

## **POSITION TITLE: ASSISTANT PROFESSOR IN MATERIALS RESISTANCE**

### **UNIVERSITY MOHAMMED VI POLYTECHNIC, UM6P**

Located at the heart of the future Green City of Benguerir, Mohammed VI Polytechnic University (UM6P), a higher education institution with international standards, is established to contribute to the development of Morocco and the African continent. Its vision is honed around research and innovation at the service of education and development. This unique nascent university, with its state-of-the-art campus and infrastructure, has woven a sound academic and research network, and its recruitment process is seeking high quality academics and professionals in order to boost its quality-oriented research environment in the metropolitan area of Marrakech.

### **MATERIALS SCIENCE, ENERGY AND NANOENGINEERING, MSN**

The Materials Science, Energy, and nano-engineering (MSN) is a department at Mohammed VI University that aims to make use of innovative research and education in order to promote solution development and entrepreneurship (in the context of Moroccan and African challenges), while training the next generation top scientists, innovators and entrepreneurs.

Research at MSN is organised in five divisions: Energy efficiency, Surface technology, Polymers and composites, Metallurgy, and Phosphates & sustainability.

With some 50 researchers and PhD students and several national and international partners, MSN is emerging as a strong actor in the Moroccan materials research scene. In 2019, the department will launch a Master program in Materials science and engineering as well as several executive master programs.

### **DESCRIPTION OF THE POSITION**

The recruited professor will be in charge of teaching and R & D in the field of materials resistance.

The profile sought is that of a specialist in the field of mechanics, fracture and damage of materials.

The activity of the future candidate will be oriented towards the following points:

- Experimentally determine the mechanical properties of materials: compression, torsion, tension, shear, impact, ....
- Correlate the structure-mechanical properties relationship of materials
- Studying the molecular aspects of material failure
- Understanding cracking-shear interactions
- Mastering the aspects related to the failure of materials: analytical and energetic approach of the fracture, experimental characterization of the toughness, fracture with plasticity of materials, failure modes.
- Understanding the impact resistance of materials: experimental aspects, physical factors influencing fracture,
- Understanding the phenomena of material reinforcement
- Studying the failure in fatigue of materials: experimental aspects of fatigue tests, cracking and fatigue, molecular structure and fatigue.

Research activities and interests in other areas of materials engineering may also be considered.

## SELECTION CRITERIA

A preferred candidate should have:

- Ph.D. degree in chemistry, physics, electrical engineering or another scientific or engineering discipline closely related with materials mechanics
- An h-index >10
- Five (5) years technical experience in mechanical characterization of materials, the concepts of normal stress and strain, design methodology of bearing structures, the stress field of a beam caused by torsion, axial forces and/or uniaxial or bi-axial bending moment, shearing forces.
- Experience in fundraising from government and international agencies and/or industry.
- Excellent leadership and project management skills with ability to foster teamwork.
- Exceptional managerial, technical, analytical, evaluative and follow-through skills, preferably in a research arm of a higher education institution or government laboratory.
- Experience in supervising undergraduate students, graduate students, and/or Post Doctoral fellows.
- Strong communication skills with the ability to write, speak, and present effectively to a wide variety of audiences including academics and industry representatives.
- Ability to forge collaborative relationships with peers and to work effectively and collaboratively with diverse stakeholders at various organizational levels.
- Very good command of oral and written English and French

## APPLICATION PROCEDURE

Applications must be sent to: [recrutement@um6p.ma](mailto:recrutement@um6p.ma) , before April 30, 2019 in a single electronic zipped folder with the mention of the job title in the mail's subject. The folder must contain:

A cover letter indicating the position applied for and the main research interests.

A detailed CV.

A brief research statement.

Contact information of 3 references (applicants are assumed to have obtained their references' consent to be contacted for this matter).

The short-listed candidates will be invited to meet the university selection committee.

## COMPENSATION PACKAGE

Best in class salaries

30% annual bonus on gross salary.

Research budget allowance to professor

Best in class :

IP sharing policy (33% for professor)

MOOCs policy (60% for professor)



Consulting policy (100% for professor when teaching time is completed)

Complete benefits including housing, tuition fees, life & medical insurance, retirement, maternity leave and sabbatical.