

Kavan Hazeli

CONTACT INFORMATION	Department of Mechanical & Aerospace Engineering University of Alabama in Huntsville	301 Sparkman Drive Technology Hall Huntsville, AL 35899 phone: (256)-824-2257 e-mail: kavan.hazeli@uah.edu
APPOINTMENTS	University of Alabama in Huntsville <i>Assistant Professor</i> <i>Department of Mechanical & Aerospace Engineering</i>	August 2016 – present
	Johns Hopkins University , Baltimore, Maryland <i>Postdoctoral Fellow</i> , Hopkins Extreme Materials Institute <i>Advisor: Prof. K. T. Ramesh</i>	April 2014 – August 2016
	Drexel University , Philadelphia, Pennsylvania <i>Research Assistant</i> , Theoretical Applied Mechanics Group <i>Advisor: Prof. A. Kontsos</i>	April 2010 – April 2014
EDUCATION	Drexel University , Philadelphia, Pennsylvania <i>Ph.D.</i> , Mechanical Engineering & Mechanics	March 2010 – March 2014
	<i>M.S.</i> , Mechanical Engineering & Mechanics	March 2010 – December 2012
	Karaj University , Iran <i>B.S.</i> , Materials Science & Engineering	August 2000 – June 2004
PEER-REVIEWED JOURNAL PUBLICATIONS	Hazeli, K. , Kingstedt, O., Kannan, V., Ravichandran, G., & Ramesh, K. (2016). Rate-sensitivity of deformation twinning. <i>Submitted to Nature Materials</i> .	
	Dixit, N., Hazeli, K. , & Ramesh, K. (2015). Twinning in extruded magnesium under high strain rate loading of uniaxial stress and uniaxial strain. <i>Submitted to Journal of the Mechanics and Physics of Solids</i> .	
	Hogan, J. D., Kimberley, J., Hazeli, K. , Plescia, J., & Ramesh, K. (2015). Dynamic behavior of an ordinary chondrite: the effects of microstructure on strength, failure and fragmentation. <i>Icarus</i> , 260, 308–319.	
	Hazeli, K. , Askari, H., Cuadra, J., Streller, F., Carpick, R., Zbib, H., & Kontsos, A. (2015). Microstructure-sensitive investigation of magnesium alloy fatigue. <i>International Journal of Plasticity</i> , 68, 55–76.	
	Hazeli, K. , Cuadra, J., Streller, F., Barr, C., Taheri, M., Carpick, R., & Kontsos, A. (2015). Three-dimensional effects of twinning in magnesium alloys. <i>Scripta Materialia</i> , 100, 9–12.	
	Hazeli, K. , Sadeghi, A., Pegguleryuz, M., & Kontsos, A. (2014). Damping and dynamic recovery in magnesium alloys containing strontium. <i>Materials Science and Engineering: A</i> , 589, 275–279.	
	Hazeli, K. , Sadeghi, A., Pegguleryuz, M., & Kontsos, A. (2013). The effect of strontium in plasticity of magnesium alloys. <i>Materials Science and Engineering: A</i> , 578, 383–393.	
	Hazeli, K. , Cuadra, J., Vanniamparambil, P., & Kontsos, A. (2013). In situ identification of twin-related bands near yielding in a magnesium alloy. <i>Scripta Materialia</i> , 68(1), 83–86.	
	Cuadra, J., Vanniamparambil, P. A., Hazeli, K. , Bartoli, I., & Kontsos, A. (2013). Damage quantification in polymer composites using a hybrid NDT approach. <i>Composites Science and Technology</i> , 83, 11–21.	
	Vanniamparambil, P. A., Khan, F., Hazeli, K. , Cuadra, J., Schwartz, E., Kontsos, A., & Bartoli, I. (2013). Novel optico-acoustic nondestructive testing for wire break detection in cables. <i>Structural Control and Health Monitoring</i> , 20(11), 1339–1350.	

Zhang, Q., Mochalin, V. N., Neitzel, I., **Hazeli, K.**, Niu, J., Kontsos, A., & Gogotsi, Y. (2012). Mechanical properties and biomineralization of multifunctional nanodiamond-PLLA composites for bone tissue engineering. *Biomaterials*, 33(20), 5067–5075.

Vanniamparambil, P. A., Bartoli, I., **Hazeli, K.**, Cuadra, J., Schwartz, E., Saralaya, R., & Kontsos, A. (2012b). An integrated structural health monitoring approach for crack growth monitoring. *Journal of Intelligent Material Systems and Structures*, 23(14), 1563–1573.

