manbu Saji, "Transport Properties in Gallium Doped CdTe MOVPE Layers", *Journal of Crystal Growth* (IF=1.7, 2014), Vol. 172, pp. 83-88, 1997.
38. K. Yasuda, H. Hatano, Farid Touati, M. Minamide, T. Maejima, K. Kawamoto, "Growth characteristics of (100) HgCdTe layers in low-temperature MOVPE with Ditertiarybutyltellyuride", *Journal of Crystal Growth* (IF=1.7, 2014), Vol. 166, pp. 612-616, 1996.
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97. K. Kawamoto, H. Hatano, F. Touati et al., "Study of dislocation density in MOVPE CdTe films", The Japan Society of Applied Physics, March 1994, Kanagawa University, Kanagawa, Japan.
98. Farid Touati et al., "Dependence of lattice constant on MOVPE Infrared HgTe and CdTe films on temperature", The Japan Society of Applied Physics, March 1994, Kanagawa University, Kanagawa, Japan.
99. M. Ohno, J. Yamaguchi, F. Touati et al., "Composition control of low-temperature MOVPE Infrared MCT films", The Japan Society of Applied Physics, March 1994, Meiji University, Nagoya, Japan.
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103. M. Ekawa, F. Touati et al., "Study of Photoluminescence spectra of Ga-doped MOVPE CdTe layers", The Japan Society of Applied Physics, March 1992, Japan University, Nagoya, Japan.

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105. Farid Touati et al., “Electrical doping of Infrared MOVPE CdTe films”, The Japan Society of Applied Physics, October 1991, Okayama University, Okayama, Japan.

## **Technical Reports:**

### **Proof of Concepts Projects (QSTP)**

1. Farid Touati, Damiano Crescini, Adel Ben Mnaouer, Alessio Galli, and Paolo Crescini, “Environmentally-Powered Battery-Less Smart Sensor Nodes for High Efficiency Indoor/Outdoor Air Quality Diagnostics”, awarded by QSTP January 2016, QR 1,233.600.00
2. Farid Touati, Zubair Ahmad, and Khasan Karimov, “Flexible organic Photo-thermogalvanic generators for low power and medical applications”, submitted/Not awarded to QSTP June 2015.
3. Zubair Ahmed, Farid Touati, and Khasan Karimov, “Flexible organic photo-thermogalvanic cells for low power generation and gradient of temperature measurement”, submitted (not funded) to QSTP November 2015.

### **Patents (IP)**

1. Applicants: Qatar Foundation for Education, Science and Community Development [US/US], Qatar University (QA/QA), Office of Academic Research. Inventors and Applicants: Crescini Damiano, Touati Farid, Legena Claudio, Galli Alessio, and Ben Manouer Adel. Owner: Qatar Foundation For Education, Science And Community Development. TITLE: "MULTI-PARAMETRIC ENVIRONMENTAL DIAGNOSTICS AND MONITORING SENSOR NODE", International Application Published under the Patent Cooperation Treaty (PCT), World Intellectual Property Organization (International Bureau), International Publication Date: 12 November 2015 (11.11.2015), International Publication Number: WO 2015/171920 A1, International Application Number: PCT/US15/29731, International Filing Date: 7 May 2015 (07.05.2015).
2. Crescini Damiano, Touati Farid, Legena Claudio, Galli Alessio, Ben Manouer Adel. (2014). “ENVIRONMENTALLY POWERED AIR QUALITY DIAGNOSTICS DEVICE”, UNITED STATES PATENT AND TRADEMARK OFFICE, May 7, 2014, Provisional Patent (No.: 61/989,732).
3. Zhu, Zhaozhao; Mankowski, Trent; Balakrishnan, Kaushik; Shikoh, Ali Sehpar; Touati, Farid; Benammar, Mohieddine; Mansuripur, Masud; Falco, Charles, “Copper Nanowire Thin Films with Protective Layers of Reduced Graphene Oxide as Transparent Conductive Electrodes”, Provisional Patent submitted to UNITED STATES PATENT AND TRADEMARK OFFICE, 7 May 2015.
4. Zubair Ahmad, Farid Touati, and Khasan Karimov, “Fabrication of flexible conductive films for application in elastic thermo-electric cells by rubbing in technology”, submitted to UNITED STATES PATENT AND TRADEMARK OFFICE, 21 June 2015.
5. Zubair Ahmad, Farid Touati, Khasan Karimov, and Abdul Shakoor, “Pressure sensitive thermo-electric generator”, submitted to UNITED STATES PATENT AND TRADEMARK OFFICE, 7 October 2015.
6. Zhu, Zhaozhao; Mankowski, Trent; Balakrishnan, Kaushik; Shikoh, Ali Sehpar; Touati, Farid; Benammar, Mohieddine; Mansuripur, Masud; Falco, Charles, “Reduced graphene oxide as passivation for ZnO and CuNW/ZnO transparent conductive electrodes”, Provisional Patent submitted to UNITED STATES PATENT AND TRADEMARK OFFICE, 12 November 2015.

