

Curriculum Vitae

Professor. Talal Hassan Yousef Alzanki.
College of Technological Studies

Shuwaikh, Jamal Abdalnasser Street, Kuwait

th.alzanki@paaet.edu.kw

Education

Ph.D. in Electronic Engineering in **2004** from University of Surrey, Guildford, UK.

M.Sc. (Hon.) in Electrical Engineering in **1994** from Boston University, Boston, USA.

B.Sc. (Hon.) in Electronic Engineering in **1989** from Wentworth Institute of Technology, Boston, USA.

Academic experience

Assistant Dean of Student Affairs, Head of the Department of Electronic Engineering and Head of Academic Advising at College of Technological Studies (CTS).

Head of the Department of Electronic Engineering from **2015** until **2016** on Faculty of Technological Studies at the General Authority for Applied Education and Training, PAAET.

Head of Academic Advising from **2012** until **2015** on Faculty of Technological Studies at the General Authority for Applied Education and Training, PAAET.

Chairman of the Committee appointments from **2005** until **2010** on Faculty of Technological Studies at the General Authority for Applied Education and Training, PAAET.

Chairman of the Research Committee from **2007** until **2009** on Faculty of Technological Studies at the General Authority for Applied Education and Training, PAAET.

Chairman of the Committee on Electronic Computers from **2007** until **2012** on Faculty of Technological Studies at the General Authority for Applied Education and Training, PAAET.

Chairman of the Commission of Inquiry from **2007** until **2014** on Faculty of Technological Studies at the General Authority for Applied Education and Training, PAAET.

Chairman of the Commission of Website College of Technological Studies (CTS) from **2009** until **2012** at the General Authority for Applied Education and Training, PAAET.

Non-academic experience

Photoshop Training Sessions Experiences:

Distinguished Teaching award (**Photoshop**) in 26/10/2008 until 30/10/2008 Evaluation Measurement and Professional Development Center, PAAET. Distinguished Teaching award (**Photoshop**) in 22/03/2009 until 26/03/2009 Evaluation Measurement and Professional Development Center, PAAET. Distinguished Teaching award (**Photoshop**) in 8/11/2009 until 16/11/2009 Evaluation Measurement and Professional Development Center, PAAET. Distinguished Teaching award (**Photoshop**) in 25/04/2010 until 03/05/2010 Evaluation Measurement and Professional Development Center, PAAET. Distinguished Teaching award (**Photoshop**) in 19/12/2010 until 30/12/2010 Evaluation Measurement and Professional Development Center, PAAET. Distinguished Teaching award (**Photoshop**) in 18/12/2011 until 22/12/2011 Evaluation Measurement and Professional Development Center, PAAET.

PowerDirector Training Sessions Experiences:

Distinguished Teaching award (**PowerDirector**) in 04/01/2009 until 08/01/2009 Evaluation Measurement and Professional Development Center, PAAET. Distinguished Teaching award (**PowerDirector**) in 10/05/2009 until 14/05/2009 Evaluation Measurement and Professional Development Center, PAAET. Distinguished Teaching award (**PowerDirector**) in 13/12/2009 until 17/12/2009 Evaluation Measurement and Professional Development Center, PAAET.

Microsoft Access Training Sessions Experiences:

Distinguished Teaching award (**Microsoft Access**) in 09/05/2010 until 18/05/2010 Evaluation Measurement and Professional Development Center, PAAET. Distinguished Teaching award (**Microsoft Access**) in 21/11/2010 until 30/11/2010 Evaluation Measurement and Professional Development Center, PAAET.

Kuwait University the College for Women, for Commitment to the labor market and community service:

Fundamentals of Personal Computers (ISC100)-Kuwait University from Fall/2008 until Spring/2010.

College Algebra (CFW107)-Kuwait University from Fall/2008 until Spring/2010.

Sector planning and development:

Follow-up of graduates and the labor market for the sector's development planning and the Public Authority for Applied Education and Training, the State of Kuwait from Fall/2013 until Spring/2014.

