ASSOC. PROF. IR. DR. ADNAN BIN IBRAHIM

Deputy Director

Solar Energy Research Institute (SERI), Universiti Kebangsaan Malaysia (UKM)

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1. BIODATA & EXECUTIVE SUMMARY

Assoc. Prof. Ir. Dr. Adnan Ibrahim is a distinguished academic leader and certified Professional Engineer at Universiti Kebangsaan Malaysia, serving as Deputy Director at the Solar Energy Research Institute (SERI). His expertise spans renewable energy engineering, specialized solar thermal systems, photovoltaic-thermal (PVT) cooling integration, and Multi-Disciplinary energy-efficient industrial drying processes. Over his illustrious career, he has earned substantial global prestige, consistently ranking in Stanford University's World's Top 2% Scientists list. His contributions cross-pollinate deep academic vigor with applied industry solutions, protected by a dense matrix of engineering patents and corporate intellectual property rights.

7,207+ Google Scholar Citations (H-index: 38)	**5,015+** Scopus Citations (H-index: 31)	**4,500+** Web of Science Citations (H-index: 32)
93 Main/Corresponding Author Count	**68 /18** High-Impact Papers Q1: 68 | Q2: 18	**World Top 2%** Global Scientific Rank (Years 2024 & 2025)

2. RESEARCH LEADERSHIP & STRATEGIC ETHOS

Dr. Adnan Ibrahim's research framework centers on developing practical, high-efficiency systems that address current limitations in solar collector designs. By combining computational fluid dynamics (CFD) optimization with rigorous experimental testing, he delivers novel solutions that actively target structural hot spots, uneven thermal loading, and systemic stagnation in high-demand collectors. His leadership coordinates extensive international consortium networks, bridging strategic alliances across the United Kingdom, UAE, Indonesia, and Iraq to transfer cutting-edge technology directly into localized food, agriculture, and manufacturing spaces.

3. FORMAL CHRONOLOGICAL CAREER PATHWAY

- **2025 – Present: Deputy Director**

  Solar Energy Research Institute (SERI), Universiti Kebangsaan Malaysia (UKM). Coordinates large-scale institutional funding tracks, research translation pipelines, and direct multi-lateral international joint ventures.

- **2017 – 2025 : Senior Lecturer**

  Solar Energy Research Institute (SERI), Universiti Kebangsaan Malaysia (UKM). Launched key theoretical explorations into nanofluids and micro-fin multi-channel absorbers.

4. ADVANCED ACADEMIC QUALIFICATIONS

- Doctor of Philosophy (Ph.D.) in Renewable Energy Engineering | Universiti Kebangsaan Malaysia (UKM) (2007 – 2012)
- Master of Science (M.Sc.) in Integrated Product Development | University of Strathclyde, Glasgow, United Kingdom (2000 – 2002)
- Bachelor of Engineering (B.Eng. Hons) in Manufacturing System Engineering | University of Portsmouth, United Kingdom (1998 – 2000)

5. TRANSLATIONAL PATENTS & INTELLECTUAL PROPERTY PORTFOLIO

- **UI 2025007745: Ecodryer Heat Pump Drying System**

  Copyright & Design protection: tracking novel configuration optimization for high-value industrial, food, and agricultural processing.

- **PI 2023007645: Reversed Circular Flow Jet Impingement Cup Design**

  Utility Innovation & Patent application providing ultra-high heat transfer coefficients via dynamic targeting of active localized hot-spots.

- **PI 2023007002: Multi-directional Tapered Fin Heat Sinks (MTFHS)**

  Patent track exploring multi-level passive optimization structures engineered specifically to promote natural convection within solar architectures.

- **PI 2023004977: Novel Absorber Tube for a PVT-PCM System Architecture**

  Patent exploring sheet-connected micro-fin layout variations packed with spiral twisted tape arrays to maximize overall thermal retention capacity.

- **PI 2023008078: Advanced Thermal Management Apparatus Matrix**

  Design registration covering total integration layout configuration, combining structural twisted tube lines inside organic phase-change materials.