### **Project Interim Reports:**

1. Drs. C. Falco, F. Touati, M. Benammar, M. Mansuripur, Interim Report 3 for NPRP 5 - 546 - 2 - 222, Title: High performance electrodes for solar cells, submitted to Qatar National Research Fund, October 1, 2015.
2. Drs. F. Touati, M. Fadlee, L. Khriji, A. Mnaouer, Interim Report 4 for NPRP 4 - 1207 - 2 - 474, Title: Wireless Biotelemetry for Ubiquitous Healthcare Monitoring, submitted to Qatar National Research Fund, April 1, 2015.



3. Drs. C. Falco, F. Touati, M. Benammar, M. Mansuripur, Interim Report 2 for NPRP 5 - 546 - 2 - 222, Title: High performance electrodes for solar cells, submitted to Qatar National Research Fund, April 5, 2015.
4. Dr. Farid Touati and Prof. Mohieddine Benammar, Final Report for UREP 14 - 034 - 2 - 011, Title: Development of Innovative Indoor/Outdoor Air Quality Monitoring for Environmental Impact Assessment in the State of Qatar, submitted to Qatar National Research Fund, 11 February 2015.
5. Drs. M. Uysal, F. Touati, R. Schober, Interim Report 3 for NPRP 5 - 157 - 2 - 051, Title: Advanced Transmission Techniques for Next Generation Terrestrial Wireless Optical Communications, submitted to Qatar National Research Fund, April 30, 2015.
6. Drs. M. Uysal, F. Touati, R. Schober, Interim Report 2 for NPRP 5 - 157 - 2 - 051, Title: Advanced Transmission Techniques for Next Generation Terrestrial Wireless Optical Communications, submitted to Qatar National Research Fund, November 15, 2014.
7. Drs. M. Uysal, F. Touati, R. Schober, Interim Report 1 for NPRP 5 - 157 - 2 - 051, Title: Advanced Transmission Techniques for Next Generation Terrestrial Wireless Optical Communications, submitted to Qatar National Research Fund, May 15, 2014.
8. Drs. C. Falco, F. Touati, M. Benammar, M. Mansuripur, Interim Report 1 for NPRP 5 - 546 - 2 - 222, Title: High performance electrodes for solar cells, submitted to Qatar National Research Fund, October 13, 2014.
9. Drs. F. Touati, M. Fadlee, L. Khriji, A. Mnaouer, Interim Report 3 for NPRP 4 - 1207 - 2 - 474, Title: Wireless Biotelemetry for Ubiquitous Healthcare Monitoring, submitted to Qatar National Research Fund, October 1, 2014.
10. Drs. F. Touati, M. Fadlee, L. Khriji, A. Mnaouer, Interim Report 5 for NPRP 4 - 1207 - 2 - 474, Title: Wireless Biotelemetry for Ubiquitous Healthcare Monitoring, submitted to Qatar National Research Fund, October 1, 2014.
11. Drs. C. Falco, F. Touati, M. Benammar, M. Mansuripur, Interim Report 3 for NPRP 5 - 546 - 2 - 222, Title: High performance electrodes for solar cells, submitted to Qatar National Research Fund, October 1, 2014.