Certifications

1. “International Conference on Distributed Generation and Sustainable Energy ICDGSE” Proceedings of the conference will be held at Dubai, United Arab Emirates, 05th- 06th July 2022.
2. “Workshop on Integrity in the Public Education Sector” Proceedings of the Training will be held at on Kuwait Anticorruption Authority (Nazaha). The State of Kuwait, 21th-22th October 2019.
3. “Developing Executive Leadership Skills” Proceedings of the Training will be held at on LMC London Management Centre (people help sharing knowledge)” 92 Seymour Place, London, United Kingdom, 18th- 22nd March 2019.
4. “International Conference on Energy, Environment and Economics (ICEEE2018) " Peak Load Shaving in Kuwait Utilizing High Concentrated Photovoltaic Systems" Edinburgh Conference Centre, Heriot-Watt University, Riccarton, Edinburgh, EH14 4AS. 14-16 August 2018,

5. **"The 20th edition of Intersec 2018 Conference"** Proceedings of the conference will be held at Dubai International Convention and Exhibition Centre. (20th edition of Intersec Conference Dubai 2018)" Dubai, United Arab Emirates, **21st- 23rd January 2018.**
6. **"The 5th Arab Robotics Conference"** Proceedings of the conference will be a joint effort of Emirates Science Club, the Cultural & Scientific Association and Arab Robotics Association. (5th Arab Robotics Conference Dubai 2017)" Dubai, United Arab Emirates, **03th- 05th October 2017.**
7. **"Robotics in Education"** Proceedings of the "8th International Conference and Exhibition (Robotics in Education Sofia, Bulgaria 2017)" Sofia, Bulgaria, **26th- 28th April 2017.**
8. **"MEIS analysis for investigating ultra-shallow junction of Sb⁺ implanted in Si"** Proceedings of the "3rd Edition Nanotech Dubai 2016 Conference and Exhibition (Nanotech Dubai 2016)" Dubai, United Arab Emirates, **05th- 07th December 2016.**
9. **"High-Performance Nanotechnology of Hall Scattering Factor Measurements in Sb Implanted Bulk and Strained Silicon"** Proceedings of the "19th International Conference on Climbing and Walking Robots and Support Technologies for Mobile Machines (CLWAR 2016), London, United Kingdom, **12-14 September 2016.**
10. **"High-Performance Nanotechnology of Hall Scattering Factor Measurements in Sb Implanted Bulk and Strained Silicon"** Proceedings of the "19th International Conference on Climbing and Walking Robots and Support Technologies for Mobile Machines (CLWAR 2016), London, United Kingdom, **12-14 September 2016.**
11. **"A spiral dynamic optimised hybrid fuzzy logic controller for a unicycle mobile robot on irregular terrains"** Proceedings of the 12th International Conference on Control, Automation, Robotics and Vision Engineering (ICCARVE 2014), London, United Kingdom, **23-25 October 2014.**
12. **"Ion Beam Analysis for Hall Scattering Factor Measurements in Antimony Implanted Bulk and Strained Silicon"** was presented at Public Authority for Applied Education and Training (PAAET) Conference and Exhibition of the scientific. The State of Kuwait, **05th-06th May 2014.**
13. **"Shallow junctions in silicon via low thermal budget processing"** was presented at Public Authority for Applied Education and Training (PAAET) Conference and Exhibition of the scientific. The State of Kuwait, **05th-06th May 2014.**
14. **"High-Performance Gas Sensor Based on Brush-like Hierarchical ZnO Nanostructures"** was presented at Materials for Energy and Environment International Conference and Exhibition. NANOTECH MEET TUNISIA, **24th-26th April 2014.**
15. **"Bottom-Up Fabrication of High-Performance Nanostructured Photodetectors"** was presented at Materials for Energy and Environment International Conference and Exhibition. NANOTECH MEET TUNISIA, **24th-26th April 2014.**
16. **"1st Regional Technology and Social Networking Forum"** was presented The Forum will be held under the patronage of His Highness Sheikh Jaber Mubarak Al-Hamad Al-Sabah, the Prime Minister of the State of Kuwait. The event will be held at the Regency Hotel, Kuwait, **16-18 March 2013.**
17. **"Ion Beam Analysis for Hall Scattering Factor Measurements in Antimony-Implanted Silicon"** was presented at Institute of Physics (IOP) CMD-24, ECOSS-29. ECSCD-11. CMMP-12 Conference. Edinburgh International Centre. Edinburgh, UK, **3-7 September 2012.**
18. **"Specifically low energy antimony implants in silicon with Electrical shape"** was presented at ESSDERC/ESSCIRC 2010 Conference. Seville University, **14-16 September 2010.**
19. **"Low energy antimony implantation in p-type for ultra-shallow junction formation"** was presented at Ion Beam Centre (IBC 2009) Workshop. Surrey University, **1 April 2009.**
20. **"Implant Dose Dependence of Ultra-Shallow Junctions in Antimony Ions Implanted Silicon"** the 5th Saudi Technical Conference and Exhibition STCEX, **12 August 2009.**
21. **"The electrical properties of antimony implantation in bulk and strained silicon for shallow junctions formation using low thermal budget annealing range"** was presented at Ion Beam Centre (IBC 2008) Workshop. Surrey University, **18 March 2008.**
22. **"Ultra-Shallow junctions in silicon using low thermal budget processing"** was presented at Ion Beam Centre (IBC 2007) Workshop. Surrey University, **28 March 2007.**
23. **"Ultra-shallow n⁺p junctions in silicon by low energy Sb implantation"** was presented at Ion Beam Centre (IBC 2006) Workshop. Surrey University, **5 April 2006.**

