



## 3rd OMICRON Saudi User Meeting

2 - 4 Decemeber 2019

Riyadh, Saudi Arabia



**WELCOME**

To 3rd OMICRON  
SAUDI USER  
MEETING



Dear Participant,

On behalf of the entire OMICRON team, welcome to **3rd OMICRON Saudi User Meeting**. This is a unique opportunity to meet and learn from our range of internal and external international speakers.

Our agenda includes over 20 industry expert speakers who are present to share their knowledge and experience with you!

We are conducting two parallel sessions. Primary testing sessions will take place in Hall 1, while Secondary testing sessions will take place in Hall 2. You may choose the sessions you are most interested in joining.

As always, audience participation is strongly encouraged, so please ask any questions you may have.

We hope you enjoy the user meeting, and thank you for your participation!

Sincerely,  
Ali Dawood  
Area Sales Manager

## Program I Monday, 2 December 2019

08:00 - 08:50 Registration & Breakfast

08:50 - 09:00 Event App Introduction

09:00 - 10:00

Hall 1: > Overview about instrument transformer testing  
> Advanced requirements for instrument transformers

Hall 2: > How to find problems of the protection scheme using system based test approach  
> Challenges of on-site testing of Ring Main Unit (RMU)

10:00 - 10:30 Coffee Break

10:30 - 11:00 Conventional testing of CT

11:00 - 11:30 CT testing and impact on protection settings

11:30 - 12:00 Keynote speech

12:00 - 12:05 Feedback

12:05 - 13:30 Lunch and Prayer

13:30 - 14:30

Hall 1: > Diagnostic measurement on rotating machines

Hall 2: > Increasing system reliability for line-differential-protection with synchronized End-to-End testing  
> GPS End-to-End testing

14:30 - 15:00 Coffee Break and Prayer

15:00 - 16:00

Hall 1: > Case studies for rotating machines measurements  
> Partial discharge measurement basics and fundamentals

Hall 2: > A story of success for automatic testing  
> Differential characteristic real demonstration for G60 protection relay  
> Bus bar neutral overvoltage protection (59BN) coordination for GE Protection scheme

## Program | Tuesday, 3 December 2019

08:00 - 09:00 Registration & Breakfast

09:00 - 10:00

Hall 1: > Case studies on partial discharge measurement  
> Power transformer testing strategy

Hall 2: > Protection testing of generator functions  
> Requirements for measuring frequency and testing frequency protection

10:00 - 11:00

Hall 1: > Advanced hardware and software tools for offline diagnostics on transformers  
> Case study on power transformer Tap changer with DRM using TESTRANO 600

Hall 2: > Efficient commissioning of IEC 61850 substation automation systems  
> Lessons learned and testing experiences in digital substations worldwide

11:00 - 11:30 Coffee Break

11:30 - 12:00 Keynote speech

12:00 - 12:05 Feedback

12:05 - 13:30 Lunch and Prayer

13:30 - 14:30

Hall 1: > Power transformers partial discharge measurement  
> Motivation for doing line impedance & grounding system measurements

Hall 2: > Practical cyber security for substation - Attack scenarios & countermeasures  
> New approach for detecting cyber intrusions in IEC 61850 substations

14:30 - 15:00 Coffee Break and Prayer

15:30 - 16:30

Hall 1: > New on-site non-intrusive testing methods for Gas Insulated Switchgear

Hall 2: > Simulation of cyber attacks on IEC 61850 station bus and how to detect them  
> KPI improvement for protection testing using automatic testing solutions

## Program I Wednesday, 4 December 2019

08:00 - 09:00 Registration & Breakfast

09:00 - 09:30 Keynote speech

09:30 - 09:45 Investigation into a double-circuit line fault using the mutual coupling impedance

09:45 - 10:00 Equipment calibration process according to ISO 17025:2017

10:00 - 10:30 Coffee Break

10:30 - 12:00

- Track 1:
- > Practical session on power transformer
  - > Practical session on circuit breaker
  - > Practical session on current transformer / voltage transformer

