Personal details

Title:	Dr.	
Full Name:	Aiman Moftah A. Dandi	
Gender:	Male	
Date of Birth: (dd/mm/yyyy)	17/04/1980	
Marital Status:	Married	
Address:	Souq El-Jumaa, 9729 Tripoli, Libya	
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Citizenship:	Libyan	

Education

School/Educational institution, Course of study	**From - To**	**Points,Grad**	**Description**
Kyung Hee University, Republic of Korea – Ph.D. in Nuclear Engineering [Doctoral]	[Mar-2016] – [Aug-2022]	[3.81 out of 4.3]	Dedicated and results-driven researcher with a profound commitment to advancing nuclear power technology. My research thesis centered on the development of an innovative Best Practices (BP) framework tailored for next-generation Pressurized Water Reactors (PWRs), with a specific emphasis on achieving extended operational cycles of 24 months or longer. Additionally, my focus extended to the design and optimization of a compact core for Small Modular Reactors (SMRs).
Universiti Putra Malaysia (UPM), Serdang, Malaysia - Masters in Applied Radiation [Master of Science]	[June-2009] – [Nov-2012]	[3.925 out of 4.0] [Good Standing]	Enthusiastic researcher specializing in the synthesis of conducting polymers, with a focus on Polythiophene composites using an innovative Gamma ray irradiation method. Explored pioneering applications of Polythiophene, introducing a novel approach to synthesis in my master's thesis.

University of Tripoli, Tripoli, Libya - B. Sc in Nuclear Engineering [Bachelor of Science]	[Nov-1998] – [Feb-2004]	[64.04 out of 100][Pass]	Dedicated and detail-oriented researcher with a focus on nuclear engineering, exemplified by my Bachelor of Science project that involved a thorough neutronic study of diverse IRT fuels.

Work experience

Job, Employer	From - To	Description
Full-time Lecturer, Department of Nuclear Engineering, University of Tripoli, Tripoli, Libya	[Mar-2026] – Present	Responsibilities include delivering undergraduate-level instruction in the fundamentals of nuclear engineering, covering topics such as nuclear energy systems, reactor physics, radiation principles, and nuclear safety. Involved in preparing lectures and course materials, guiding students through complex core concepts, and bridging the gap between theoretical knowledge and real-world nuclear applications. Currently teaching two courses: Introduction to Nuclear Engineering (NE-200) and Fast Reactor Theory (NE-516). Additionally, supervising two undergraduate capstone projects for graduation.
Head of Energy Planning Division, Libyan Atomic Energy Establishment, Tripoli, Libya	[July-2024] – [Feb-2026]	I lead the Energy Planning Department in developing and implementing strategic energy plans aimed at optimizing efficiency and sustainability, with a particular focus on integrating nuclear energy solutions. In this role, I oversee comprehensive energy data analysis, forecast future energy needs, and identify opportunities for improvement. By coordinating with key stakeholders and staying updated on industry trends and regulatory changes, I contribute directly to the primary objective of the Libyan Atomic Energy Establishment: establishing the first nuclear power plant in Libya. My efforts are aligned with the nation's goal of advancing its energy infrastructure and achieving long-term energy security through the adoption of nuclear technology.
Volunteer Lecturer, Department of Nuclear Engineering, University of Tripoli, Tripoli, Libya	[Sep-2025] – [Feb-2026]	Delivered undergraduate-level instruction covering fundamentals of nuclear engineering, including nuclear energy systems, reactor basics, radiation principles, and nuclear safety. Prepared lectures and course materials, guided students through core concepts, and linked theoretical foundations to real-world nuclear applications, alongside professional duties at the Libyan Atomic Energy Establishment (LAEE).

Nuclear Engineer, Atomic Energy Establishment, Tripoli, Libya	[July-2023] – [July-2024]	Motivated researcher specializing in nuclear reactor design within the Department of Nuclear Power Generation. Actively engaged in professional development by participating in workshops organized by the International Atomic Energy Agency (IAEA), with a focus on the development of Small Modular Reactors (SMRs).
Researcher, Kyung Hee University, Republic of Korea	[Mar-2016] – [Aug-2022]	Dynamic Ph.D. researcher actively contributed to multiple research projects during doctoral studies. Diversified expertise through participation in various training courses and represented research findings at both national and international conferences. Demonstrated scholarly impact with the publication of three research papers in high-impact factor, peer-reviewed journals.
Nuclear Engineer, Tajoura Nuclear Research Centre, Tajoura, Libya	[April-2006]– [Aug-2014]	Experienced researcher in the Calculation Unit and engineer operator at the Critical Stand Facility. Contributed to a project on nuclear techniques for landmine detection and mentored students in Nuclear Lab III, including hands-on work at the facility.

