

Mohamed Eladawy Khalil ELADAWY M.Sc., Ph.D.
Assistant Professor



Summary

Dr. MOHAMED ELADAWY is an assistant professor of Electrical Engineering at Mansoura University, Egypt. He received the B.Eng. degree in electrical engineering and the M. Eng. degree in high-voltage engineering from Mansoura University, Mansoura, Egypt, in 1997 and 2003, respectively. He received the Ph.D. degree from the Institut P' UPR 3346, the Electro-Fluid Dynamics Group, Centre National de la Recherche Scientifique, University of Poitiers, Poitiers, France, in 2011. His areas of research include oil-flow electrification in electric power apparatus, fundamental aspects of the electrical double layer and its modeling, power system overvoltage, generation and measurement of impulse voltage, characterization of impulse voltage and modeling of power transformers.

- Research background. Authored and Co-authored of about 13 research papers. Published and presented in the reputed electrical engineering journals and at electrical engineering specializing conferences.
- Presented papers in a number of conferences and seminars in the USA, France, Spain, Netherlands and Egypt.

LANGUAGES:

Native Language:	<i>Arabic</i>	Mother Tongue		
Foreign Languages:	<i>English</i>	Excellent	French	Very Good

Education

Mar 2003–April 2011 : Ph.D. in Electrical Engineering, Institute P', UPR3346, CNRS, Poitiers University, France. Thesis: "Study of Flow Electrification Phenomenon: Understanding the Origin and Development of the Phenomenon".

June1997 – mar 2003 : M.Sc. in Electrical Engineering, Thesis: "Determination of Impulse Voltage Generator Parameters Under Different Loading Conditions", Mansoura University, Mansoura, EGYPT.

Sept 1992 – Jun 1997: B.Sc. in Electrical Engineering, grade: Very Good with Honor's Degree.

Professional Experience

June 2011 – Present: Assistant Professor – Electrical Engineering Department, Faculty of Engineering, Mansoura University, EGYPT. Duties include conducting research work, supervising graduate students and teaching the following graduate and undergraduate courses:

- High Voltage Engineering.
- Electrical Power I (Transmission and Distribution).
- Electrical Power II (Fault Analysis and Stability).
- Electrical Power and Machines (Transformers and DC Machines).
- Electrical Engineering Materials.
- Electric Circuit Analysis I (Introduction to Electric Circuit Analysis).
- Principles of Energy Conversion.
- Power Electronics.

▪ ***As a H.V& E.H.V Lab. Supervisor:***

- Manufacturing, Assembling, Maintenance and Design of Impulse Voltage Generators.
- Generation and Measurement of Impulse Voltages.
- Generation and Measurement of HVAC and HVDC.
- Measuring Gases Dielectric Strength.
- Measuring Liquid and Solid Dielectric Strength.
- Simulation of Impulse Voltage Generators and Transformer Equivalent Circuits.
- Testing Transformers against Impulse Voltages.
- Modeling of transformers under transient phenomena.
- Modeling of reactors under transient phenomena.
- Testing the electrical charge tendency of the Transformer oils

▪ ***As a Project Manager, I have been the technical manager of the graduation projects that interested to:***

1. Modeling of transformers under transients.
2. Design and implementation of impulse voltage generators.
3. Simulation of earthing resistance with the help of electrolytic tanks
4. Study of flow electrification phenomenon in power transformer: electrical and mathematical modeling
5. Transformer modeling under transient phenomenon: PSCAD simulation
6. Study of medium voltage power cables and cable joints: FEMM and COMSOL simulation

Professional Affiliations

- **Member** of the Egyptian Engineers Syndicate
- **Member** of the Scientific Body at the Faculty of Engineering, Mansoura University.
- **Member** of the Scientific Body at the Institute P', UPR3346, CNRS, ENSMA, University of Poitiers, France.

EXPERIENCE:

- | | |
|-------------------------|---|
| <u>Feb 2016</u> | <ul style="list-style-type: none">• Assistant Professor, Electrical Engineering Department–Faculty of Engineering Mansoura University.• High-Voltage & Extra High- Voltage Laboratory Supervisor.• Graduation Project Technical Manager. |
| <u>2013-2016</u> | <ul style="list-style-type: none">• Assistant Professor, Electrical Engineering Department–Faculty of Engineering Mansoura University.• High-Voltage & Extra High- Voltage Laboratory Supervisor.• Graduation Project Technical Manager.• General director of Mansoura University Press (MUP), Mansoura University |
| <u>2011-2013</u> | <ul style="list-style-type: none">• Assistant Professor, Electrical Engineering Department–Faculty of Engineering Mansoura University.• High-Voltage & Extra High- Voltage Laboratory Supervisor.• Vice-Vice-Dean for Community Service & Environment Development Affairs - Faculty of Engineering Mansoura University.• Manager of Crisis and Disaster Unit-Faculty of Engineering Mansoura University.• Graduation Project Technical Manager. |
| <u>2007-2011</u> | Ph. D Full Scholarship to France, Institute P' UPR 3346 CNRS, Université de Poitiers, ENSMA
<u>Research Title:</u> Electrical Double layer |
| <u>2006-2007</u> | Nominated for Ph. D Full Scholarship to FRANCE according to the rules of Mansoura University and the Egyptian Mission' Administration sector
<u>Mission Number:</u> 2/6/7 for Year 2005-2006 |
| <u>2004-2006</u> | Preparatory Doctoral Degree Courses according to the rules of Mansoura University
<u>Research Title:</u> Power System Overvoltage |
| <u>2003-2004</u> | Research for the subscription in Doctoral Program according to the rules of Mansoura University |

