

Postdoc Fellowship

King Fahd University of Petroleum & Minerals (KFUPM) has several Postdoc Fellowship openings for distinguished candidates who have obtained their PhD degrees recently, preferably within the last 2-3 years. The various Interdisciplinary Research Centers (IRCs) where the candidates will continue their research, and the sub-areas of work in the IRCs, can be found by visiting the link below:

<https://postdoc.kfupm.edu.sa/Required-Postdoc-Competencies.pdf>

In the next page is the brochure. More details of the fellowship can be found at <https://postdoc.kfupm.edu.sa>

Interested candidates with excellent research/academic records may do the following:

- (i). Fill the form at <https://forms.gle/jGFWdMVPfiz36FWq8>
- (ii). Send credentials, including a detailed CV (with contact information), scholarly work and publications, degree certificates, etc. to postdoc@kfupm.edu.sa

Strengths & Competencies Required

Candidate with PhD Degree in	<u>Interdisciplinary Research Center's Areas of Research</u>	Email to send CV or request more details (cc: postdoc@kfupm.edu.sa)
Mechanical/Civil/Systems/Computer/Electrical Engineering and Computer Science	<p>Intelligent Manufacturing and Robotics: Intelligent system design, automation and manufacturing using Industry 4.0 principles & technologies, Autonomous robotic system design and development, hands-on prototyping, programming, sensors integration and analysis, and intelligent process planning and optimization for offsite construction and manufacturing processes.</p> <p>More Details: https://postdoc.kfupm.edu.sa/irc/imr.pdf</p>	irc-imr@kfupm.edu.sa
Materials/Mechanical Engineering, Chemistry, Physics	<p>Advanced Materials: Coatings; surface engineering; light alloys; polymers & polymer composites; biomaterials; smart materials; materials for extreme environments; corrosion & scale inhibitors; self-healing materials; nanomaterials & nanocomposites; multifunctional materials; graphene; metamaterials; photovoltaic materials; computational materials; machine learning in materials selection and design; corrosion; electrochemistry; tribology.</p>	irc-am@kfupm.edu.sa
Mechanical Sciences, Physics, Materials/Energy/Architecture and Building /Chemical/ Electrical Engineering	<p>Renewable Energy: PV Module assessment for harsh weather conditions (high temperature, high UV, and dust), Renewable energy grid integration, grid stability and resilience, power electronic converters and control, Smart energy management systems for buildings, microgrid, and industry better efficiency, Industry 4.0 for energy managements, Energy storage systems, e.g., battery, thermal storage, PCM, considering harsh weather, Integrated and hybrid Renewable energy systems for power, cooling, desalination and heating applications.</p> <p>More Details: https://postdoc.kfupm.edu.sa/irc/corere.pdf</p>	postdoc@kfupm.edu.sa
Computer Sciences, Computer/ Electrical/ Systems Engineering	<p>Intelligent Secure Systems: Cyber Security And Privacy, Artificial Intelligence, Computer Systems And Networks, Hardware, Sensors, And Embedded Systems, Applied Cryptography, Secure And Trustworthy AI/ML-Based Systems; Cloud/Edge Computing And Communication, Physical Security, Cyber-Physical (CPS), Internet-of-Things Systems (IoT), Integrity and Privacy Preserving AI/ML, Resilient and Dependable Distributed Systems and Networks, Trusted Computing and Execution Environments, Distributed Blockchain & Ledger Systems, and Post-Quantum Cryptography.</p>	irc-iss@kfupm.edu.sa

Electrical / Systems / Computer Engineering, Computer Science and Applied Physics	Communications Systems & Sensing: Wireless Communications, Networking, Signal processing, Acoustics and Sonar, Remote sensing, Machine Learning applied to Communications and Sensing, Programming Skills (MATLAB, Python, Mobile Programming), Statistical Analysis Capabilities, Excellent Signal Processing Skills.	postdoc@kfupm.edu.sa
Chemistry/Material Science/Chemical/Mechanical Engineering	Membranes and Water Security: Membrane synthesis, characterization, and membrane separation processes.	aljundi@kfupm.edu.sa
Finance / Economics	Islamic Banking and Finance: Financial and Economic Stability, Economic Development and Society Welfare, Sustainability and Infrastructure Development, Corporate Governance & Compliance, Financial Product Pricing and Marketing, Financial Technology and Big data, Business and Financial Markets Development, Innovation and Product Development, Islamic Finance Ecosystem Integration	postdoc@kfupm.edu.sa
Electrical / Systems / Computer Engineering, Computer Science	Smart Mobility & Logistics: Connectivity solutions, Optimization Strategies, Predictive Models, Data storage, fusion and processing, Mobility (Hydrogen, EV, Hybrid), V2V-V2I communication, Cybersecurity, Sensor Technology, Smart autonomous Systems, Navigation and Control	selferik@kfupm.edu.sa
Chemistry / Chemical Engineering	Refining & Petrochemicals: Catalyst Synthesis for Hydrocarbons to Fuels and Chemicals, Computational Chemistry and Kinetics, Polymerization Catalysis (PE, PP), Waste Plastics Recycling (Chemicals), CO2 Utilization and Hydrogen Production, Fine and Specialty Chemicals	alasiri@kfupm.edu.sa
More to be Added Shortly		