جامعة الملك فهد للبترول والمعادن
King Fahd University of Petroleum & Minerals

Center	Interdisciplinary Research Center for Construction and Building Materials
Job Title	**Post-Doctoral Fellow**
Job Description	The applicants should have research experience in one or more of the research areas noted below, as evidenced through their theses and published work. • Innovative digital manufacturing techniques (e.g., 3D printing with concrete, rammed earth, etc.) • Eco-friendly and sustainable materials incorporating natural/industrial waste • Composite and smart construction materials, advanced insulation, and coatings • Phase change materials (PCM) • Energy-saving building design and systems for severe climatic conditions • Structural supercapacitors • Highway, railway, airport materials and infrastructures. Thermochromic and cool asphalt pavements • Self-cleaning/healing materials and coatings (including for indoor air quality and aesthetics) • Noise pollution control using eco/recycled materials • Life cycle analysis of building materials • Water footprint analysis for building and construction materials • Carbon footprint analysis and carbon utilization in building materials • Masonry structures • Earthquake-resistant and climate-resistant structural design • Impact and blast loading, and dynamic material characterization • Predictive modeling for long-term sandy soil behavior • Soil-Structure Interaction, including offshore structures • Tunneling and underground construction • Automation in construction • Construction systems, management, and digital twins in construction management • Molecular-level simulations of materials • Machine learning and AI in materials modeling, construction systems, and inspections **Candidates with knowledge of using and interpreting materials characterization techniques such as SEM, XRD, XRF, FESEM, FTIR, DSC, TG/DTA, SimaPro, GEMS Skeletor, etc., will be given preference**.
Job Responsibility	• Contribute to the ongoing research projects in the center. • Write research proposals. • Conduct basic and applied research. • Propose and introduce novel research areas that enhance the Center's scientific scope and impact. • Develop advanced products and technology. • Participate in commercialization and technology transfer initiatives. • Publish findings or creative work. • Mentor junior researchers and students involved in related projects. • Support the organization of Center activities such as seminars, workshops, and training sessions. • Teach courses
Qualification	1. A Ph.D. degree in Civil Engineering, Environmental Engineering, Architecture, Construction Management, Chemistry, Chemical Engineering, Materials Science, Computer Science, or Mechanical Engineering. 2. In-depth knowledge and a strong record of published research in one or more of the areas outlined in the Job Description.

We thank all applicants for their interest. However, only those individuals selected for an interview will be contacted.