- 2003-2007**
- Lecturer in Electrical Power & Machine Department–Faculty of Engineering Mansoura University
 - High-Voltage & Extra High- Voltage Laboratory Technical Engineer
 - Graduation Project Technical Manager
-

2000-2003 Master Degree Research

1999-2000 Preparatory Master Degree Courses according to the rules of Mansoura University

1998-1999 Military Service

1997-2003 Demonstrator in Electrical Power & Machine Department–Faculty of Engineering–Mansoura University

Publications, Technical Reports & Presentations

Refereed Journal Publications

- [1] M. EL-Adawy Khalil and I. A. Metwally, “Reconfiguration of impulse-voltage generator for conducting standard lightning tests: A comparative investigation”, The International Journal for Computation and Mathematics in Electrical and Electronic Engineering (COMPEL), Vol. 27, No. 2, pp. 518-531, 2008.
- [2] M. EL-Adawy, J. M. Cabaleiro, T. Paillat, O. Moreau and G. Touchard, “Experimental determination of space charge density associated with flow electrification phenomenon: Application to power transformers,” J. Electrostatics 67 (2009), pp. 354-358.
- [3] Mohamed EL-Adawy, Thierry Paillat, Yves Bertrand, Olivier Moreau and Gérard Touchard, “Physicochemical analysis at the interface between conductive solid and dielectric liquid for flow electrification phenomenon,” IEEE Trans. Industry Applications, Vol. 46, No. 4, pp. 1593-1600, July/August 2010.
- [4] M. EL-Adawy, T. Paillat, J. M. Cabaleiro and G. Touchard, “Numerical Simulation of the Electrical Double Layer Development: Physicochemical Model at the Solid and Dielectric Liquid Interface for Laminar Flow Electrification Phenomenon”, IEEE Trans. Dielectrics and Electrical Insulation, Volume: 18, No. 5, pp.1463 - 1475, October 2011.

Conference Publications

- [1] Fathi M. Youssef, Taher D. Eish and M. EL-Adawy Khalil, “A modified algorithm for the pre-determination of impulse voltage generator parameters under different loading conditions: theory and experimental verification”, 13th ISH, Delft, The Netherlands, August 25-29, 2003.

- [2] M. EL-Adawy, J. M. Cabaleiro, T. Paillat, O. Moreau and G. Touchard, “Experimental determination of space charge density associated with flow electrification phenomenon: Application to power transformers”, Proceeding of the 11th International Conference on Electrostatics 2009, Polytechnical University of Valencia (UPV), Valencia (Spain), 27-29 May 2009.
- [3] M. EL-Adawy, T. Paillat, Y. Bertrand, O. Moreau and G. Touchard, “Physicochemical analysis at the interface between conductive solid and dielectric liquid for flow electrification phenomenon”, Electronic Conference Proceeding of the 2009 Electrostatics Joint Conference, Boston University, Boston, MA-USA, June 16-18, 2009.
- [4] T. Paillat, J. M. Cabaleiro, M. EL-Adawy, O. Moreau, G. Touchard, “High Power Transformers Failures due to Flow Electrification: Tools for Understanding the Electrostatic Hazard”, Electronic Conference Proceeding of the 2009 Electrostatics Joint Conference, Boston University, Boston, MA-USA, June 16-18, 2009.
- [5] M. EL-Adawy, T. Paillat, J. M. Cabaleiro, O. Moreau and G. Touchard, “Numerical Approach of the Electrical Double Layer Development of the Physicochemical Corrosion Model: Interface between Solid and Dielectric Liquid”, Proceeding of the 7th Conference of the French Society of Electrostatics SFE 2010, Montpellier, France, 30/08/2010-01/09/2010.
- [6] M. EL-Adawy, T. Paillat, J. M. Cabaleiro and G. Touchard, “Numerical Simulation of the Electrical Double Layer Development at the solid and Dielectric Liquid Interface for Flow Electrification Phenomenon”, IEEE-IAS 2010 Annual Meeting, Houston, TX-USA, 3-7 October 2010.
- [7] Mohamed EL-Adawy, Magdi Saadawi and Mohamed S. Abdel-Aziz, “Numerical Simulation of Electric Field and Potential Distribution of Medium Voltage Cables using OctaveFEMM”, 17th International Middle East Power System Conference MEPCON’15, 15-17 December, 2015.
- [8] Mohamed EL-Adawy, Magdi Saadawi and Mohamed S. Abdel-Aziz, “Applying OctaveFEMM Method to Simulate Electric Field and Potential Distribution of Medium Voltage Cable Joints”, 17th International Middle East Power System Conference MEPCON’15, 15-17 December, 2015.
- [9] Mohamed EL-Adawy, Kamal Shebl and Abdel-Rahman A.Mewafy, “New Multi-Objective Function Based on Generation, Losses and Voltage deviation for Optimization of DG Size and Location”, 17th International Middle East Power System Conference MEPCON’15, 15-17 December, 2015.