Curriculum vitae



Personal

information

Name | Mohamed Talaat Mohamed Moustafa

Position | Dean of Engineering and Technology – Faculty of Engineering and Technology –

Egyptian Chinese University - Cairo - Egypt.

Full Professor (Prof. of Electrical Power Systems)

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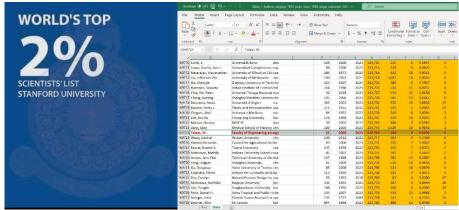
Google Scholar https://scholar.google.com.eg/citations?user=Jwd8yQIAAAAJ&hl=en

Research interests:

Renewable energy integration techniques, Energy conversion (solar-wind-wave energies) to electrical power generation, Artificial intelligence applications in power systems, IoT, and hybrid cloud-based data processing for power system monitoring in smart and microgrids.

Research Impact:

According to Stanford University, my name (M. Talaat) is on the World's Top 2% Scientists' List for 2022 and 2023.



Publications

- [1]. A. El-Zein and M. Talaat "New Experimental Study of an Injected Air Bubble Deformation in Dielectric Liquid under Applied High D.C. Voltage Using Photographic Recording", IEEE, Ninth International Middle East power systems conference, MEPCON' 2003, pp. 869-873 Shebin El-Kom, Egypt, December 16-18, 2003.
- [2]. A. El-Zein and M. Talaat "Pre-Breakdown Analysis during the Deformation of an Artificial Air Bubble in Transformer Dielectric Liquid under High DC Negative Applied Voltage" IEEE, Tenth International Middle East power systems conference, MEPCON' 2005, pp. 113-117, Port-said, Egypt, December 13-15, 2005.
- [3]. A. El-Zein, M.M. El Bahy and M. Talaat "Types of Electrical Tree in Solid Insulation Under Electrical and Mechanical Energy Basis" IEEE, Power System Conference MEPCON' 2008, pp. 80-84, Aswan, Egypt, 2008.
- [4]. A. El-Zein, M.M. El Bahy and **M. Talaat** "A Simulation Model for Electrical Tree in Solid Insulation Using CSM Coupled with GAs", **IEEE** Annual Report Conference on Electrical Insulation and Dielectric Phenomena **CEIDP 2008**, pp. 645-649, Quebec, **Canada** October 26-29, **2008**.
- [5]. A. El-Zein, M.M. El Bahy and **M. Talaat** "A Prediction Methodology of Electrical Tree Propagation in Solid Dielectrics" International Journal of Electrical Engineering, J. Elec. Eng. (2009) Vol. 9 / 2009 No. 2, pp. 87-93, 2009.
- [6]. A. El-Zein, **M. Talaat** and M.M. El Bahy "A New Method to Predict the Electrical Tree Growth in Solid Insulation" Proceedings of the 16th International Symposium on High Voltage Engineering, **(ISH 2009)**, paper D-15, pp. 1-6, **2009**.
- [7]. A. El-Zein, M. Talaat and M.M. El Bahy "A Numerical Model of Electrical Tree Growth in Solid Insulation" IEEE Transactions on Dielectrics and Electrical Insulation, Vol. 16, No. 6; pp. 1724-1734, December 2009. IEEE.
- [8]. A. El-Zein and M. Talaat, "A New Model of Investigating the Electric Field in Dielectric Liquid for Streamer Initiation" Journal of Electrical Engineering, J. Elec. Eng. (2010) Vol. 10 / 2010 No. 2, pp. 47-51, 2010.
- [9]. A. El-zein and **M. Talaat**, "A Numerical Model of Investigating the Electric Field in Dielectric Liquid" **IEEE MELECON** Conference 2010, pp. 393-397, **2010**.
- [10]. **M. Talaat** "A Simulation Model of Fluid Flow and Streamlines Induced by Non-Uniform Electric Field" **IEEE**, 14th International Middle East Power Systems Conference **MEPCON'10**, pp. 371-375, Cairo University, **Egypt**, **2010**.
- [11]. M. Farahat and **M. Talaat** "A New Approach for Short-Term Load Forecasting Using Curve Fitting Prediction Optimized by Genetic Algorithms" **IEEE**, 14th International Middle East Power Systems Conference **MEPCON'10**, pp. 106-110, Cairo University, **Egypt**, December 19-21, **2010**.
- [12]. **M. Talaat** "Charge Simulation Modeling for Calculation of Electrically Induced Human Body Currents" **IEEE** Annual Report Conference on Electrical Insulation and Dielectric Phenomena **CEIDP 2010**, pp. 644-647, **USA**, October 17-20, **2010**.
- [13]. **M. Talaat** "Influence of Transverse Electric Fields on Electrical Tree Initiation in Solid Insulation" **IEEE** Annual Report Conference on Electrical Insulation and Dielectric Phenomena **CEIDP 2010**, pp. 313-316, **USA**, October 17-20, **2010**.
- [14]. **M. Talaat** "Electric Field Simulation along Silicone Rubber Insulators Surface" Proceedings of the 17th International Symposium on High Voltage Engineering, (ISH **2011) Germany**, paper A-22, pp. 1-6, **2011**.