Kontsos, A., Loutas, T., Kostopoulos, V., **Hazeli, K.**, Anasori, B., & Barsoum, M. W. (2011). Nanocrystalline Mg-MAX composites: Mechanical behavior characterization via acoustic emission monitoring. *Acta Materialia*, 59(14), 5716–5727.

Vaziri, S., Shahverdi, H., Shabestari, S., **Hazeli, K.**, & Torkamany, M. (2010). Effect of re-scanning on tribological characterization of laser surface alloyed layers. *Materials & Design*, 31(8), 3875–3879.

JOURNAL
PUBLICATIONS IN
PREPARATION

Hazeli, K., Papanikolaou, S., El Mir, C., Delbo, M., & Ramesh, K. (2016). Thermal fatigue mechanism for asteroidal rock disaggregation. *To Be Submitted to Nature Geoscience*.

Xie, K., **Hazeli, K.**, Ramesh, K., & Hemker, K. (2016). Atomic level differences in twin boundaries in magnesium deformed at quasi-static and high rates. *To be Submitted to Nature Communication*.

PEER-REVIEWED
CONFERENCE
PROCEEDINGS

Dixit, N., **Hazeli, K.**, & Ramesh, K.T. “Twinning in magnesium under dynamic loading”, *11th International Conference on the Mechanical and Physical Behavior of Materials under Dynamic Loading*, DYMAT, September 7-11, 2015, Lugano, Switzerland

Hazeli, K., Wilkerson, J., El Mir, C., Delbo, M., & Ramesh, K. (2015). Regolith formation on airless bodies. In *Lunar and planetary science conference* (Vol. 46, p. 1618).

Hogan, J., Kimberley, J., **Hazeli, K.**, Plescia, J., & Ramesh, K. (2015). On the role of defects in the dynamic failure of an ordinary chondrite. In *Lunar and planetary science conference* (Vol. 46, p. 1481).

Hazeli, K., Hogan, J.D., Elmir, CH., & Ramesh, KT. “Mechanical and Thermal Investigation of a Stony Meteorite”, *Symposium on Experimental and Applied Mechanics*, SEM, June 8-11, 2015, Costa Mesa, CA, USA

Hazeli, K., Cuadra, J., Vanniamparambil, P., Carmi, R., & Kontsos, A. (2014). Quantification of microstructure-properties-behavior relations in magnesium alloys using a hybrid approach. *Magnesium Technology 2014*, 121–124.

Cuadra, J., **Hazeli, K.**, Cabal, M., & Kontsos, A. (2014). The role of multiscale strain localizations in fatigue of magnesium alloys. In *Asme 2014 international mechanical engineering congress and exposition* (pp. V009T12A034–V009T12A034).

Cuadra, J., Vanniamparambil, P. A., **Hazeli, K.**, & Kontsos, I. B. A. (2013). Data-fusion NDE for progressive damage quantification in composites. *Advanced Composites for Aerospace, Marine, and Land Applications*, 137–145.

Kontsos, A., **Hazeli, K.**, Abraham, P., Cuadra, J., Schwartz, E., Saralaya, R., & Schmidt, T. (2012). Scale-bridging fatigue monitoring in magnesium alloys. In *Aip conference proceedings*.

Vanniamparambil, P. A., Bartoli, I., **Hazeli, K.**, Cuadra, J., Schwartz, E., Saralaya, R., & Kontsos, A. (2012a). In-situ acousto-ultrasonic monitoring of crack propagation in Al2024 alloy. In *Spie smart structures and materials: Nondestructive evaluation and health monitoring* (pp. 83482J–83482J).

INVITED TALKS

Hazeli, K., “Multiscale Materials Characterization”, Department of Mechanical Engineering, University of Rochester, Oct 2016, Rochester, NY, USA

Hazeli, K., “Materials by Design: Application for Extreme Environments”, Department of Mechanical Engineering, Mississippi State University, Mar 3, 2016, Starkville, MS, USA

Hazeli, K., “Asteroidal Rock Disaggregation”, Division of Structural Mechanics and Concepts, NASA Langley Research Center, Aug 6, 2015, Hampton, VA, USA

Hazeli, K., “Thermal Fatigue on Airless Bodies”, *Mechanics of Materials Seminar*, Department of Mechanical Engineering & Mechanics, Drexel University, May 18, 2015, Philadelphia, PA, USA