12. Drs. F. Touati, M. Fadlee, L. Khriji, A. Mnaouer, Interim Report 4 for NPRP 4 - 1207 - 2 - 474, Title: Wireless Biotelemetry for Ubiquitous Healthcare Monitoring, submitted to Qatar National Research Fund, April 1, 2014.
13. Drs. C. Falco, F. Touati, M. Benammar, M. Mansuripur, Interim Report 2 for NPRP 5 - 546 - 2 - 222, Title: High performance electrodes for solar cells, submitted to Qatar National Research Fund, April 5, 2014.
14. Dr. Farid Touati and Prof. Mohieddine Benammar, Final Report for UREP 14 - 034 - 2 - 011, Title: Development of Innovative Indoor/Outdoor Air Quality Monitoring for Environmental Impact Assessment in the State of Qatar, submitted to Qatar National Research Fund, 11 February 2014.
15. Drs. M. Uysal, F. Touati, R. Schober, Interim Report 3 for NPRP 5 - 157 - 2 - 051, Title: Advanced Transmission Techniques for Next Generation Terrestrial Wireless Optical Communications, submitted to Qatar National Research Fund, April 30, 2014.
16. Dr. Farid Touati and Prof. Mohieddine Benammar, Progress Report for UREP 14 - 034 - 2 - 011, Title: Development of Innovative Indoor/Outdoor Air Quality Monitoring for Environmental Impact Assessment in the State of Qatar, submitted to Qatar National Research Fund, 11 February 2014.
17. Dr. Farid Touati and Prof. Mohieddine Benammar, Final Report for UREP 12 - 065 - 2 - 028, Title: Second Generation QU Vehicles "GERNAS 2" for Shell Eco-Marathon Europe 2013 Competition, submitted to Qatar National Research Fund, 15 December 2013.
18. Drs. M. Uysal, F. Touati, R. Schober, Interim Report 2 for NPRP 5 - 157 - 2 - 051, Title: Advanced Transmission Techniques for Next Generation Terrestrial Wireless Optical Communications, submitted to Qatar National Research Fund, November 15, 2013.
19. Drs. M. Uysal, F. Touati, R. Schober, Interim Report 1 for NPRP 5 - 157 - 2 - 051, Title: Advanced Transmission Techniques for Next Generation Terrestrial Wireless Optical Communications, submitted to Qatar National Research Fund, May 15, 2013.
20. Drs. C. Falco, F. Touati, M. Benammar, M. Mansuripur, Interim Report 1 for NPRP 5 - 546 - 2 - 222, Title: High performance electrodes for solar cells, submitted to Qatar National Research Fund, October 13, 2013.
21. Drs. F. Touati, M. Fadlee, L. Khriji, A. Mnaouer, Interim Report 3 for NPRP 4 - 1207 - 2 - 474, Title: Wireless Biotelemetry for Ubiquitous Healthcare Monitoring, submitted to Qatar National Research Fund, October 1, 2013.
22. Drs. F. Touati, M. Fadlee, L. Khriji, A. Mnaouer, Interim Report 2 for NPRP 4 - 1207 - 2 - 474, Title: Wireless Biotelemetry for Ubiquitous Healthcare Monitoring, submitted to Qatar National Research Fund, April 1, 2013.

