

**Name: Dr. Afif Gouissem****Rank: Assistant Professor - Mechanical Engineering****Personal Information**

Nationality:	Tunisian
AU Joining Date:	15 Jan 2020
E-Mail Address:	a.gouissem@au.kw.edu

Professional Information

Education:	Qualification: Doctorate Major: Mechanical engineering College/University: University of Houston Year: 2009/2014 Qualification: Masters Major: Mechanical engineering College/University: Tunisia Polytechnic school Year: 2008/2009 Qualification: Bachelor Major: Mechanical engineering College/University: Tunisia Polytechnic school Year: 2006/2008
Specialization:	Mechanical design, nanomaterials, biomechanics
Current Academic Position:	Assistant Professor - Mechanical Engineering
Current Professional Positions:	Professional Engineer
Previous Administrative Position Held:	Project Manager

Previous Academic Positions Held:	Teaching Assistant, University of Houston, TX 2010
Fellowships And Honors:	- ASME research organization member 2013-present - Presidential scholarship at University of Houston
Teaching Experience:	Assistant Professor AU, Kuwait January 2020 – present Coordinating, and teaching mechanical engineering courses. Courses taught: - Engineering Drawing, I - 3D-CAD modeling - Engineering Mechanics - Statics and Dynamics - Mechanical Engineering materials - Engineering Fluids and Applications - Mechanical Engineering Workshop II - Engineering Project (PBL) Teaching Assistant, University of Houston, USA 2010
Industrial And Technical Experience:	Project Manager Luxor group (Tunis, Tunisia) Sept. 2017 - Present - Planning and monitoring projects - Measuring project performance using appropriate systems, tools and techniques. - Monitoring overall progress and use of resources Structural and Design Engineer EMAS CHIYODA SUBSEA (Houston, TX, USA) June 2014 - June 2017 - Contributed in all project lifecycle phases: tendering, FEED, Engineering, HIRAs and HAZIDs, FEMECAs, and supporting the project offshore during the execution phase. - Performed non-linear FE analysis Performed Installation analysis for rigid, flexible and umbilical pipeline.
Research Interest:	- Nanomaterials - Multi-scale Mechanical modeling - Biomechanics - Mechanical Design
Research Grants:	- M. Adouni, A. Gouissem, F. Alkhatib, "Chondrocyte Mechano-transduction properties explained by multi scale explicit composition of the articular cartilage: Mutual continuity between cellular and tissue level (2022) KFAS - A. Gouissem, M. Adouni, "Explain the mechanical properties of cartilage cells through an explicit multi-level model of cartilage: mutual continuity between the level of cells and tissues" (2023) KFAS
Research and Publications including Journal and Books:	1. A. Gouissem, Wu Fan, A.C.T. van Duin, P. "A reactive force-field for Zirconium and Hafnium Di-boride", Sharma, Computational material science v70 p171-177 (2013) 2. A. Gouissem, R. Sarangi, D. Qian, P.Sharma, "Grain Boundary Sliding Constitutive Law from Atomistics", Computational Materials Science (2015) 3. X. Yan, A. Gouissem, P. Sharma, "Atomistic insights into Li-ion diffusion in amorphous silicon", Mechanics of Materials (2015)

	4. A. Gouissem, R Sarangi, Q Deng, P Sharma Bridging time-scales: Grain boundary sliding constitutive law from atomistic Computational Materials Science 104, 200-204 5. X. Yan, A. Gouissem, P. Gudru, P. Sharma, "Elucidating the atomistic mechanisms underpinning plasticity in Li-Si nano-structures", Physical Review Materials (2017) 6. F. Al khatib, A. Gouissem, A. Eilaghi, M. Adouni, " The effect of enzymatic crosslink degradation on the mechanics of anterior cruciate ligament: A hybrid multi-domain model ", Applied sciences (2021) 7. M. Adouni, A. Gouissem, F. Al Khatib, A. Eilaghi " Biomechanics of the anterior cruciate ligament under simulated molecular degradation", Eur. Cells Mater (2022) 8. F. Al Khatib, A. Gouissem, R. Mbarki, M. Adouni, "Biomechanical Characteristics of the Knee Joint during Gait in Obese versus Normal Subjects", International Journal of Environmental Research and Public Health (2022) 9. A. Gouissem, R. Mbarki, F. Al Khatib, M. Adouni, "Multiscale Characterization of Type I Collagen Fibril Stress–Strain Behavior under Tensile Load: Analytical vs. MD Approaches" ,Bioengineering (2022) 10. F. Al Khatib, A. Gouissem, R. Mbarki, M. Adouni, "Biomechanical Characteristics of the Knee Joint during Gait in Obese versus Normal Subjects", IJERPH (2022) 11. M. Adouni, A. Gouissem, F. Al khatib, R. Mbarki, "AGES effect on the biomechanics of the knee tendon", Results in Engineering (2023) 12. Adouni M, Alkhatib F, Gouissem A, Faisal TR (2023) Knee joint biomechanics and cartilage damage prediction during landing: A hybrid MD-FE-musculoskeletal modeling. PLoS ONE 18(8):
Paper Presentations at Professional Conferences:	A. Gouissem , H. Essaieb, N. Romdhane, "Topographic site effect: contribution of topographies to the amplification of seismic signal", International Conference on Geotechnical Engineering (2007)
College Service including committee Membership:	NA
National Service:	Collaborations with KFAS
College Committees:	- College of Engineering credit transfer committee - College of Engineering Quality management committee - College of Engineering Labs and Workshop committee