Oussama ROMDHANI

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If you ask a child what his dream job is, the answer is, most of the time, obvious: "a doctor, a pilot or a lawyer..." For me, it wasn't the case. I have always known what I have wanted to do with my future, and I have always answered "a scientist or engineer"! I have always been excited about it and I have never deviated from my goal.

That dream grew bigger within me year after year as I found myself closer and closer to reach that goal. It started with entering the best high-school reserved for the elite in my region "Pioneer School of Gabes", and then obtaining my baccalaureate diploma in mathematics and physics with high honors. That allowed me to integrate the best preparatory institute for entering to engineering schools in the country "IPEIT". The dream didn't stop there, it continued to get better shaped in my engineering studies at National Engineering School of Tunis, the most prestigious engineering school in my country where I also had my master courses in Environmental and Hydraulic Modelling. And today, pursuing the dream, I joined the Environmental Fluid Mechanics research group at University of Houston as a PhD candidate and a research assistant.

I believe that my academic background and passion for Spatial planning, Mechanics, Physics, Structural Analysis, Material Sciences, Aerodynamics, Soil Mechanics, Heat Transfer, and Thermodynamics resides behind my ardour for this new scientific and professional adventure. Furthermore, you will find in me to be someone with a strong ability to investigate, model and provide critical insights into complex physical phenomena, someone of excellent problem-solving skills, clear thought and high energy with passion for excellence and science.

Work Experience

January 2021 – Ongoing: Environmental Fluid Mechanics research group at University of Houston

Graduate Research assistant Graduate teaching assistant

July 2018 – December 2020: Spec-Technologies

Fiber optic network engineer at Spec- Technologies office: Design and implementation of fiber optic networks in the northeast part of France.

February – July 2017: BETA-PI Office

Design and dimensioning of a beam bridge over "wadi Sbiba", part of the national road relating Tunisia to Algeria.

July – August 2015: Chaabane Freres Enterprise

Construction of a (ground floor + 10 floors) building.

Education

2016 –2018 National Engineering School of Tunis (Master degree): Environmental and Hydraulic Modeling

These courses aim to provide student-researchers with methods of identification, analysis, forecasting

and control, mainly by mathematical modeling, of problems linked to the hydrological cycle and its associated flows and management of water pollution as well as hydraulic systems.

2014 – 2017 National Engineering School of Tunis (Engineering Diploma): Civil Engineering

Multidisciplinary courses: Structural Analysis, Soil mechanics, Material science, Limit analysis, nonlinear behavior of materials, fluid and structure interaction, CFD, composite structures, Applied Mathematics, mixed finite elements, Road construction, Hydrology, IT, Economics

2012 – 2014 Preparatory Institute for Engineering Studies of Tunis

2 years of intensive preparation program for the National Examination, (Major: Mathematics and Physics).

2008 – 2012 Pioneer School of Gabes

GCSE with high honors at the Pioneer school of Gabes

Academic Projects

January – June 2018 National Waste Management Agency (ANGED)

Master Thesis: Compatibility analysis of geosynthetic clay liners and leachate (Case of study: Landfill of Borj Chakir). This study ranges from quantitative evaluation of the landfill's performance using HELP model (developed by the Environmental Protection Agency of USA) to qualitative and chemical leachate-GCL interaction using PhreeqC (C++) program (developed by USGS of USA).

October – December 2017 University Nova of Lisbon (CENSE)

Subject: Mapping electricity consumption in Portugal during extreme climatological events (Heat and cold waves) using energy modeling tool "TIMES".

January – June 2017 Environmental and Hydraulic modeling Laboratory at the National Engineering School of Tunis

Subject: Studying different turbulence models with a special focus on K-τ model.

July – September 2016 Manipal Jaipur University (INDIA)

Studying the behavior of tall buildings under earthquake loads in the seismic zone of Jaipur according to "IS 1893" code and finite element method.

September – April 2015 Civil Engineering Department of the National Engineering School of Tunis

Studying the mechanical and chemical characteristics of cellular concrete.

Fields of interest

- Mechanics (Aerodynamics, hydraulics, continuum mechanics...)
- Mathematics
- Renewable energies
- Machine learning
- Environment
- Economics
- History

Technical skills

Programming tools: C (Code Blocks), C++, MATLAB, VBA, Python, FORTRAN (moderate knowledge) *Operating systems:* Linux, Windows, Ios Analysis and design software: ARCHE, Robot STRUCTURAL, ANSYS, ETABS, ALIZE ... Drafting tools: AutoCAD 2016 Packages: MS Office applications Other softwares: Hec-Ras, Abaqus, EPANET, CIVIL 3D, Comac, CapFT, QGis, ArcGis, HY8, Qgis

Languages

- Arabic: Native
- French: Excellent
- English: Excellent
- German: Moderate knowledge
- Spanish: Fair

Personal Attributes

- Good communication, planning and organizational skills.
- Highly developed numeracy and computer literacy skills.
- Self-motivator and the ability to motivate others.
- Able to work on my own initiative as well as being a team player.

Extracurricular activities

- Co-founder and accountant of the ADAL association
- Active member of Junior ENIT Enterprise
- Projects' manager of the civil engineering club
- Captain of STADE GABESIEN team of Basket-Ball