23. Dr. Farid Touati and Prof. Mohieddine Benammar, Progress Report for UREP 12 - 065 - 2 - 028, Title: Second Generation QU Vehicles "GERNAS 2" for Shell Eco-Marathon Europe 2013 Competition, submitted to Qatar National Research Fund, 5 January 2103.
24. Dr. Farid Touati and Prof. Mohieddine Benammar, Progress Report for UREP 11 - 010 - 2 - 004, Title: Investigating and Overcoming the Effects of Harsh Environment on the Performance of Solar PV Technologies in the State of Qatar, submitted to Qatar National Research Fund, 31 May 2012.
25. Drs. F. Touati, M. Fadlee, L. Khriji, A. Mnaouer, Interim Report 1 for NPRP 4 - 1207 - 2 – 474, Title: Wireless Biotelemetry for Ubiquitous Healthcare Monitoring, submitted to Qatar National Research Fund, October 1, 2012.
26. Drs. Farid Touati, Saud Ghani, and Mohieddine Benammar, Final report for Project UREP 09 - 099 - 2 – 029, Title: Design and Development of Two QU Vehicles for Shell Eco Marathon 2011 European Completion, submitted to the Undergraduate Research Experience Program at the Qatar National Research Fund, Dec. 25, 2012.
27. Drs. A. Gastli, S. Al-Alawi, A. Malik, H. Bourdoucen, A. Al-Badi, F. Touati, A. Al-Lawati, “ Final report on “Renewable Energy Business Opportunities in Duqum-Oman”, Consultancy Project for: Daewoo Shipbuilding & Marine Engineering Co., Ltd. (DSME), Contract number: AS/ENG/ECED/08/04 (RO 20,160), 2008.
28. Drs. A. Gastli, H. Bourdoucen, A. Al-Badi, F. Mnif, F. Touati, Y. E.-A. Mohammedzein, S.A. Prathapar, S. Zekri, N. Z. Al-Rawahi, M. Ali Tahat, A. Al-Alawi , Joint-Research Proposal between SQU and Nagoya Institute of Technology of Japan, Submitted for HM Strategic Research October 2007: “Environment-Friendly Irrigation Water Pumping and Conservation Systems”, RO 133,600 (not granted).
29. Farid Touati, “Review of Labs Equipment for the New Electrical Engineering Program of the Omani Ministry of Defense”, Summer 2003
30. Farid Touati, “Annual Progress Report of the NSF-EPSCoR, NSF 00-43 (\$120k) Grant, Alabama Research Infrastructure, June 2001 – June 2004”, May 2002.
31. Farid Touati, Essam Ibrahim, and Heshmat Aglan, "Electronics Textiles", December 2001, DoD–DARPA, BAA-01-41 E-Textiles Grant, USA (not funded).

### **Books and/or Book Chapters (submitted):**

Adel Ben Mnaouer, **Farid Touati**, Waiser Mehmood, Ammad Hassan, Ochirkhand Erdene-Ochir, Brahim Gaabab and Reem Hussein, “Enabling Technologies and Protocols for successful IoT connectivity to the cloud”, RSC book chapter, Book Title: Cooperative Robots and Sensor Networks (RSC2014), Third Edition Special edition in the “Studies in Computational Intelligence” Springer Book Series <http://www.springer.com/series/7092>.

### **Conference/Workshop/Forum Attendance and Presentations:**

#### **Conference Attendance and Presentation (few selected from above):**

- SPIE LASE Symposium (Free-Space Laser Communication and Atmospheric Propagation XXVIII), San Francisco, California, USA, February 13-18, 2016.
- International Congress on **Education and Learning Technologies**, Granada Spain, September 21-23, 2015
- The 2015 International Conference on Frontiers in **Education** (FECs15), Las Vegas, USA, July 27-30, 2015
- ANNIC 2015, Paris, France, November 5-7, 2015
- Laser Communication and Propagation through the Atmosphere and Oceans IV" conference, SPIE Optical Engineering + Applications, San Diego, California, USA, August 9-13, 2015

- The 8th IEEE-GCC 2015 conference, Sultan Qaboos University, Oman, Sultan Qaboos University, Oman, February 1-4, 2015
- The 26th IEEE International Conference on Microelectronics (ICM14), Doha, Qatar, December 14-17, 2014.
- Arabic **Interview** in QF Radio about our IP on Air Quality Monitoring NPRP6 Project. QF/QF Communication, with Mrs. Mona Beckhet, Arabic Language Radio Program Maker. Date: 03/12/2015

**Conference Organization:**

- IEEE RAMCOM 2016, Madrid, Spain, May 23-26, 2016
- 7<sup>th</sup> IEEE GCC Conference and Exhibition, Doha, Qatar, November 17-20, 2013.
- Workshop on First Aid for the College of Engineering (Sponsor Exxon Mobile), QU, Doha, Qatar, February 24, 2014