- [15]. **M. Talaat,** A. El-Zein, "Analysis of Air Bubble Deformation Subjected to Uniform Electric Field in Liquid Dielectric", **International Journal of Electromagnetics and Applications**, Vol. 2, No. 1, pp. 4-10, **2012**.
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- [17]. M. Talaat, M. Magdy, A. Abd El-Baset, M. Abo-Msallam, A. Abdallah, E. Mohamed, A. Amer, M. El-Dallal, "Software for Calculating The Non-Uniform Electric Field Causing Electrical Tree in Underground Cables", International Journal of Electromagnetics and Applications, Vol. 2, No. 4, pp. 69-72, 2012.
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- [22]. **M. Talaat,** "Calculation of electrostatically induced field in humans subjected to high voltage transmission lines", **Electric Power Systems Research** Vol. 108, pp. 124-133, **2014**. **Elsevier**.
- [23]. **M. Talaat,** "Calculation of Electric and Magnetic Induced Fields in Humans Subjected to Electric Power Lines", **Journal of Electrostatics** Vol. 72, No. 5 pp. 387-395, **2014. Elsevier.**
- [24]. **M. Talaat,** "Electrostatic Field Calculation in Air Gaps with a Transverse Layer of Dielectric Barrier", **Journal of Electrostatics** Vol. 72, No. 5 pp. 422-427, **2014. Elsevier.**
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"Monolithic Design of Self-Adaptive CMOS Converter and Robust Event-Triggered Consensus Control for Integration of Multi-Renewable Energy Sources with Battery Storage System", **Journal of Energy Storage**, 88, 111498, **2024**. https://doi.org/10.1016/j.est.2024.111498 **Elsevier**.

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Work

experience.

1 September 2023→ Present

Professor – **Dean of Engineering and Technology** – Faculty of Engineering and Technology – Egyptian Chinese University – Cairo – Egypt.

Dates
Occupation or
position

Dates | 15 October 2022→ 31 August 2023

Occupation or Professor – Vice Dean for Education and Students' Affairs – Faculty of Engineering position and Technology – Egyptian Chinese University – Cairo – Egypt.

Dates 1 September 2023→ Present

Occupation or position Professor – **Head of Energy and Renewable Energy Program** – Faculty of Engineering and Technology – Egyptian Chinese University – Cairo – Egypt.

Dates | 1 **September 2021** → 31 **August 2023**

Occupation or Professor – **Head of Mechatronics Program** – Faculty of Engineering and Technology position – Egyptian Chinese University – Cairo – Egypt.

Dates | 27 April 2018 → 31 August 2021

Occupation or position Professor – **Head of Electrical Department** – College of Engineering -Shaqra University – KSA

And Head of ABET accreditation team of EE Program (accredited from ABET for 8 years)

Dates | 10 July 2021 → Present

Occupation or position | Full Professor – Electrical Power and Machines Department – Faculty of Engineering - Zagzaig University - Egypt

Main activities and responsibilities

Teaching the following subjects

- Power System Analysis.
- Electrical Power Eng.
- Power System Dynamics & control.
- High Voltage Eng.
- Electrical Measurements.
- Utilization of power system.
- Computer Design of Electrical Power System.
- Electromagnetic Fields.
- Electrical and Electronics Engineering.
- Electrical Power & Machines Eng.
- Introduction to Mechatronics.
- Mechatronics Measurements.
- Computer applications in Electromagnetic Fields.
- Modern Trends in High Voltage and DC Transmission Line.

