Name: Dr. Raouf Mbarki
Rank: Assistant Professor – Mechanical engineering

Personal Information

Nationality:	Tunisian
ACK Joining Date:	29 Sep 2015
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Professional Information

Education:	**Qualification:** Doctorate **Major:** Mechanical Engineering **College/University:** University of Houston **Year:** 2013/2014 **Qualification:** Masters **Major:** Civil Engineering **College/University:** Michigan State University **Year:** 2007/2008 **Qualification:** Bachelor **Major:** Mechanical Engineering **College/University:** Tunisia Polytechnic School **Year:** 2006/2007
Specialization:	Nano mechanics, Energy harvesting and storage, Material modeling
Current Academic Position:	Assistant Professor
Current Professional Positions:	N/A
Previous Administrative Position Held:	N/A
Previous Academic Positions Held:	N/A
Fellowships And Honors:	N/A
Teaching Experience:	Lecturer - University of Houston Teaching Assistant - University of Houston Teaching Assistant - Michigan State university

Industrial And Technical Experience:	Product Engineer Analyst, DeepFlex Inc, USA, 9/2014 – 5/2015 System Engineer, Kopileft, Tunisia, 1/2008- 8/2008
Research Interest:	Theoretical and Computational Materials Science Atomistic Simulations Flexoelectricity Nano Scale Piezoelectricity Size-Dependent Elasticity Physics of Nanostructures Nanomaterials.
Research Grants:	ACK research Grant.
Research and Publications including Journal s and Books:	• R Mbarki, F Al Khatib, M Adouni, "Multiscale Syntheses of Knee Collateral Ligament Stresses: Aggregate Mechanics as a Function of Molecular Properties", International Journal of Medical, Health, Biomedical, Bioengineering and Pharmaceutical Engineering, 12, 9, 388 – 393, 2018 • L. Borvayeh, M. Sabati, R. Mbarki, "An Optimization Method for Quantifying Magnetization Vectors in Magnetic Resonance Measurements", International Journal of Scientific Research in Science, Engineering and Technology, 4 (8),162-169, 2018. • A. Sedaghat, M. AlJundub, A. Eilaghi, E. Bani-Hani, F. Sabri, R. Mbarki, M El Haj Assad, "Application of pbl in the course fluid and electrical drive systems, case study: Manufacturing an automated punch machine", Journal of Problem Based Learning in Higher Education, 5 (2), 2017. • R Mbarki, L Borvayeh, M Sabati, "Investigation of the Flexoelectric Coupling Effect on the 180 Domain Wall Structure and Interaction with Defects", J Material Sci Eng 5 (264), 2169-0022.10002, (2016). • R Mbarki, JB Haskins, A Kinaci, T Cagin, "Temperature dependence of flexoelectricity in BaTiO3 and SrTiO3 perovskite nanostructures", Physics Letters A 378 (30-31), 2181–2183, (2014). • R Mbarki, N Baccam, K Dayal, P Sharma, "Piezoelectricity above the Curie temperature? Combining flexoelectricity and functional grading to enable high-temperature electromechanical coupling", Applied Physics Letters 104 (12), 122904, (2014). • R Mbarki, ME Kutay, N Gibson, AR Abbas, "Comparison between fatigue performance of horizontal cores from different asphalt pavement depths and laboratory specimens", Road Materials and Pavement Design 13 (3), 422-432, (2012).
Paper Presentations at Professional Conferences:	• R Mbarki, F Al Khatib, M Adouni, "Multiscale Syntheses of Knee Collateral Ligament Stresses: Aggregate Mechanics as a Function of Molecular Properties", 20th International Conference on Biomedical Science and Engineering, 2018 • L. Borvayeh, R. Mbarki, F. Alkhatib, A. Sedaghat, A. Hassanzadeh, J. Jamali, A. Mostafaeipour, "A New Capacity Factor Based on Rated Wind Speed for Optimal Selection of Wind Turbines", Proceedings of ISERD International Conference, Abu Dhabi, UAE, 2nd -3rd March 2018. • Kutay, M.E., R. Mbarki , "Comparison between Fatigue Performances

	of Horizontal Cores from Different Asphalt Pavement Depths and Laboratory Specimens". 1st International Conference of Middle East Society of Asphalt Pavements (MESAT), July 4th, 2010, Beirut, Lebanon.
College Service including committee Membership:	N/A
National Service:	N/A
School Committees:	Auditing and Quality Management Committee, Chair CT committee, member PBL committee, member