

Yaser Abdellatef

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Profession

Mechanical Engineer. Thermo-Fluid Analyst. Energy Analyst & Modeler. Energy Advisor & Building Science specialist. Sustainability & GHG Analyst.

Professional Development

- **CEA.** Certified Energy Auditor, AEE, July 2025.
- **CEM.** Certified Energy Manager, AEE, September 2025.
- **NRCan Energy Advisor (Foundation + House).** Passed both exams. May 2025.
- **LEED AP.** Leadership in Energy and Environmental Design, Accredited Professional. 2024-2026.
- **WELL AP.** WELL Building Standard, Accredited Professional. 2025-2027.
- **ENV SP.** Envision Sustainable Infrastructure Professional. 2025-2026.
- **CAPM-PMI.** Certified Associate in Project Management, PMI institute. 2024-2027.

Professional Work Experience

- **Energy Advisor - Internship - EcoPlus Services – Ottawa.** (July 2025 – October 2025).
 - Concurrently achieved Certified Energy Manager (CEM) and Certified Energy Auditor (CEA) designations while completing this hands-on EnerGuide training.
 - Hands-on training to apply building science principles and the (house-as-a-system) concept in residential homes.
 - Participated in on-site EnerGuide home audits for building envelope data collection, blower door testing, and HVAC systems documentation.
 - Developed HOT2000 energy models to generate EnerGuide ratings and to perform analysis for building energy and GHG emissions.
 - Analyzed the interactions between: Envelope, Mechanicals, and Distribution systems, to identify energy-saving opportunities.
 - Calculated energy savings of various retrofit scenarios to provide homeowners with upgrade recommendations.
- **Research & Teaching Assistant - University of Ottawa.** (2020-2024).
 - Civil Engineering Department, Energy in Buildings & Sustainable Construction Materials.
 - Assisted in teaching course (CVG6310 Sustainable buildings for climate resilience), Prof. Miroslava Kavvic.
 - **Keywords:** Building Energy Analysis & Modelling / Sustainable Construction Materials / Thermal energy storage / Bio-composite materials / Phase Change Materials / Hysteresis Modelling / CFD modelling.
 - **Main Tasks:** Experimental and lab work + Numerical simulations + Statistical analysis.
 - **Numerical Software:** ANSYS Fluent / EnergyPlus / WUFI / C programming language / Excel Pivot Tables.
 - **General skills:** Data Analysis, Project Management, Technical writing.
- **Research Assistant - University of Manitoba.** (2018-2020).
 - Civil Engineering Department, Energy in Buildings & Sustainable Construction Materials.
 - **Keywords:** Building Energy Analysis / Sustainable Construction Materials / Thermal energy storage / Bio-composite materials / Phase Change Materials / Hysteresis Modeling.
 - **Main Tasks:** Experimental and lab work + Numerical simulations + Statistical analysis.
 - **Experimental work:** Heat Flow Meter / Climate Chamber / Kd2 Pro / Mechanical Properties tests.

- **Research & Teaching Assistant - Cairo University, Egypt.** (2013-2018).
 - Mechanical Power Department, Faculty of Engineering, BSc + MSc.
 - Assisted in teaching the following courses (Refrigeration and Air conditioning, Advanced Air conditioning (HVAC design), Heat transfer, Applied thermodynamics, Conventional Power plants, Experimental & Measurement Techniques).
 - Keywords: Energy Analysis / Thermo-Fluid Analysis / Gas Turbine / Film Cooling.
 - Main Tasks: Numerical simulations for studying the geometrical and flow factors affecting gas turbine blade cooling to maximize film cooling effectiveness.
 - Software: ANSYS Fluent / MATLAB / Excel Pivot Tables / SolidWorks.
- **Summer internships in Top Companies in Egypt.** (2009-2012)
 - Arab Contractors Company: HVAC design, REVIT & HAP software, Construction projects.
 - Petrojet Company: Thermal Energy Analysis, Engineering Drawings.
 - Enppi Petrol Company: Pressure vessels, Stress analysis, heat exchangers.
 - General Skills: Data Analysis, Communication & Teamwork skills, Project Management skills.

Education Degrees (PhD + MSc + BSc)

- **PhD in (Energy in Buildings & Sustainable Construction Materials)** (2020-2024).
University of Ottawa, Supervisor: Miroslava Kavgic. Details are described in the (Work Experience) section.
- **Master of Science (MSc) in Mechanical Engineering (Energy Engineering)** (2013-2017).
Cairo University, Supervisor: Essam E. Khalil. Details are described in the (Work Experience) section.
- **Bachelor of Science (BSc) in Mechanical Engineering (Energy Engineering)** (2009-2013).
 - Cairo University, Egypt. Supervisor: Prof. Essam E. Khalil
 - *Distinction with Highest Honors, score 93%, ranked 1st.*
 - Graduation Project: Hospital air conditioning and water supply system, Distinction grade.
 - Main Tasks: Analytical and numerical simulations to design HVAC and water supply for a hospital project.
 - Software: SolidWorks / AutoCAD / HAP.

Academic Achievements

Published 4 papers in peer-reviewed journals, and 2 conference papers. A full list of academic publications is available on my Google Scholar Page.

https://scholar.google.com/citations?hl=ar&user=7zwxx_kAAAAJ

Skills

- **Languages**:
 - Arabic (Native speaker).
 - English (Spoken and written). Excellent technical writing skills.
- **Software**:
 - CFD analysis, ANSYS Fluent.
 - Energy modelling (EnergyPlus, HOT2000, IES,).
 - HVAC (REVIT, HAP).
 - Programming, MATLAB, Python, C Programming Language.
 - General: AutoCAD, SolidWorks, Microsoft Office.