- Track 2:
- > How to manage and monitor the huge amount of asset data in field during commissioning and maintenance
  - > Automatic testing of multifunctional protection devices
  - > End-to-End testing Part 1: Technical basics and challenges

12:00 - 13:30 Lunch and Prayer

13:30 - 14:30

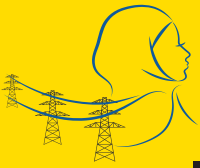
- Track 1:
- > Practical session on power transformer
  - > Practical session on circuit breaker
  - > Practical session on current transformer / voltage transformer

- Track 2:
- > End-to-End testing Part 2: Practical demonstration

14:30 - 15:00 Coffee Break and Prayer

15:00 - 15:05 Feedback

15:05 - 16:00 Questions & answers



# OMICRON ENERGIZING WOMEN

**Session Date:** Tuesday, 3 December 2019

**Session Time:** 13:30 - 16:00

## Agenda:

13:30 - 14:30	Panellist introduction and panel discussion
14:30 - 15:00	Coffee Break
15:00 - 15:30	Continuation of panel discussion
15:30 - 15:50	Networking with panellists
15:50 - 16:00	Group picture

## Panellists:

1. Dr. Fatmah Baothman
2. Sabine Wellhöfer

\* This session is specific for female attendees.

## Speakers



**Ahmed Abdelwahab**  
Application Engineer  
OMICRON

Mr. Ahmed holds a Bachelor's degree in Electrical Power and Machines from Ain Shams University and post graduate studies in Improvement of Power System Stability via Numerical Analysis.

He has over 13 years of experience in testing and commissioning field.

He joined OMICRON in 2017 as an Application Engineer with a focus on Engineering Services.



**Ahmed El-Hamaky**  
Regional Manager  
OMICRON

Mr. Ahmed has worked at OMICRON since May 2010, presently as Regional Manager for Middle East, Africa and Turkey.

He has years of experience in Electrical Power Systems following attainment of a diploma degree in power system protection in 2005 from Ain Shams University and a B.Sc. of Electrical Engineering from Cairo University in 2000. He has been an IEEE senior member since December 2011 and is also a member of IEEE Power Energy Society (PES). In 2014, he received a post graduate Certificate in Business Administration from the Open University in the United Kingdom.



## Speakers



**Dr. Ahmed Safieeldin Abouagwa**  
Senior Protection Specialist  
Saudi Electricity Company

Dr. Ahmed obtained his degree in engineering in 2004. In 2009, he received his Ph.D. in Electrical Power from Cairo University, Egypt.

He has over 23 years of experience in power system protection. He was working at Egyptian Electricity Transmission Company (EETC) for 18 years.

Currently he is working at Saudi Electricity Company as Senior Protection Specialist in Jubail.



**Anas Abdulkhader**  
Application Engineer - Primary Assets  
OMICRON

Mr. Abdulkhader began working with OMICRON in 2017 as Technical Support and Applications Engineer providing support to customers. In addition, he has given formal training via OMICRON Academy courses in OMICRON's training centers and also at customers premises. Anas graduated in 2013 with a degree in Electrical and Electronics Engineering from Toch Institute of Science and Technology in Kerala, India.

## Speakers



**Andreas Nenning**  
Product Manager  
OMICRON

Mr. Nenning has a degree in automation engineering and mechatronics obtained by the university of applied science in Dornbirn, Austria. Since September 2013 he has been Product Manager at OMICRON electronics, responsible for circuit breaker testing.

He started his professional career with an apprenticeship at the municipal utilities of Feldkirch, Austria. Later he graduated as Master of Science at the University of Applied Science in Dornbirn, Austria. After that he spent several years abroad working as application engineer and project leader before finally returning to Austria working as Product Manager in the field of decentralized renewable energy. Andreas was an active member of the CIGRE Working Group A3.32.