SELECTED
LECTURE AND
CONFERENCES

Hazeli, K., Kingstedt, O., Kannan, V., Ravichandran, G., & Ramesh, K.T. “Strain Evolution and Twinning Modes in Magnesium Single Crystal”, *Symposium on Fatigue and Fracture under Extreme Environments*, SEM, June 6-9, 2016, Orlando, FL, USA

Hazeli, K., Papanikolaou, S., ElMir, CH., & Ramesh, K.T. “Thermal Fatigue as the Origin of Rock Break-up on Asteroids”, *Symposium on Fatigue in Materials*, TMS, February 14-18, 2016, Nashville, TN, USA

Hazeli, K., Kingstedt, O., Kannan, V., Ravichandran, G., & Ramesh, K.T. “The Effect of Strain Rate on Twinning Modes in Magnesium Single Crystal”, *Materials Research Society*, MRS, November 29-December 4, 2015, Boston, MA, USA

Dixit, N., **Hazeli, K.**, & Ramesh, K.T. “Twinning in magnesium under dynamic loading”, *11th International Conference on the Mechanical and Physical Behavior of Materials under Dynamic Loading*, DYMAT, September 7-11, 2015, Lugano, Switzerland

Hazeli, K., Hogan, J.D., Elmir, CH., & Ramesh, K.T. “Mechanical and Thermal Investigation of a Stony Meteorite”, *Symposium on Experimental and Applied Mechanics*, SEM, June 8-11, 2015, Costa Mesa, CA, USA

Hazeli, K., Cabal, M., Cuadra, J., Vanniamparambil, P., Wisner, B., & Kontsos, A. “Use of Full Field Strain Measurements for Identification of Fatigue Precursors in Magnesium Alloys”, *Symposium on Experimental and Applied Mechanics*, SEM, June 8-11, 2015, Costa Mesa, CA, USA

Hazeli, K., Wilkerson, J., Elmir, CH., & Ramesh, K.T. “Regolith Formation on Airless Bodies”, *46th Lunar and Planetary Science Conference*, LPSC, March 16-20, 2015, Houston, TX, USA

Hazeli, K., Askari, H., Zbib, H., & Kontsos, A. “The Role of Twinning-Detwinning-Retwinning in Fatigue of Mg Alloys”, *17th U.S. National Congress on Theoretical and Applied Mechanics*, USNCTAM, June 15-20, 2014, East Lansing, MI, USA

Hazeli, K., Cuadra, J., Vanniamparambil, P., Carmi, R., & Kontsos, A. “Quantification of Microstructure-properties-behavior Relations in Mg Alloys Using a Hybrid Approach”, *Symposium on Magnesium Technology*, TMS, February 16-20, 2014, San Diego, CA, USA

Hazeli, K., Sadeghi, A., Pekguleryuz, M. O., & Kontsos, A. “Microstructure and Mechanical Behavior Characterization in Novel Extruded Magnesium Alloys”, *9th International Conference on Magnesium Alloys and their Applications*, July 8-12, 2013, Vancouver, BC, Canada

CLASS TAUGHT – MAE 378 Materials and Manufacturing Process

EDITORIAL DUTY – Reviewer: **Materials & Design**, Elsevier 2015 – present
– Reviewer: **ASME Journal** 2015 – present

SYMPOSIA ORGANIZATION – **Fracture & Fatigue of Composites** June 12-15, 2017
• Society for Experimental Mechanics (SEM), Fracture & Fatigue Division
– **Fatigue and Fracture Under Extreme Environments** June 12-15, 2017
• Society for Experimental Mechanics (SEM), Fracture & Fatigue Division
– **Fatigue and Fracture Under Extreme Environments** June 6-9, 2016
• Society for Experimental Mechanics (SEM), Fracture & Fatigue Division

CONSULTING	<ul style="list-style-type: none"> – Federal Aviation Administration (FAA) 2013 – 2014 <ul style="list-style-type: none"> • The Influence of Texture and Grain Size on Mechanical Behavior of Advanced Aluminum-Lithium alloy – Mississippi State University and University of Virginia, Charlottesville 2012 – 2014 <ul style="list-style-type: none"> • Characterization of Luders-band Formation in Magnesium AM30 alloy
UNIVERSITY SERVICES & LEADERSHIP	<ul style="list-style-type: none"> – Vice President of Postdoctoral Association, Johns Hopkins University 2014 – 2015 – Vice President of Graduate Student Association, Drexel University 2013 – 2014
PROFESSIONAL MEMBERSHIP	<ul style="list-style-type: none"> – Society of Experimental Mechanics (SEM) 2014 – present – American Society of Mechanical Engineers (ASME) 2010 – present