24. “**Implant-dose dependence of ultra-shallow junctions in Sb implanted silicon**” was presented at the 15th International Conference on Ion Implantation Technology (IIT) Taipei Taiwan, **October 2004**.
25. “**Electrical profiles of 20nm junctions in Sb implanted silicon**” was presented at Ion Beam Modification of Materials (IBMM) California USA, **September 2004**.
26. “**Concentration profiles of antimony doped shallow layers in silicon**” was presented at the Condensed Matter and Materials Physics (CMMP) conference in Warwick, **April 2004**.
27. “**Concentration profiles of Sb-doped shallow layers in silicon**” was presented at Ion Beam Centre (IBC 2004) Workshop. Surrey University, **31 March 2004**.

Current membership

Kuwait Society of Engineers (**KSE**)

Honors and awards

Distinguished Teaching award in **2004** until **2012** Electronic Engineering Technology, PAAET.

Distinguished Teaching award in **2004** until **2008** the College for Women, Kuwait University.

Distinguished advising award in **2005** until **2012** from Electronic Engineering Technology, PAAET.

Distinguished advising award in **2003** until **2012** from University of Surrey.

Open Fellowships **2001** until **2012** from University of Surrey.

Best high-quality articles published in Semiconductor Science and Technology (SST) during **2006**.

Best Poster Certificate in Condensed Matter and Materials Physics (CMMP) conference in Warwick, during **2004**.

Follow-up Technological Scientific Society “mobile robot” was presented of at College of Technological Studies (CTS 2015) Workshop. **5 November 2015**.

Service activities

Kuwait University the College for Women, for Commitment to the labor market and community service:

Fundamentals of Personal Computers (ISC100)-Kuwait University from Fall/2008 **until** Spring/2010.

College Algebra (CFW107)-Kuwait University from Fall/2008 **until** Spring/2010.

Sector planning and development:

Follow-up of graduates and the labor market for the sector's development planning and the Public Authority for Applied Education and Training, the State of Kuwait from Fall/2013 **until** Spring/2014.

