



# SALMAN MAHMOOD

ASSISTANT PROFESSOR

## Personal Data

Nationality | Pakistan

Department | Mechanical and Energy Engineering

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## Language Proficiency

Language	Read	Write	Speak
Arabic	Intermediate	Intermediate	Intermediate
English	Advanced	Advanced	Advanced
Urdu	Proficient	Proficient	Proficient

## Academic Qualifications (Beginning with the most recent)

Date	Academic Degree	Place of Issue	Address
٢٠١١	PhD in Electrical Engineering	Malaysia	Universiti Teknologi Petronas, Perak, Malaysia
٢٠٠٤	MS in Electrical Engineering	Sweden	Royal Institute of Technology KTH, Stockholm, Sweden
٢٠٠١	BS in Electrical Engineering	Pakistan	University of Engineering & Technology Taxila, Pakistan

## PhD, Master or Fellowship Research Title: (Academic Honors or Distinctions)

PhD	Modelling and Simulation of Field Emission in Carbon Nanotube Based Ionization Gas Sensor
Master	Investigation of Gate Oxide Breakdown in MOSFETs and Their Impact on Circuit Operation and Reliability
Fellowship	

## Professional Record: (Beginning with the most recent)

Job Rank	Place and Address of Work	Date
Assistant Professor	Imam Abdulrahman Bin Faisal University, KSA	٢٠١٤- Present
Assistant Professor	IQRA University, Pakistan	٢٠١٢-٢٠١٣



## Scientific Achievements

### Published Refereed Scientific Researches

(In Chronological Order Beginning with the Most Recent)

#	Name of Investigator(s)	Research Title	Publisher and Date of Publication
١	S. Mahmood, Z.A. Burhanudin, and A. Salman	Field emission model of carbon nanotubes to simulate gas breakdown in ionization gas sensor	Journal of Applied Physics, American Institute of Physics Impact Factor: ٢,١٦٨
٢	S. Mahmood, Z.A. Burhanudin, and N.H. Hamid	Field Emission Model of CNT based Ionization Gas Sensor,	<i>Advanced Materials Research</i>

### Refereed Scientific Research Papers Accepted for Publication

#	Name of Investigator(s)	Research Title	Journal	Acceptance Date

### Scientific Research Papers Presented to Refereed Specialized Scientific Conferences

#	Name of Investigator(s)	Research Title	Conference and Publication Date
١	S. Mahmood, Z.A. Burhanudin, and N.H. Hamid	Effects of CNT Density Variation in Field Emission Model of Ionization Gas Sensor	<i>IEEE proc. Micro and Nanoelectronics RSM-٢٠١١</i>
٢	S. Mahmood, Z.A. Burhanudin, and N.H. Hamid	Simulation of Electron Densities and Breakdown Voltages in Argon-Filled Cylindrical Electrodes	<i>IEEE ICEDSA ٢٠١٠</i> pp. ٤٣٦, Kuala Lumpur, Malaysia.
٣	S. Mahmood, Z.A. Burhanudin, and N.H. Hamid	Electron densities in Radio Frequency Argon Discharge Simulated Using PIC-MCC	<i>IEEE-RSM ٢٠٠٩</i> , Kota Bahru, Malaysia
٤	S. Mahmood, Z.A. Burhanudin, and N.H. Hamid	Fundamental Realization of Ionization Gas Sensor Design	Symposium on Engineering & Technology, Jul. ٢٠٠٨, Labuan, Malaysia
٥	B. Kaczer, A. De Keersgieter, S. Mahmood, R. Degraeve, G. Groeseneken	Impact of gate-oxide breakdown of varying hardness on narrow and wide nFET's	<i>IEEE, ٤٣<sup>rd</sup> Intl. Reliability Physics Symposium (IRPS)</i> , pp. ٧٩-٨٣, ٢٠٠٤, Arizona, USA.