List of publications

International Journals

1. **Aiman Dandi**, Myung Hyun Kim, Conceptual design of the double tube burnable poison for the next generation small modular reactor, Annals of Nuclear Energy, 186, 109776 (2023). ***(IF= 2.3)***
2. **Aiman Dandi**, Myung Hyun Kim, Feasibility of Innovative Design Concepts of Burnable Poison Pins for 24-Month Cycle PWR, Annals of Nuclear Energy, 171, 109031 (2022). ***(IF= 2.3)***
3. **Aiman Dandi**, MinJae Lee, Myung Hyun Kim, Feasibility of combinational burnable poison pins for 24-month cycle PWR reload core, Nuclear Engineering and Technology, 52, pp. 238-247 (2020). ***(IF=2.6)***
4. **Aiman Dandi**, Elias Saion, Determine the Optimum Concentration of 2-Thiopheneacetyl Chloride to Synthesize the Conducting Polythiophene by Using the Direct Irradiation Method. Research Journal of Applied Sciences, 9: 169-173 (2014).
5. **Aiman Dandi**, Elias Saion, Optical and Electrical Characterization of Conducting Polythiophene Composite Synthesized by Gamma-Ray Irradiation Method. Research Journal of Applied Sciences, 9: 92-98 (2014).
6. Ramadan Mustafa Kredan, **Aiman Dandi**. Comparative Neutronic Analysis of IRT Fuels. Journal of Engineering Research. 7, March, 2007.

Conferences

7. **Aiman Dandi**, Advancing Nuclear Design: Optimizing Burnable Poison Configurations for Extended Cycle Small Modular Reactors, in: International Conference on Small Modular Reactors and their Applications, Vienna, Austria, 2024. October 21-25, (2024).
8. **Aiman Dandi**, Myung Hyun Kim, Innovative Burnable Poison Pins for Longer Cycle Length Small PWR Core, Transactions of the American Nuclear Society, 127, 1044-1047, (2022).
9. **Aiman Dandi**, Myung Hyun Kim, Burnable Poison Strategies for Extra-Long Cycle Small PWR, in: Transactions of the Korean Nuclear Society Spring Meeting, Jeju, Korea, 2021. May 12-14, (2021).
10. **Aiman Dandi**, Myung Hyun Kim, Innovative Design Concepts of Burnable Poison Rods for PWR, in: Proceedings of the Reactor Physics Asia 2019 (RPHA19) Conference, Osaka, Japan, 2019. Dec. 2-3, (2019).
11. **Aiman Dandi**, Myung Hyun Kim, A New Design Concept of Burnable Poison for PWR Core – BP Attached to GT, in: ICENES 2019, Bali, Indonesia, 2019. October 6-9, (2019).
12. **Aiman Dandi**, Myung Hyun Kim, A New Design Concept of Burnable Poison for Longer Cycle PWR, in: Transactions of the Korean Nuclear Society Spring Meeting, Jeju, Korea, 2019. May 23-24, (2019).
13. MinJae Lee, **Aiman Dandi**, Myung Hyun Kim, Soon Ki Kim, Sang Rin Shon, The combinational use of burnable Poison pins for 24 Months cycle PWR, Transactions of the American Nuclear Society, 118, 1001-1004, (2018).
14. **Aiman Dandi**, MinJae Lee, Myung Hyun Kim, Soon Ki Kim, Sang Rin Shon, Combination of burnable Poison pins for 24 months cycle PWR reload core, in: Transactions of the Korean Nuclear Society Spring Meeting, Jeju, Korea, 2018. May 17-18, (2018).
15. **Aiman Dandi**, Elias Saion, Mohamad Zaki B Abd Rahman. 2012. Synthesis of conducting polythiophene/polyvinyl alcohol composites by gamma-ray irradiation method. Fundamental Science Congress, (2012).