Name and address of employer

Zagazig University

Electrical Power and Machines Department, Faculty of Engineering, 44519 Zagazig -Sharkia (Egypt)

Dates

May 2016 → July 2021

Occupation or position held Associate professor - Electrical Power and Machines Department - Faculty of

of employer

Engineering -Zagzaig University - Egypt

Main activities and responsibilities

Associate professor participating in teaching power, high voltage and machines courses.

Name and address

Zagazig University

Electrical Power and Machines Department, Faculty of Engineering, 44519 Zagazig -

Sharkia (Egypt)

Dates

2009 → May 2016

Occupation or position held Assistant professor - Electrical Power and Machines Department - Faculty of

Engineering -Zagzaig University - Egypt

Main activities and responsibilities Assistant professor participating in teaching power, high voltage and machines courses.

Name and address Zagazig University

of employer

Electrical Power and Machines Department, Faculty of Engineering, 44519 Zagazig -Sharkia (Egypt)

Dates

2005 → July 2009

Occupation or position held Lecturer - Electrical Power and Machines Department - Faculty of Engineering -Zagzaig University - Egypt

Main activities and Lecturer participating in teaching power and machines courses and Labs. responsibilities Name and address Zagazig University Electrical Power and Machines Department, Faculty of Engineering, 44519 Zagazig of employer Sharkia (Egypt) **Dates** $\textbf{2001} \rightarrow \textbf{2005}$ Occupation or Demonstrator - Electrical Power and Machines Department - Faculty of Engineering position held Zagzaig University - Egypt Main activities and Demonstrator participating in teaching power and machines courses and Labs. responsibilities Name and address Zagazig University Electrical Power and Machines Department, Faculty of Engineering, 44519 Zagazig of employer Sharkia (Egypt) **Dates 2010** → **2012** Occupation or Consultant - Communication and Information Technology Center CITC/MIS -Zagazig University - Egypt position held Main activities and MIS Consultant - Zagazig University. responsibilities Name and address Zagazig University - Egypt of employer $2012 \rightarrow 2014$ **Dates** Occupation or Project Manager - Communication and Information Technology Center CITC/MIS position held Zagazig University - Egypt Main activities and Project Manager - Zagazig University. responsibilities Name and address Zagazig University - Egypt of employer **2014** → **2016 Dates** Occupation or Project Manager - Training and Continuing Education Unit -Zagazig University - Egypt position held Project Manager - Zagazig University. Main activities and responsibilities Name and address Zagazig University - Egypt of employer

Dates

 $\textbf{2014} \rightarrow \textbf{2016}$

Occupation or IT Unit Manager - Information Technology Unit - Faculty of Engineering - Zagazig position held University - Egypt Main activities and IT Unit Manager – Faculty of Engineering - Zagazig University. responsibilities Name and address Zagazig University - Egypt of employer **Dates 2016** → **2017** Occupation or Consultant - Project Management Unit - Higher Education Development - Ministry of position held Higher Education - Egypt Main activities and MIS Consultant - Higher Education Development. responsibilities Name and address Ministry of Higher Education - Egypt of employer **Dates** December 2017 → August 2021 Occupation or Associate professor - Electrical Engineering Department - College of Engineering position held Shaqra University - KSA Main activities and Teaching the following subjects Fundamental of Power Systems responsibilities High Voltage Engineering. Devices and Measurements. Engineering Electromagnetics (1). Renewable Energy. Name and address Shaqra University Electrical Engineering Department, College of Engineering, 11911 Dawadmi - KSA of employer Education **Dates** $2005 \rightarrow 2009$ Title of qualification PhD in Electrical Power and Machines Engineering awarded Principal subjects / Thesis Title: "Electrical Trees in Solid Insulation Analysis" occupational skills covered Name and type of Zagazig University organization providing education and training

Dates | 2001 → 2005

Title of qualification | MSc in Electrical Power and Machines Engineering

awarded

Principal subjects / occupational skills covered

Thesis Title: "Electrical Pre-Breakdown Analysis in Dielectric Liquid Using Air Bubble Deformation in the Medium"