**Anis Ben Hammouda**  
Protection Engineer  
Saudi Electricity Company

Mr. Anis is from Generation Sector of Saudi Electricity Company (SEC-Central Operation Area). Currently he is working as Protection Engineer in Technical Support Division in Qassim Central Power Plant. He completed his B.E. degree in Electrical Engineering from Tunisian National Engineering School.

From 2003 to 2013, he has been working as Protection Engineer at Tunisian Power and Gas Utility with a focus on generator protection relays maintenance, testing, schemes development and coordination.

He has joined SEC in 2013 as Protection Engineer. He is the group leader of Protection Specialist Group at COA.

He has also worked in various profiles of Power System Protection and Power Plant Transformers testing & commissioning; and Protection system modifications including generators, bus bar and transformer.

## Speakers



**Bavley Farid**  
**Regional Application Specialist**  
**OMICRON**

Mr. Bavley has worked as Application Engineer with a focus on Partial Discharge diagnostics and monitoring in OMICRON electronics Middle East, since February 2016. Currently he is the Regional Application Specialist for Partial Discharge Measurements on transformers / rotating machines / cables. He conducts theoretical and practical training courses, performs partial discharge measurements on HV assets and provides technical support to customers.

He received his Bachelor's degree in Science in Electrical Engineering with a focus on High Voltage Systems from the American University of Sharjah, United Arab Emirates in June 2015.



**Claudio Reginio**  
**Business Development and Innovation - PUC**  
**OMICRON**

Mr. Reginio has worked more than 10 years at ABB Power Grid Automation in Switzerland and other Swiss companies for the water, gas and electricity industry.

He gained experience in engineering, testing and commissioning of protection, automation and control systems, development of test and simulation equipment and project management for SCADA systems.

He holds a Bachelor's degree in Science in Systems Engineering (Automation) from the University of Applied Science Northwestern Switzerland.

He joined OMICRON in July 2018 and is working as Business Developer in Power Utility Communication. His focus is on IEC 61850, test automation, cyber security and innovation.

## Speakers



**Faisal Al-Ruhaily**  
Electrical Engineer  
GCC Electrical Testing Laboratory

Mr. Faisal is an Electrical Engineer who holds a Bachelor's degree in Electrical Engineering from Prince Muhammed Bin Fahd University. He worked as Maintenance Engineer in Astra Polymer for 1 year. Mr. Faisal is now working as a process developer and acting lab manager for Gulf Calibration Laboratory. He had successfully established the quality system for Gulf Calibration Laboratory.



**Dr. Fatmah Baothman**  
Assistant Professor of Artificial Intelligence  
King Abdulaziz University

Dr. Fatmah is a high-performance expert in Artificial Intelligence (AI) technologies with national and international recognition for her achievements.

Her achievements include, but are not limited to:

- > First woman in the Middle East with a Ph.D. in Modern Artificial Intelligence.
- > First woman Computer Science professor assistant at KAU.
- > First woman engineer in Saudi Engineering Society.
- > First woman IEEE chapter at KAU.

Dr. Fatmah has completed Master of Philosophy in Computing and Math from the University of Huddersfield in 1999, and Ph.D. from the School of Computing and Engineering in 2003.

## Speakers



**Hamad A. Al-Fayez**  
**High Voltage Engineering Technical Consultant**  
**GCC Electrical Testing Laboratory**

Mr. Hamad has over 29 years of field experience in different industry sectors. He is specialized in design, operate and maintain of power system equipment including GIS, Transformers, Switchgears, Transmission Lines, Electrical Equipment Testing and Certifications.

He received his B.Sc of Electrical Engineering from King Saud University in Riyadh at 1991. In addition, he completed all required courses for Masters Degree from King Fahd University in Dhahran.

Currently, he is working at GCC Electrical Testing Laboratory Company as a Technical Consultant to support industrial laboratory project objected to build and construct high voltage and high current testing and certification facilities.