**Funded Projects (Title, Agency, Amount, Period, Role):**

No	Title of Research Grant	Granting Body	Amount	Project Duration	Role
1	<b>1<sup>st</sup> QU Proof-of-Concept by QSTP:</b> Environmentally-Powered Battery-Less Smart Sensor Nodes for High Efficiency Indoor/Outdoor Air Quality Diagnostics	QF/Qatar Science & Technology Park (QSTP) (Contract)	\$365,369.86	2016-2017	LPI
2	Early Warning System for Asset & Underground Monitoring for Safe & Sustainable Environment	QNRF, Qatar (NPRP 8-1781-2-735)	\$899,755.60	2015-2018	LPI
3	Environmentally-Powered Battery-Less Smart Sensor Nodes for High Efficiency Indoor/Outdoor Air Quality Diagnostics	QNRF, Qatar (NPRP 6 - 203 - 2 - 086)	\$1,043,641.60	2013-2016	LPI
4	Towards Safe Indoor Air Quality in View of the On-Going Massive Development in the State of QATAR	QNRF, Qatar (NPRP 6 - 600 - 2 - 250).	\$1,018,821.00	2013-2016	PI
5	High performance electrodes for solar cells	QNRF, Qatar (NRP No.: 5 - 546 - 2 - 222)	\$1,045,629.00	2012-2015	Co-LPI
6	Advanced Transmission Techniques for Next Generation Terrestrial Wireless Optical Communications	QNRF, Qatar (NPRP No.: 5 - 157 - 2 - 051)	\$1,047,471.00	2012-2015	Co-LPI

7	Wireless Biotelemetry for Ubiquitous Healthcare Applications	QNRF, Qatar (NPRP 4 - 1207 - 2 - 474)	\$1,042,027.20	2011-2014	LPI
8	Towards the Development of Inexpensive High-Performance Organic-Inorganic Hybrid Photo-Thermo-Electric Generators	QNRF, Qatar (PDRA1-0117-14109)	\$277,200.00	3 years (2015-2018)	LPI
9	Metamaterials and RF Safety for MRI Applications and Mobile Communications	QNRF, Qatar (PDRA2-1101-14034)	\$277,200.00	3 years (2016-2019)	LPI
10	Integrated Acoustoelectronic Sensors for sensing of saline water vapor in natural Gas Flow”	QNRF, Qatar (GSRA3-1-1116-14016)	\$492,000.00	4 years (2016-2020)	LPI
11	Towards a track simulator test bench for energy-efficient race cars	QNRF, Qatar (UREP17-128-2-030)	\$60,000	01/04/2015-31/03/2016	PI
12	Qatar University “Gernas 5” Zero-CO2 Footprint Solar Car	QUST-CENG-SPR-14/15-11	\$8,220	17/05/2015-31/03/2016	LPI
13	Development of Innovative Indoor/Outdoor Air Quality Monitoring for Environmental Impact Assessment in the State of Qatar	QNRF, Qatar (UREP 14 - 034 - 2 - 011)	\$60,000	18/08/2013-17/08/2014	LPI
14	Development of a Truck Simulator Test Bench for Energy Efficient Race Cars	QUST-CENG-SPR-13/14-10	\$8,220	31/8/2014-31/03/2015	PI
15	Investigating the Impact of Environment on Commercial Solar PV Technologies in Qatar	Qatar University (QUUG-ENG-DCE-10/11-13).	\$40,500	1/4/2013-31/3/2015	LPI
16	Second Generation QU Vehicles "GERNAS 2" for Shell Eco-Marathon Europe 2013 Competition (Netherlands)	QNRF, Qatar (UREP 12 - 065 - 2 - 028).	\$60,000	15/9/2012-14/9/2013	LPI
17	Investigating and Overcoming the Effects of Harsh Environment on the Performance of Solar PV Technologies in the State of Qatar	QNRF, Qatar (UREP 11 - 010 - 2 - 004)	\$20,000	One year (2012-2013)	LPI
18	Fourth Generation QU Vehicles for 2014 Shall Eco-Marathon For the Middle East and Africa Region in Doha/Qatar	QUST-CENG-SPR-12/13-18 (College Special Grant)	\$39,900	18/6/2013-17/6/2014	LPI
19	Environment-Friendly	Qatar University	\$40,500	1/4/2011-	LPI