Theses

16. **Aiman Dandi**, Nuclear Design of Multi-zone Heterogeneous Burnable Poison Pins for The Next Generation PWR, Department of Nuclear Engineering, Kyung Hee University (2022). (PhD Thesis)
17. **Aiman Dandi**, Optical and Electrical Properties of Conducting Polythiophene/polyvinyl Alcohol Composites Synthesized by Gamma-ray Irradiation Method, Department of physics, Universiti Putra Malaysia (2012). (MSc Thesis)
18. **Aiman Dandi**, Neutronic Calculation of LEU Fuel for the Tajoura Research Reactor using MCNP-4C, Department of Nuclear Engineering, University of Tripoli (2004). (B.Sc Thesis)

International participations

Event Title	Organization	Event Location	From - To
Interregional Workshop on Generic User Requirements and Criteria for Small Modular Reactors (SMRs)	International Atomic Energy Agency (IAEA)	Sanya, and Chengdu, China	04-13/09/2023
Infrastructure Development Issues for SMRs & Microreactors Deployment Including Policy, Strategy and Key Aspects	International Atomic Energy Agency (IAEA)	Vienna, Austria	27/11-01/12/2023

Technical Meeting on Experience in Removal of High Enriched Uranium from Research Reactors	International Atomic Energy Agency (IAEA)	Budapest, Hungary	11-14/03/2024
23rd INPRO Dialogue Forum on Nuclear Energy Innovations to Support Net-Zero Transition	International Atomic Energy Agency (IAEA)	Vienna, Austria	30/10-01/11/2024
Interregional Workshop on Aspects of Modelling and Simulation in Gen-IV Type SMR Developments	International Atomic Energy Agency (IAEA)	Moscow, Russia	03/11-07/11/2025
25th INPRO Dialogue Forum on Nuclear Energy Development in Embarking Countries	International Atomic Energy Agency (IAEA)	Nairobi, Kenya	17/11-21/11/2025

Nuclear design codes

Throughout my academic studies, I proficiently utilized various nuclear design codes, including MCNP, DeCART2D, and MASTER codes, showcasing a comprehensive understanding of advanced computational tools in the field.

Awards and Scholarships

Organization	Scholarships	From - To
Korean Government	Scholarship for Studies	[Sept-2014] – [Jan-2019]
Libyan Government	Scholarship for Studies	[Feb-2011] – [Sept-2012]
International Atomic Energy Agency (IAEA)	Fellowship in Italy	[Sept-2007] – [Dec-2007]

References

Name	Title	Location	Phone	Email
Ramadan M. Kuridan	Professor (Nuclear Engineering)	University of Tripoli, Libya	+218-927120986	kuridarm@yahoo.com
Musbah Alhengari	Director of Nuclear Power Generation Department	Libyan Atomic Energy Establishment	+218-919985384	mosbah_h@yahoo.com
Park Ho Jin	Professor (Nuclear Engineering)	KHU, S. Korea.	+82-312013690	parkhj@khu.ac.kr

Douglas A. Fynan	Professor (Nuclear Engineering)	UNIST, S. Korea.	+82-52-217-2780	dfynan@unist.ac.kr

Courses

Name	Start	Duration	Description
Korean Language	Sep-2014	Eighteen Months	Intensive Korean Language Lessons, in writing, Oral and grammar.
Certified Intensive English Programme	Mar-2008	Five Months	Intensive English Lessons, in written and Oral English Language and grammar. The course was extensive, hence competitive.
Radiation Protection	Feb-2008	Two weeks	I completed a training course in the field of Radiation Protection.
GEANT3/4 simulation code	Sep-2007	Four Months	I awarded an International Atomic Energy Agency fellowship in Italy, about GEANT3/4 simulation code.
Emergency and Evacuation	June-2007	Two weeks	I attended to Emergency and Evacuation course.

Languages

Languages	Verbal skills	Written skills
Arabic	Mother tongue	Mother tongue
English	Fluent	Fluent
Korean	Basic	Basic

Certificates

Name	Issued	Description
PhD in Nuclear Engineering	Aug-2022	An academic Certificate.
TOPIK	Oct-2015	Overall Band Score (3.0).
MSc. in Applied Radiation	Nov-2012	An academic Certificate.
IELTS	June-2009	Overall Band Score (6.0).
Radiation Protection	Feb-2008	I completed a training course in the field of Radiation Protection.

Emergency and Evacuation	July-2007	I attended to Emergency and Evacuation course.
Engineer Operator	May-2007	I successfully passed the qualification exam for the occupation of (Engineer Operator) of a critical system.
B. Sc in Nuclear Engineering	Nov-2005	An academic Certificate which was obtained after Five Years of serious academic work.