**Muhammad H. Abbasi**  
**Team Lead - Solar PV Distribution Generation**  
**Saudi Electric Services Polytechnic (SESP)**

Mr. Muhammad obtained his MS degree in Electrical Engineering from King Saud University (KSU), Riyadh with a specialization in Electrical Power. Since 2016, he has worked as Team Lead heading the Solar PV Distribution Generation training program by Ministry of Energy for contractors and consultants. He is certified as NABCEP PV Associate & PV Inspector. His research interest includes Multimode/ Micro grid design, Grid Integration and Advance Megawatt (MW) PV designing.

## Speakers



**Mohamed Ibrahim Ali**  
**Regional Application Specialist**  
**OMICRON**

Mr. Mohamed has over 17 years of experience, 12 years of which was based in GCC. He joined OMICRON in 2015 and provides technical and application support on primary and secondary testing and diagnostic substation equipment. He conducts theoretical and practical training courses and also troubleshoots technical problems for customers. In addition, he develops application notes and technical papers for various applications.

He obtained a B.Sc degree in Electrical Engineering in 2002 and his high post graduate studies (Diploma in Electrical Power Engineering) in 2007.



**Mohamed Rashad**  
**Technical Training Engineer**  
**Alfamar Construction**

Mr. Mohamed has over 10 years of experience, 8 years of which was based in GCC. He joined Alfamar Construction in 2011 and provides technical training as well as technical support on power plants and substation testing and commissioning. He is conducting theoretical and practical training courses for switchgear with all voltage levels from low to extra high voltage, protection relays using different test kits, power transformers and in renewable energy as 'PV Solar System Design'.

He obtained a B.Sc degree in Electrical Engineering in 2009.

## Speakers



### **Mohammad Surrati** **Trainer in Power System Protection** **Saudi Electricity Company**

Mr. Mohammad is currently working in Saudi Electricity Company as a Trainer in Power System Protection.

He has completed his Master's degree in Innovation and Entrepreneurship in 2019.

He works along many different scientific committees and participates in national and international conferences.



### **Dr. Rahim K. Jassim** **Academic Leader & Training Manager** **Saudi Electric Services Polytechnic (SESP)**

Dynamic Professor and Senior Management Professional with 25 years of experience in varied business domains; currently working as the Academic leader and the training manager of Saudi Electric Services Polytechnic, KSA. Recognized for leading operational competitive advantage by utilizing analytical framework for strategic management and attaining top & bottom line objectives.

Dr. Jassim received his engineering education at the University of Technology, Baghdad (Iraq) and was awarded in July 1987 a BS.c. First Class Honors in Mechanical Engineering and Technical Education. He received his Ph.D. degree in Power Systems Engineering from University of London, Queen Mary and Westfield College in 1992. He has worked as a university lecturer at Al-Fateh University Tripoli, Libya. His research work has been in the field of Thermoeconomic Optimization of thermal systems. He has published over 60 technical papers and technical reports. He is a member of ASME and IPENZ.

## Speakers



**Richard Marenbach**  
**General Manager of OMICRON Erlangen;**  
**Engineering Services Process Manager**  
**OMICRON**

Dr. Marenbach completed his studies in Electrical Power Systems from University of Kaiserslautern, Germany. He has worked as an assistant to the technical general manager of a local utility. In 1998 he was a research assistant at the institute of electrical power systems Ph.D. with a research work about testing of digital distance protection relay. He has also worked as a consultant at VDEW in Frankfurt, department of electricity generation, environment and scientific research.

He joined OMICRON in 2000 as a project engineer, trainer and consultant for OMICRON Germany. He is currently working as the General Manager of OMICRON Erlangen and is responsible for Engineering Services for Secondary Systems.



