

Mohammed VI Polytechnic University

Complex Systems Engineering and Human Systems (CSEHS)

Position Announcement

Job Title: Associate Professor in Optimization.

Area of specialization in CSEHS Education and Research: Optimization, mathematical programming, combinatorial optimization, graph theory, control, and theoretical computer science.

Position summary:

The Associate Professor is a member of the faculty with a high academic rank who has demonstrated a continuous and effective competence in teaching and research including scholarly publications. The Associate Professor's teaching responsibilities are assigned by the academic department head which may include serving as an academic advisor. The primary purpose of this role is to engage in the supervision and mentorship of graduate students and to demonstrate advanced skills in scholarly activities and research.

Job description:

The Complex Systems Engineering and Human Systems (CSEHS) at Mohammed VI Polytechnic University invites applications for an Associate Professor specialized in the area of Optimization as soon as profile found. Qualified candidates at the Associate Professor level will be considered with hiring rank commensurate with academic accomplishments.

The position is open to individuals who hold an HDR in the subject discipline, obtained since less than 5 years, from a recognized university. The Scopus h-index should be between 5 and 15, and the number of papers in qualified revues should be between 10 and 30. Preference will be given to those with excellent research and teaching experience. Excellent communication skills, both verbal and writing are important. Fluency in French and English are mandatory.

Key duties:

Successful candidates are expected to:

- Have the desire and ability to teach courses at the undergraduate level as well as courses at the graduate level related to the candidate's areas of research interest.
- Pursue research support including submission of proposals and contact with funding organizations.
- Have a strong collaboration with the program faculty, perform multidisciplinary research, and develop a funded research program.

- Publish the results of personal and sponsored research in international journals refereed by his/her peers.
- Pursue and/or propose scholarly and professional activities that will keep him/her at the leading edge of his/her field.

Criteria of the candidate:

- HDR (Habilitation) in the subject discipline
- Demonstrated understanding of operational requirements for a successful research project and managing resources.
- Proven ability to identify and fulfill the academic writing requirements for excellent target publications.
- Proven ability of working with team members and PhD students to help build their research skill and knowledge and to support and guide their professional development.
- Ability to generate new ideas, links, and to build upon existing ideas to generate unique concepts and solutions.
- Demonstrated confirmed teaching skills.
- Proven ability in the organization of seminars, workshops and conferences.

Skills:

Research skills

- Good knowledge of problem formulation in optimization, and analytical theory.
- Good knowledge of mathematical programming and combinatorial optimization.
- Good knowledge of computational methods in optimization.
- Good knowledge on the recent applications in engineering, statistical machine learning, data analysis, mathematical finance, signal processing, control, and theoretical computer science.

Teaching skills

- Theory and numerical algorithms for optimization.
- Theories: finite dimensional derivatives, convexity, optimality, duality, and sensitivity.
- Methods: simplex and interior-point, gradient, Newton, ...
- Applications in machine learning, data analysis, control, theoretical computer science, ...
- Analyze the networks and data using graph theory.

About UM6P:

Located at the heart of the future Green City of Benguerir, Mohammed VI Polytechnic University (UM6P), a higher education institution with an international standard, is established to serve 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.

About CSEHS:

The Complex Systems Engineering and Human Systems (CSEHS) is a component of the University Mohammed VI Polytechnic (UM6P). It constitutes a structure of higher education and finalized research. Its main themes are: Modeling, Simulation, Data Science, Optimization, Probability and statistics.

Disciplinary fields of CSEHS cover the following areas: Numerical Analysis, Scientific Computing, HPC, Data Science, Fluid and solid Mechanic, Rheology, Optimization, Scheduling, Logistics, Probability and Applied Statistics, Stochastic Processes, Data Assimilation, Valorization, Social Interactions, Environment, Uncertainties and Reliability.

The CSEHS entity operates on the principle of partnerships with Moroccan and international universities and adopts the approach of joint diplomas and joint laboratories labeled.

The main operation of the CSEHS entity is structured around two axes:

- Finalized Research and Development: CSEHS operates on the principle of the development of finalized research projects (primarily for OCP), for which it seeks funding from OCP and other organizations.
- Initial and Executive Higher Education: The entity has four Masters and a Bachelor's degree in Data Sciences in initial training, already accredited by the ministry. The Bachelor's degree was launched in October 2018 and the Masters will start in September 2019. Two Executive Masters will also be launched in 2019.

Applications and selection procedure :

- Applications must be sent to: 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.

About 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.