



Dr. Ahmed Aboulmagd

Dr. Aboulmagd is a senior instructor, researcher and consultant in the field of **Sustainable Energy** and **Thermofluids** engineering. The area of expertise in the sustainable energy field includes energy efficiency (buildings and industrial), energy storage, renewable energies (mainly **Solar Thermal, Solar Photovoltaics, Wind Energy and Bioenergy**), environmental control and water technology systems. The area of expertise in the thermofluids applications field includes **CFD** (Computational Fluid Dynamics), **HVAC&R** (Heating, Ventilation, Air Conditioning and Refrigeration), **Heat Exchange Equipment, Combustion and Steam Systems, Thermal Energy Storage, Fluid Machinery and Equipment Systems, Power Plants, Heat Engines and Cogeneration Systems, Water Resource Management and Treatment Systems**, and **Safety, Health and Environment (SHE)**. In addition, he has a good working knowledge with **Measurements, Instrumentation and Control System Engineering** (e.g. data acquisition, computer-based control and programmable logic controllers – PLCs). In addition, his experience extends in the field of sustainable development, resource efficiency and the WEF (Water – Energy – Food) nexus.

He has also a good working experience (including training and applications) of many software tools, e.g.: **MATLAB/Simulink-Stateflow** (Programming, Control System Analysis, Data Acquisition/Hardware Implementation, Fuzzy Logic, Artificial Neural Networks, Modern Optimization, Genetic Algorithms, Numerical Analysis, Statistics and Data Analysis), **Visual Basic for Applications (VBA), Advanced Excel Programming, FORTRAN, TRNSYS, EES (Engineering Equation Solver), ANSYS-Fluent, FEHT, EnergyPlus, HAP (Hourly Analysis Program), MEASUR Software (DoE), Hammer/WaterCAD, Pipe Flow Expert, SAM (System Advisor Model), RETScreen, Greenius, SolTrace (NREL), Tonatiuh, F-Chart, PV F-Chart, T*SOL, PV*SOL, PVsyst, , QBlade, Revit, SketchUp, and SolidWorks.**

Dr. Aboulmagd has significant experience spanning higher education, research and industry, including project management. He has worked for a range of prestigious **national and international universities and organisations**, including the EU-funded Research, the **EU RDI-2 Programme** (Development & Innovation Programme), **Egyptian Renewable Energy Cluster Initiative** (EU-funded), United Nations Industrial Development Organisation (**UNIDO**), the Industrial Modernization Centre (**IMC**), the Regional Centre for Renewable Energy and Energy Efficiency (**RCREEE**), the World Bank (**WB**), the Development Research and Technological Planning Centre (**DRTPC**), the Energy Research Centre (**ERC**), the National Research Centre (**NRC**), the National Water Research Centre (**NWRC**), the Desert Research Centre (**DRC**), the Egyptian Organization for Standardization and Quality (**EOS**), **IEC** National Committee of Egypt – Ministry of Electricity & Renewable Energy and a number of Egyptian and European Universities and Research Centres.

On the academic level Dr. Aboulmagd is a former member of the education Quality Assurance Unit (**QAU**) in Cairo University, Faculty of Engineering. He has supervised a number of **B.Sc, M.Sc and Ph.D theses (23+)** of undergraduate and postgraduate students in the fields of sustainable energy and thermofluids applications. He has also authored/co-authored **a number of national/international publications (16+), including two books and three book chapters. Currently, he is an editor of ETEC (Estudos Tecnológicos em Engenharia) journal, ISSN: 1808-7310, a journal of the University of Vale dos Rio dos Sinos, São Leopoldo, Brazil.**

Dr. Aboulmagd has a significant working experience with supporting SMEs, private sector development and

cooperating with the industrial sector (especially **food, textile and chemical** industries) in **the EU-MENA region (Egypt, Tunisia, Morocco, Sudan, Jordan, Italy, Spain, France, Belgium and Denmark)**. He has knowledge/working experience of many practical training/workshop activities, industrial case studies and consultations. He has conducted a number of **Energy and Environmental studies/audits for industrial, residential/commercial sectors** through many research centres, firms and consultation offices (**150+**). The fields of studies include designs, feasibility analyses for solving thermofluid problems, energy efficiency solutions, developing solar thermal and solar photovoltaic systems. He has attended/conducted many field visits, tutorials, workshops and seminars on Sustainable Energy.