### Completed Research Projects

#	Name of Investigator(s) (Supported by)	Research Title	Report Date
١	Salman Mahmood (UOD)	Design and Analysis of a Breath Sensor to Monitor Patients Health	٢٠١٦
٢	Salman Mahmood, Z. A. Burhanudin (Ministry of Higher Education Malayisa)	Fabrication of carbon nanotubes for highly sensitive and selective ionization gas sensor	٢٠١١
٣	Salman Mahmood, Z. A.	Design and Modelling of a carbon nanotube based ionization gas	٢٠٠٩



	Burhanudin (Research Enterprise Office, PETRONAS, Malaysia)	sensor for petroleum industry applications	
٤	Ben Kaczer, Salman Mahmood (IMEC, Belgium)	Investigation of soft and hard gate-oxide breakdowns in MOSFETs and their impact on circuit reliability	٢٠٠٤

#### Current Researches

#	Research Title	Name of Investigator(s)
١	Effective Teaching Methodologies in Engineering and Computer Programming Courses	Salman Mahmood

#### Contribution to Scientific Conferences and Symposia

#	Conference Title	Place and Date of the Conference	Extent of Contribution

#### Membership of Scientific and Professional Societies and Organizations

- Member IEEE, USA
- Member PEC, Pakistan

#### Teaching Activities

##### Undergraduate

#	Course/Rotation Title	No./Code	Extent of Contribution (no. of lectures/Tutorials. Or labs, Clinics)
١	Electric Circuits	ENG-٣٣١	Instructor
٢	Introduction to Engineering	ENG-٢٥١	Instructor
٣	Advanced Computer Programming	COMP-٣٦١	Instructor
٤	Microprocessors	BIOEN-٤٤٢	Instructor
٥	Introduction to Communication Systems and Networks	ENG-٤٤٢	Instructor
٦	Electromechanical Systems	ENG-٤٢٢	Instructor
٧	Summer Training-١	BIOEN-٣٣٣	Instructor
٨	Electronics-I		Instructor
٩	Analog Electronics-II		Instructor
١٠	Digital Electronics		Instructor
١١	Electricity and Magnetism		Instructor
١٢	Assembly Language Programming		Instructor



**Brief Description of Undergraduate Courses Taught: (Course Title – Code: Description)**


**Postgraduate**

#	Course/Rotation Title	No./Code	Extent of Contribution (no. of lectures/Tutorials. Or labs, Clinics)
١	VLSI Design		Instructor
٢	Power Electronics		Instructor

**Brief Description of Postgraduate Courses Taught: (Course Title – Code: Description)**


**Guest/Invited Lectures for Undergraduate Students**

#	Activity/Course Title and Code	Subject	College and University or Program	Date

**Student Academic Supervision and Mentoring**

#	Level	Number of Students	From	To
١	Undergraduate	٤	٢٠١٥	٢٠١٦
٢	Undergraduate	٣	٢٠١٥	٢٠١٦
٣	Undergraduate	٤	٢٠١٤	٢٠١٥

**Ongoing Research Supervision**

#	Degree Type	Title	Institution	Date

**Administrative Responsibilities, Committee and Community Service (Beginning with the most recent)**

**Administrative Responsibilities**

#	From	To	Position	Organization




#### Committee Membership

#	From	To	Position	Organization
١	٢٠١٦	Present	Member, Program Initiation Committee	IAU
٢	٢٠١٦	Present	Member, Quality and Accreditation Committee	IAU
٣	٢٠١٦	Present	Member, Faculty Hiring Committee	IAU
٤	٢٠١٥	Present	Member, Academic affair Committee	UOD

#### Scientific Consultations

#	From	To	Institute	Full-time or Part-time

#### Personal Key Competencies and Skills: (Computer, Information technology, technical, etc.)

١	XOOPIC, XPDP١, Particle-in-Cell simulations
٢	Star HSPICE, Awaves
٣	Cadence, Virtuoso Spectre Simulator and Layout Editor
٤	PSPICE
٥	MATLAB
٦	C/C++ Compiler Windows/ GCC compiler Linux
٧	Microwind
٨	ORCAD
٩	MPLAB IDE for PIC

#### Last Update

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