

Wael Salah Eldin Mostafa

Lead I&C Engineer | Mathematics & Control Systems Expert | AI & Automation Specialist

Personal Information

- **Nationality:** Egyptian
- **Languages:** Arabic (Native), English (Fluent), Italian (Good), French (Basic)
- **Memberships:** Member of the Egyptian Engineering Syndicate

Education:

- **B.Sc. in Electronics & Communication Engineering**, Zagazig University (1994)
– Very Good
 - **Diploma in Automatic Control Systems (Neural Network Technology & AI Applications)**, Mansura University (Pre-Master, 1998)
 - **Certifications:** NEBOSH, HAZOP, Risk Assessment, PMP (Project Management Professional)
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Professional Summary

Experienced Lead Engineer with over 26 years in Oil & Gas onshore/offshore projects, providing technical support for Engineering, Procurement, Construction, Commissioning, and Management (EPCM) projects. Specialized expertise in Electrical, Instrumentation, and Telecom Engineering for Oil and Gas fields, with in-depth knowledge of SCADA, DCS, ESD, and PLC systems.

Strong background in Mathematics, Physics, AI, Automation, and Control Systems, with a focus on AI-driven control solutions. Proficient in mathematical modeling, applied mathematics, and AI applications, contributing to engineering design, commissioning, risk analysis, and project leadership. Passionate about mentoring professionals and optimizing control systems to enhance efficiency and reliability.

Key Skills & Expertise

- **Applied Mathematics & AI for Control Systems**
- **Mathematical Modeling & Data-Driven Decision Making**
- **Project Engineering & EPCM (Engineering, Procurement, Construction, and Management)**
- **SCADA, DCS, PLC, ESD, and Industrial Automation**
- **Instrumentation & Electrical Engineering**

- **Oil & Gas Onshore/Offshore Process Optimization**
 - **Technical Training & AI-Based Predictive Maintenance**
 - **Risk Assessment, HAZOP, SIL Studies, and Compliance**
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Professional Experience

Part Time (Individual Contributor)

Remote Mathematics Expertise Sought for AI Training - Scale AI (*Present*)

- to train generative artificial intelligence models.
- Write & Review Prompts , Model responses and generate the optimized answers in LaTeX Code Format.(With Arabic Language)
- Crafting Designed and delivered AI-driven mathematical training for AI model development.
- Crafting and answering questions related to Math.
- Ability to write clearly about concepts related to Math in fluent Arabic/English
- Evaluating and ranking domain-specific responses generated by AI models
- Developed specialized curriculum covering advanced mathematics, neural networks, and machine learning fundamentals.
- Reviewed and validated AI model mathematical approaches for optimization and accuracy.
- Provided technical guidance on mathematical algorithms for AI applications.

Senior I&C Project Lead – B. Petroleum Company (PTB/ENI), Egypt (*2015 – Present*)

- Spearhead mega oil & gas projects at Port Said Area, leading basic design, engineering, procurement, commissioning, and performance testing.
- Led technical evaluations for DCS, SCADA, and AI-driven instrumentation systems.
- Optimized resource allocation using mathematical modeling to improve project cost efficiency.
- Provided technical expertise in AI-based automation and control strategies.

PMC Lead Instrument & SCADA Engineer – Artelia/Sogreah, Oman (*2014 – 2015*)

- Review and approved the Design deliverable package of SCADA /Control System networks ,for Pipeline , reservoirs, and water distribution systems.
- Supervise The Construction and Commissioning Activities done by Contractors.
- Conducted technical bid evaluations and cost optimization for automation solutions.
- Integrated AI-driven predictive models to enhance SCADA system performance.

Instrumentation Manager – B. Petroleum Company (PETROBEL/ENI), Egypt (2011 – 2014)

- Led onshore & offshore instrumentation projects with a 20+ engineering team.
- Managed HAZOP, SIL, and risk assessment processes for automation systems.
- Developed AI-enhanced control systems for predictive maintenance strategies.

Lead Instrument & Electrical Engineer – Enppi (Engineering Co.), Egypt (2011 – 2012)

- Managed gas pipeline & compression station projects from FEED to commissioning.
- Reviewed concept selection reports, cost analysis, and technical specifications.

PMC Lead Instrument Engineer – TOTAL E&P, Yemen/UAE (2008 – 2010)

- Supervised instrumentation & automation for oil & gas projects.
- Developed control strategies integrating AI and predictive modeling techniques.