- **PI 2023006159: Solar Collector Apparatus Configuration Layout**

  Patent layout protecting multi-pass solar air systems boasting staggered internal fin alignments paired to high-retention nano-PCM components.
- **PI 2023004096: Solar Assisted Dual Condenser Heat Pump Drying Framework**

  Patent track focusing on high-efficiency, multi-source integrated loop architectures for sustainable post-harvest treatment setups.

6. COMPREHENSIVE REGENERATIVE FUNDING AND RESEARCH GRANTS



7. INSTITUTIONAL POSTGRADUATE DISSERTATION MENTORSHIP

Status	Main Supervisor		Co-Supervisor	
Level	PhD	MSc	PhD	MSc
Completed	13	5	7	4
Ongoing	11	3	7	2

8. GLOBAL RECOGNITION, LAURELS AND PROFESSIONAL AWARDS

- Stanford University World's Top 2% Scientist Profile (Inducted continuously for performance indices 2024 and 2025).
- MyRA Institutional Excellence Award 2025 — Crowned Outstanding Individual Winner for Postgraduate Supervision and Prototyping Innovation.
- MyRA Institutional Excellence Award 2024 — Crowned Overall Supreme Winner inside the Associate Professor Category for global citation indexes.

9. CORPORATE ADVISORY, EXPERT APPOINTMENTS & COMMITMENTS

- Professional Engineer (PEng Designation) registered firmly under the Board of Engineers Malaysia (BEM, Registration Index: P124997).
- Distinguished Visiting Research Professor — Abu Dhabi University, UAE (Strategic assignment covering advanced energy metrics).
- Subject Matter Expert (SME Track) and Visiting Professor — Department of Mechanical Engineering, Universitas Hasanuddin, Indonesia.
- Visiting Professor & guest lecturer for UI-INSIGHT GRANT 2025/2026 "International Visiting Professor & Guest Lecturer Program — Universitas Indonesia, Indonesia

10. MONOGRAPH ARCHITECTURE & HIGH-IMPACT PUBLICATION MATRIX

[1] Bannour, Y., El Alami, Y., Ibrahim, A., et al. Performance Enhancement of PV-PCM Systems with Semi-Elliptic Cavities at Different Tilt Angles. Case Studies in Thermal Engineering, 2026. 81, p. 107929.

[2] al Saadi, Z., Ibrahim, A., Fazlizan, A., et al. Numerical optimization by deep single selective investigation and experimental validation for star-fin inserts in absorber tubes. Case Studies in Thermal Engineering, 2026. 80, p. 107930.

[3] El Alami, Y., Nasrin, R., Ibrahim, A., et al. Numerical and experimental analysis of a new direct-contact PVT system for sustainable energy production: Energy, exergy, and environmental assessments. Energy, 2026. 348, p. 140542.

[4] Alzoubi, M., Ibrahim, A., Alkhedher, M., et al. Experimental investigation of energy and exergy characteristics of a novel solar collector with swirling reversed circular flow jet impingement. Scientific Reports, 2026. 16, DOI: 10.1038/s41598-026-37654-0.

11. CV CONCLUSION SUMMARY & DIRECT CONTACT PROFILE

In summary, the professional profile of Assoc. Prof. Ir. Dr. Adnan Bin Ibrahim stands as a benchmark of senior academic leadership, impactful mechanical research, and translational technology transformation. By bridging extensive corporate administrative stewardship (across multiple Dean positions) with continuous recognition inside the Stanford University World Top 2% Scientists directory, his record perfectly validates cross-disciplinary authority in renewable energy frameworks. His ongoing commitments actively promote scalable, industry-ready solutions across national and international solar infrastructure networks.

PRIMARY ADVISORY & ACADEMIC ENGAGEMENT PORTAL:

For strategic institutional panels, doctoral evaluation pipelines, or joint global grant consortiums, please establish contact via the verified university portal:

OFFICIAL EMAIL: iadnan@ukm.edu.my