Publications and presentations

1. **T. Alzanki**, R. Gwilliam, N.G. Emerson and B.J. Sealy, "**Low-temperature processing of antimony implanted silicon**", Journal of Electronic Materials, Vol. **33** (2004) 767.
2. **T. Alzanki**, R. Gwilliam, N.G. Emerson, Z. Tabatabai, C. Jaynes, and B.J. Sealy, "**Concentration profiles of antimony doped shallow layers in silicon**" Semi. Sci. and Tech., vol. **19** (2004) 728.
3. **T. Alzanki**, R. Gwilliam, N.G. Emerson and B.J. Sealy, "**Differential Hall effect profiling of ultra-shallow junctions in Sb implanted silicon**", Applied Physics Letters, vol. **85** (2004) 1979.
4. **T. Alzanki**, R. Gwilliam, N.G. Emerson and B.J. Sealy, "**Carrier and mobility profiling of ultra-shallow junctions in Sb implanted silicon**", IEE Electronic Letters, vol. **40** (2004) 774.
5. **T. Alzanki**, R. Gwilliam, N.G. Emerson and B.J. Sealy, "**Electrical profiles of ultra-low energy antimony implants in silicon**" MRS Symposium Proceedings, vol. **810** (2004) B5.7.1-B5.7.6.
6. **T. Alzanki**, R. Gwilliam, N. Emerson, A. Smith, R. Webb and B.J. Sealy, "**Electrical profiles of 20nm junctions in Sb implanted silicon**", Nuclear Instruments and Methods in Physics Research B, vol. **242**, (2006) 693.
7. B.J. Sealy, A. Smith, **T. Alzanki**, N. Bennett, L. Li, C. Jaynes, B. Colombeau, E. Collart R. Gwilliam, N. Emerson and N. Cowern, "**Shallow junctions in silicon via low thermal budget processing**", IWJT (2006) 10-15.
8. **T. Alzanki**, R. Gwilliam, N. G. Emerson and B J Sealy, "**Low energy antimony implantation in p-type silicon for ultra-shallow junction formation**" Kuwait Journal of Science and Engineering, vol. 36 (2B) (December 2009) p.107-115 ISSN: 1024-8684.
9. **T. Alzanki**, N. Bennett, R. Gwilliam, C. Jaynes, P. Bailey, T. Noakes and B.J. Sealy. "**Ion Beam Analysis for Hall Scattering Factor Measurements in Antimony-Implanted Bulk and Strained Silicon**" Journal of Engineering Research, vol. 2 (1) (March 2014) p.121-132 ISSN: 2307-1877.
10. Alenezi, Mohammad; Alshammari, Abdullah; **Alzanki, Talal**; Jarowski, Peter; Henley, Simon; and Silva, S. Ravi "**ZnO Nanodisk based UV Detectors with Printed Electrodes**" Journal Langmuir vol. 30, issue 13 (March 10, 2014), p. 3913-3921. ISSN: 0743-7463 DOI: 10.1021/la500143w.
11. **T. Alzanki**, M. Kandil, N. Bennett, B. J. Sealy, M. Alenezi, A. Almeshal, M. Jafar and A. Ghoneim. "**Nanotechnology Investigation of Ultra-Shallow Junctions of Sb Implants in Conventional Si**" SOJ Materials Science & Engineering (SOJMSE) vol. 2, issue 1 (September 04, 2014), p. 1-6. ISSN: 2372-0964 Paper ID: dx.doi.org/10.15226/sojmse.
12. M. Alenezi, **T. Alzanki**, and A. M. Almeshal. "**Nanowire Array-Based UV Detectors**" International Journal of Science and Research (IJSR) vol. 3, issue 7 (July 2014), p. 588-591. ISSN: 2319-7064 Paper ID: 020141090.
13. Mohammad R. Alenezi; **Talal H. Alzanki**; Abdullah S. Alshammari; Simon John Henley; and Ravi P. Silva, "**Hierarchically Designed ZnO Nanostructures Based High-Performance Gas Sensors**" RSC Advances Royal Society of Chemistry journals. (October 2014), p. 49521-49528. DOI: 10.1039/C4RA08732A.
14. Mohammad R. Alenezi; **Talal H. Alzanki**; Abdullah. M. Almeshal; Abdullah S. Alshammari; Simon John Henley; and Ravi P. Silva, "**UV Sensing Properties of Single 2D ZnO Nanostructure**" Journal of Materials Science and Engineering (A) vol. 4, issue 7A (July 2014) p.197-201 ISSN: A: 2161-6213.
15. Abdullah. M. Almeshal; Mohammad R. Alenezi and **Talal H. Alzanki**. "**A Spiral Dynamic Optimised Hybrid Fuzzy Logic Controller for a Unicycle Mobile Robot on Irregular Terrains**" World Academy of Science, Engineering and Technology, International Science Index 94, International Journal of

Electrical, Robotics, Electronics and Communications Engineering, vol. 8, issue (10) (December 2014) p.1618 - 1622. ISSN:0000000091950263.