	Self-Tuned Irrigation and Conservation System	(QUUG-ENG-DCE-10/11-13)		31/3/2013	
20	Investigating the Impact of Environment on Commercial Solar PV Technologies in Qatar	Qatar University (QUUG-CENG-DEE-12/13-2)	\$40,500	1/4/2013-31/3/2015	LPI
21	Qatar University" Genres 4" Zero-CO2 Foot print Solar Car	Qatar University (QUUG-CENG-FALL-13/14-4)	\$2,747	17/11/2013 - 16/11/2014	LPI
22	Effects of Environmental Factors on the Efficiency of Various Solar PV Technologies	Qatar University (QUUG-CENG-SPR-11/12-25)	\$2,747	One year (2011-2012)	LPI
23	Design of Intelligent and Environment-Friendly Irrigation and Conservation System	Qatar University (QUUG-CENG-SPR-11/12-25)	\$2,747	One year (2011-2012)	LPI
24	Design and Development of Two QU Vehicles for Shell Eco- Marathon 2011 European Competition	QNRF, Qatar (UREP 09 - 099 - 2 - 029)	\$24,300	One year (2010-2011)	LPI
25	Design and Development of Two QU Vehicles for Shell Eco Marathon 2011 European Completion	Qatar University	\$2,747	One year (2010-2011)	LPI
26	Real-time wireless monitoring and control of Renewable Energy PV stations	Qatar University (QUUG-CEN-DEE-10/11-26)	\$13,500	One year (2010-2011)	LPI
27	Wireless Sensor Networks for Environmental and Health Monitoring	Sultan Qaboos University Internal Research Grant	\$35,000	Two years (2011-2013)	LPI
28	SQU College of Engineering Eco-House Project	Sultan Qaboos University Internal Research Grant	\$500,000	Three years (2010-2013)	PI
29	Designing of Highly Efficient Power Amplifiers for Communication industry	Sultan Qaboos University Internal Research Grant	\$18,000	One year (2009-2010)	LPI
30	Wireless biotelemetry system for real time healthcare monitoring	Sultan Qaboos University Internal Research Grant	\$14,500	One year (2009-2010)	LPI
31	Artificial Intelligence Techniques-Based Autonomous Mobile Robot Navigation	Sultan Qaboos University Internal Research Grant	\$16,500	One year (2008-2009)	PI
32	Design of High-Performance UWB	Sultan Qaboos University	\$17,500	Two years (2007-2009)	LPI

	Receivers for Smart-Traffic Control Systems	Internal Research Grant			
33	Control of localization of underactuated nonholonomic ships	Sultan Qaboos University Internal Research Grant	\$15,300	Two years (2007-2009)	PI
34	Behavioral Modeling of Optical and RF Blocks for Rapid and Efficient Design of Optical and RF Systems for Virtual Prototyping	Sultan Qaboos University Internal Research Grant	\$7,300	Three years (2005-2008)	LPI
35	Self-Tuning Solar Energy Irrigation System Prototype	Sultan Qaboos University Internal Research Grant	\$24,500	Three years (2002-2005)	LPI
36	Design of digital transceivers for chip-to-chip optical interconnects for ultra wide-band parallel processing and optical communications	Tuskegee University, AL/USA Internal Research Grant	\$120,000	Three years (2001-2004)	PI
37	Renewable Energy Business Opportunities in Duqum-Oman, 2008. Contract number: AS/ENG/ECED/08/0	Consultancy Project for Daewoo Shipbuilding & Marine Engineering Co., Ltd. (DSME),	\$73,500	3 months (Febr-May, 2008)	PI

#### Not-Funded Research Grants:

1. NPRP8-277-2-109: "Macromolecular Data Storage", 2015 (not funded).
2. PDRA2-1028-14031: "Design and implementation of self-powered energy-efficient WSN for monitoring oil & gas pipelines", 2015 (not funded).
3. PDRA2-1110-14064: "Lightweight security and QoS mechanisms for 6LoWPAN-enabled ubiquitous healthcare monitoring systems", 2015 (not funded).
4. PDRA2-1116-14110: "IoT Solutions for a Generic Platform Hosting Smart Cities Applications", 2015 (not funded).