**Sabine Wellhöfer**  
**Technical Trainer for Power System Protection Testing**  
**OMICRON**

Mrs. Wellhöfer received her M.Sc. degree in electrical engineering at the Technical University of Erlangen-Nuremberg (Germany) in 2015. Until 2018, she has worked as a research assistant at the Institute of Electrical Energy Systems in the field of modelling and simulation of large interconnected power systems for small signal stability studies. Since she has been working at OMICRON as a technical trainer for power system protection testing as well as system communication according to IEC 61850.



## Speakers



### Sahbi Ben Mzoughia Protection & Control Section Head Saudi Electricity Company

Mr. Sahbi is currently working as Protection and Control Section Head in Technical Support Department in SEC-COA Head office. He completed his B.E. degree in Electrical Engineering from Tunisian National Engineering School.

Till 2008, he was working as protection engineer at Tunisian Power and Gas Utility with a focus on digital protection relays qualification, development of high voltage network protection schemes including selection of relay type, philosophy and relay coordination.

Since 2008, he joined SEC as protection engineer. His current interests include making maintenance manuals for protection relays and power transformers. He is the Superintendent of Protection Specialist Group at COA and the group leader of the elaboration of 'Protection Testing Guidelines Policy'.



### Stefan Böhler Application Engineer - Rotating Machines OMICRON

Mr. Böhler works at OMICRON in Klaus, Austria as an application engineer on rotating machines. He finished his studies in 2003 in Electrical Engineering at Graz Technical University. Before working at OMICRON, he worked at a utility as project manager for all kinds of generator related projects for new power plants, refurbishments and diagnostic measurements. In his role at OMICRON he is doing measurements and conducting customer trainings world-wide. He is a member in IEC MT10 to maintain standards around rotating machines.

## Speakers



**Thomas Bischof**  
**Application Engineer - Current & Voltage Transformers**  
**OMICRON**

Mr. Bischof has been working at OMICRON since 2013 as an application engineer for current and voltage transformers. He works in development projects and supports customers worldwide in the application of OMICRON products. Prior to that, he was employed at TEL Solar, where he was involved in the development of mass production equipment for thin film photovoltaic modules. In 2009, he graduated from the school for higher technical education (HTL) in Bregenz in Electrical Power Engineering. He studied at the Interstate University of Applied Sciences Buchs (NTB), Switzerland and completed his Master's degree in Energy Technology at the Vorarlberg University of Applied Sciences.



**Tobias Schmutzhard**  
**Process Manager**  
**OMICRON**

Mr. Schmutzhard works as Process Manager at OMICRON. He studied Engineering with Business Administration at Vorarlberg University of Applied Sciences and graduated with a BSc degree. He has been working with OMICRON since 2001, currently in the business unit 'Testing and Diagnostic Solutions for Primary Assets'.

# WHY CHOOSE **OMICRON**?

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## Visit us at 2020 Exhibitions

### **Egypt Petroleum Show 2020**

Date: 11 - 13 February 2020

Location: Egypt International Exhibition Center

Hall: 2

Booth: C10



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### **Middle East Energy 2020**

Date: 3 - 5 March 2020

Location: Dubai World Trade Centre

Hall: 2

Booth: D20





## Middle East Training Center

In 2013, the OMICRON Academy opened its training center in Manama, Bahrain. Manama is in an ideal position to serve the Middle East due its central location, road connection to Saudi Arabia and excellent air links to the major cities in the region.

The facility is very well equipped with a wide selection of equipment from OMICRON's product range. It provides a combination of actual test objects and simulation tools to enable practical training.

Our experienced trainers are fluent in Arabic and English, enabling them to provide effective training for customers throughout the Middle East and for Arabic and English speakers in North Africa. In addition to the courses provided in our training center, OMICRON can also deliver training in other countries in the region, which can take place either in a suitable central location or at the customer's site.

Training with the OMICRON Academy will enable customers to get the most from their OMICRON equipment, allowing it to be used in the most efficient and effective way.

### Contact us

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