16. Mohammad Rabia Alenezi; Michail J. Beliat; A S alshammari; S. Ravi P. Silva; A. Almeshal; **T. H. Alzanki** and Simon Henley "A Model for the Impact of the Nanostructure Size on its Gas Sensing Properties" RSC Advances Royal Society of Chemistry journals. (23 November 2015) vol. 5, issue (125) p. 103195-103202. DOI: 10.1039/C5RA19404K.
17. **Talal H. Alzanki**, Kandil M. Kandil, Chris Jeynes, Brian J. Sealy, Mohammad R. Alenezi¹, Abdullah Almeshal¹, Nahiha M. Aldukhanand¹ and Adel Ghoneim "High resolution medium energy ion scattering analysis for investigating ultra-shallow junction of antimony implanted in conventional silicon" Journal of Materials Science and Engineering A 6 (1-2) (2016) 17-22. doi: 10.17265/2161-6213/2016.1-2.002.
18. Adel Ghoneim, Kandil M. Kandil, **Talal H. Alzanki** and Mohammad R. Alenezi "Performance Analysis of High Concentrated Multi-Junction Solar Cells in Hot Climate" International Journal of Sustainable Energy, vol. 37, issue (3) (2016) 294-310. doi:10.1080/14786451.2016.1270284.
19. Goher K. M., Almeshal A. M, Agouri S. A, Nasir A. N. K, Tokhi M. O, Alenezi M. R, **Alzanki T** and Fadlallah S. O. "Hybrid spiral-dynamic bacteria-chemotaxis algorithm with application to control two-wheeled machines" Springer Open, Robotics and Biomimetic 2017, vol. 4, issue (1) (16 June 2017) p.1 - 15. ISSN: 2197-3768. doi: 10.1186/s40638-017-0059-1.
20. **Talal H. Alzanki**, Kandil M. Kandil, Mohammad R. Alenezi and Adel Ghoneim "Environmental Impacts of Grid Connected High Concentrated Photovoltaic Systems Adapted for Peak Load Minimization in Hot Climate" Smart Grid and Renewable Energy (SGRE). Vol.09, issue (11) (2018) (237-258). Article ID:88839. 10.4236/sgre.2018.911015.
21. Kandil M. Kandil, **Talal H. Alzanki** and Ibrahim M. Kadam "Assessment of High Concentrated Photovoltaic / Thermal Collector in Hot Climate" Smart Grid and Renewable Energy (SGRE). Vol.10, issue (5) (2019) (119-140). ISSN: 2151-4844. doi: 10.4236/sgre.2019.105008.
22. Mohamad K. El-Daou, **Talal H. Alzanki**, and Nadia S. Al-Mutawa " Quasi-exactly solvable differential models: A canonical polynomials approach" American Journal of Computational Mathematics (AJCM). Vol.09, issue (2) (2019) (48-60). Article DOI:10.4236/ajcm.2019.92004.
23. **Talal H. Alzanki**, and Mutaz M. Jafar " Parameter prediction of stretch–blow molding process of PET using Neural Networks" Journal of Software Engineering and Applications (JSEA). Vol.12, issue (7) (2019) (278-292). Article DOI:10.4236/jsea.2019.127017.
24. **Talal H. Alzanki**, Mohamad S. Shaaban, and Mohamad K. El-Daou," On the High-Order Quasi Exactly Solvable Deferential Equations" American Journal of Computational Mathematics (AJCM). Vol.09, issue (4) (2019) (234-250). Article DOI:10.4236/ajcm.2019.94018.
25. **Talal H. Alzanki** and Kandil M. Kandil, " Adapting Integrated High Concentrated PV Modules and Evacuated Tube Collectors to Minimize Building Energy Consumption in Hot Climate" Smart Grid and Renewable Energy (SGRE). Vol.10, issue (10) (2019) (237-256). Article DOI:10.4236/sgre.2019.1010015.

Professional development activities

UV Sensing, Ultra-Shallow Junctions, Ion Beam Analysis for Electronic Components and Semiconductors, Robotics and solar cell research and technology.