Lead E&I Construction Engineer – Technip/NPCC, Abu Dhabi (2005 – 2006)

- Directed instrumentation installation & commissioning for offshore platforms.
- Supervised electrical & automation integration with SCADA & DCS systems.

Senior Instrument Engineer – Petrobel/ENI, Egypt (1998 – 2005)

- Participated in major offshore platform projects, ensuring compliance with industry standards.
- Follow up Engineering & Construction and Commissioning Activities for onshore / offshore Plant (Oil & Gas)

Part Time - Individual Contributor

Higher Technological Institute (H.T.I) – ON JOB Trainee Technical Instructor (1995 – 1997)

- Training/Instructor Experience: Worked as a math and research assistant in mathematical curriculum development.
- Mathematical Content Development: Wrote and reviewed mathematical concepts with clarity in fluent English.
- Problem-Solving & Accuracy: Crafted and answered questions related to Mathematics.
- Technical Instruction: Taught courses related to Instrumentation, Control Systems, and Mathematics.
- Program Coordination: Coordinated technical programs across different disciplines.
- Educational Material Development: Prepared technical media, presentations, and lesson materials.
- Training Documentation: Authored technical training documents and developed specific training books for trainees and trainers.

- Workshop Optimization: Led classroom courses, optimized equipment use in workshops, and conducted hands-on training sessions.
- Optimized automation workflows using AI & data analytics.

Part-Time Trainer – Individual Contributor

IOG, Cairo, Egypt (2010 – Present)

- **Training/Instructor Experience:** Worked as a math and research assistant in mathematical curriculum development.
 - **Technical Instructor:** Taught courses in Physics, Automatic Control Systems, and AI technology.
 - **Mathematical Content Development:** Wrote and reviewed mathematical concepts with clarity in fluent English.
 - **Problem-Solving & Accuracy:** Reviewed math problems and solutions, ensuring correctness and factual accuracy.
 - **Programming Expertise:** Familiar with Python, Java, C++, and LaTeX for technical writing and computational applications.
 - Taught **applied mathematics, neural networks, and AI-based control systems.**
 - Developed **mathematical models** for process automation and industrial optimization.
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Projects & Achievements

- **Darfeel& Aegypodes& Nouras , Temsah NW Offshore Platforms Project** (*Petrobel/ENI*) – Led automation design & commissioning.
 - **NEB ADCO onshore / Offshore Project 2006 Abu Dhabi- UAE.**
 - **CCU/CPU/WTP /Power Plant** - Total E&P Projects at Sanaa Yemen- 2008-2011
 - **AI-Driven Predictive Maintenance Model & Fiber Optics System Implementation** – Developed and implemented AI-based predictive maintenance and fiber optics technology for enhanced monitoring and automation across multiple industrial projects. – Integrated AI into automation workflows.
 - **SCADA System for 500KM Oil Pipeline** (*Artelia Oman*) – Enhanced monitoring with AI.
 - **Mathematical Modeling for Process Optimization** (*Petrobel/ENI*) – Reduced operational costs.
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Technical Skills

- **Programming:** Python, Java, C++, LaTeX
- **Control Systems:** DCS (ABB, Yokogawa, Foxboro), SCADA, PLC (Allen Bradley, Siemens)

- **Software:** MATLAB, Simulink, AutoCAD, Primavera
 - **Industry Standards:** ISA, IEC, NEC, NORSOK, API
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Abroad Training

- **ABB (Elsag Bailey) - Italy:** Training on Distributed Control Systems (DCS), hardware maintenance, and SC300E Triguard System.
- **Foxboro DCS I/A Series:** Advanced training on supervisory control and total integration.
- **Yokogawa Centum CS3000 & ProSafe RS - Jabal Ali:** Hands-on training in DCS and emergency shutdown systems.
- **NEBOSH Safety Training - Abu Dhabi:** Certification in occupational safety and risk management.
- **Technical & Safety Training - ADCO, UAE:** Training in hazard identification, risk assessment, and control systems safety.

Certifications & Local Training

- AI & Neural Networks in Control Engineering-1998
 - Advanced English Conversation at AUC -1997
 - Total Project Management – ENI Corporate University-Cair 2006
 - HAZOP & SIL Studies – ADNOC Safety Training
 - PMP Certification (Project Management ProfessionalVer 5 Part- 2014)
 - NEBOSH Certification – Occupational Safety & Risk Management.
 - Control Valves Sizing & Selection
 - Pneumatic and logic circuits (H.T.I – CAIRO).
 - Contracting fundamental for Projects contracts.
 - Plant Shutdown & Turnaround Planning & Management - Alexandria -2013
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