Name and type of organization providing education and training

Zagazig University

Dates

May 2000

Title of qualification

BSc in Electrical Power and Machines Engineering

awarded

Mark obtained

Very Good with honor

Principal subjects / occupational skills
Covered

Electrical Power and Machines Engineering Undergraduate subjects

Name and type of organization Faculty of Engineering (Zagazig University) 44519 Sharkia - Zagazig (Egypt)

Training

- Training Mechatronics degree funded by Europe, Poland 2013
- Training Green Innovation and Entrepreneurship Program double MSc degree in GIEP funded by Europe, Italy 2014
- Training Green Innovation and Entrepreneurship Program double MSc degree in GIEP funded by Europe, <u>Graz 2014</u>

Training courses attended:

- 1. University teacher preparation (75 hours)
- 2. Exams and Students Evaluation Systems (15 hours)
- 3. International Publishing of Scientific Research (15 hours)
- 4. Research Ethics (15 hours)
- 5. Managing Time and Meetings (15 hours)
- 6. Conference Organization (15 hours)

Mother tongue(s)

Arabic

Other language(s)

English

Research interests

- Renewable Energy
- Energy conversion (solar-wind-wave energies) to electrical power generation
- Artificial intelligence applications in power systems
- IoT, and hybrid cloud-based data processing
- Power system monitoring
- Smart and microgrids
- Computer Simulation
- Genetic Algorithms
- Plasma Science
- High Voltage
- Electromagnetic fields
- Underground cables
- Transformer oil
- Insulations Material (Dielectric Liquid Gases Solids)
- Charge Simulation Technique

Thesis supervision

MSc (25) PhD (8)

Social skills and competences Society membership

Team- work experienced from my work with my colleagues and interacting with other colleagues and training programs with co-workers in the research.

Reviewer Summary

For manuscripts reviewed from date range April 2018 - April 2023

(32) Journal of Electrical Engineering	(23) Energy
(13) IET Science, Measurement and Technol	(11) Energy Reports
(10) Results in Engineering	(7) IEEE Transactions on Dielectrics and Elec
(7) Energies	(6) Sustainability
(4) Ain Shams Engineering Journal	(4) Sustainable Cities and Society
(4) IEEE Access	(4) Artificial Intelligence Review
(4) Environmental Progress & Sustainable E	(3) IET Generation, Transmission & Distributi
(3) Plasma Science and Technology	(3) Applied Energy
(3) High Voltage	(2) International Journal of Electrical Power
(2) Applied Computational Electromagnetic	(2) Journal of Applied Geophysics
(1) Power Engineering Letters	(1) The Journal of Optics
(1) Advances in Engineering Software	(1) Journal of King Saud University - Engine
(1) Journal of Computational Methods in Sci	(1) IEEE Transactions on Plasma Science
(1) Engineering Computations	(1) IEEE Transactions on Electromagnetic Co

Verified reviews

Review Summary



Organizational skills and

Having the ability to organize my own work, setting priorities and taking responsibility, gained during professional experiences devoted to activities scheduling, respecting both deadlines and goals.

Competences Able to work on own initiative and as part of a team.

Able to manage, develop and motivate my teams to achieve the objectives acquired at work.

Good ability to organize academic work related to quality assurance like:

- · Educational Programs specifications,
- · Course specifications,
- · Course reports,
- · Course's blueprint,
- · and other educational quality requirements.

Experience in organization conferences during my work "Annual international conference in Engineering Sciences and Applications".

Work in European projects and task management for educational degrees creation and developments like:

- Green Innovation and Entrepreneurship Programme(GIEP) No. "530611-TEMPUS-1-2012-1-IT-TEMPUS-JPCR"
- JIM2L Development of Joint International master's degree and Lifelong Learning Framework in Mechatronics No. "516686-TEMPUS-1-2011-1-DE-TEMPUS-JPCR"

Technical skills

• Technical skills provided by Electrical Engineering specialization in Renewable Energy, Artificial Intelligence and Electrical Power Insulation.

and

Good knowledge of Renewable Energy applications.

competences

- Ability to construct numerical model of power integration problems.
- Good experience of experimental work with visualization problems, measurements using data acquisition systems.

Computer skills

Operating systems:

and

Windows: Excellent knowledge
Microsoft Office: Excellent knowledge

COMSOL Multiphysics 5

competences | MATI

MATLAB, EES: Basic knowledge

LabView: Basic knowledge (Measurement and data analysis)

PROGRAMMING LANGUAGES

C, C++: Basic knowledge FORTRAN: Expert knowledge