

CONTACT INFORMATION	<p>Research Associate          Institute for Computational Engineering and Sciences (ICES),          Senior Lecturer, Department of Biomedical Engineering          The University of Texas at Austin          6.328 Peter O'Donnell Jr. Building          Austin, Texas 78712</p>	<p>danial@ices.utexas.edu          Phone: 512-232-7219</p>
RESEARCH INTERESTS	<ul style="list-style-type: none"> <li>• Multiscale and Multiphysics Modeling</li> <li>• Nonlinear and Nonlocal Theories of Continuum Mechanics</li> <li>• Reduced Order Modeling of Molecular Systems</li> <li>• Couple Particle and Continuum Modeling</li> <li>• Data-Enabled Predictive Science</li> <li>• Bayesian Model Validation and Uncertainty Quantification</li> <li>• <i>Applications:</i> Advanced micro- and nano-manufacturing, Tumor modeling and image derived treatment, Energy storage devices, Nonlinear and failure processes in structures/materials under extreme conditions, and other complex systems.</li> </ul>	
EDUCATION	<p><b>University of Texas at Austin</b>, Austin, TX <span style="float: right;">2013 – 2015</span>  <b>Postdoc.</b>, Computational Engineering          Advisor: <b>Prof. J. Tinsley Oden</b></p> <p><b>Louisiana State University</b>, Baton Rouge, LA <span style="float: right;">2008 – 2012</span>  <b>Ph.D.</b>, Structural Engineering and Mechanics, <i>Minor:</i> Material Science          Advisor: <b>Prof. George Z. Voyiadjis</b> GPA: 4.00/4.00          Dissertation: <i>Continuum and Crystal Strain Gradient Plasticity with Energetic and Dissipative Length and Time Scales</i></p> <p><b>Sharif University of Technology</b>, Tehran, IRAN <span style="float: right;">2005 – 2008</span>  <b>M.S.</b>, Civil Engineering</p> <p><b>K.N.Toosi University of Technology</b>, Tehran, IRAN <span style="float: right;">2000 – 2005</span>  <b>B.S.</b>, Civil Engineering</p>	
RESEARCH EXPERIENCE	<p><b>Research Associate</b> <span style="float: right;"><b>2016 – present</b></span>          University of Texas at Austin, Austin, TX, USA          Institute for Computational Engineering and Sciences          Supervisors: <b>Prof. J. Tinsley Oden</b> and <b>Prof. Thomas Yankeelov</b>  <i>Current Projects:</i></p> <ul style="list-style-type: none"> <li>• <i>Current:</i> <b>Predictive Multiscale Modeling of Cancer Growth and Imaging Data Guided Treatment.</b>          Sponsor : <i>National Institutes of Health</i></li> <li>• <i>Current:</i> <b>Goal Oriented Adaptive Modeling of Stochastic Multiscale Material Systems.</b>          Collaborator: <i>Barbara Wohlmuth (Technical University of Munich)</i></li> </ul> <p><i>Past Projects:</i></p> <ul style="list-style-type: none"> <li>o <b>Multifidelity Modeling of Supercapacitor Batteries.</b>          Collaborator: <i>John A. Turner (CEES Group, Oak Ridge National Laboratory)</i>          Sponsor : <i>Department of Energy's Advanced Scientific Computing Research</i></li> <li>o <b>Uncertainty Analysis of Plasma Fusion Reactors: ITER Tokamak.</b>          Collaborator: <i>Choong-Seock Chang (Princeton Plasma Physics Laboratory)</i></li> </ul>	

**Postdoctoral Fellow****2013 – 2015**

University of Texas at Austin, Austin, TX, USA  
 Institute for Computational Engineering and Sciences  
 Supervisor: **Prof. J. Tinsley Oden**

*Projects:*

- **Data Driven Systems for Realtime Monitoring of Damage in Composites**  
 Sponsored by: *The Air Force Office of Scientific Research (AFOSR)*  
 Collaborator: *Dr. K. Ravi-Chandar (Aerospace Eng Department, UT Austin)*
- **Multiscale (Atomistic–CoarseGrained–Continuum) Simulations of Polymers: Application to Nanopatterning of Semiconductors**  
 Sponsored by: *Department of Energy’s Advanced Scientific Computing Research*  
 Collaborator: *Dr. Grant Wilson (Chemical Eng Department, UT Austin)*

**Research Assistant****2010 – 2012**

Louisiana State University, Baton Rouge, LA, USA  
 Advanced Computational Solid Mechanics Laboratory,  
 Department of Civil and Environmental Engineering,  
 Supervisor: **Prof. George Z. Voyiadjis**

*Projects:*

- **Characterization of Impact Damage in Metal Matrix Composites**  
 Sponsored by: *Louisiana Space Consortium (LaSAPCE)/NASA EPSCoR.*

TEACHING  
EXPERIENCE**Instructor**

- University of Texas at Austin, Austin, TX, USA **Fall 2018**  
 Department of Biomedical Engineering  
**BME 313L. Introduction to Numerical Methods in Biomedical Engineering**  
 (Undergraduate course)
- University of Texas at Austin, Austin, TX, USA **Fall 2018**  
 Department of Biomedical Engineering  
**BME 311. Network Analysis in Biomedical Engineering**  
 (Undergraduate course)
- University of Texas at San Antonio, San Antonio, TX, USA **Fall 2016**  
 Department of Civil and Environmental Engineering  
**CE 5023. Finite Element Methods** (Graduate course)
- University of Texas at Austin, Austin, TX, USA **Fall 2013**  
 Department of Aerospace Engineering and Engineering Mechanics  
**ASE 311. Engineering Computation:**  
*Numerical methods and applications to aerospace engineering problems*  
 (Undergraduate course)

**Teaching Assistant****2008- 2012**

Louisiana State University, Baton Rouge, LA, USA  
 Department of Civil and Environmental Engineering,  
 • Plasticity of Structural Engineering (Graduate course)  
 • Solid Mechanics (Graduate course)  
 • Damage Mechanics (Graduate course)

- Statics (Undergraduate course)
- Mechanics of Materials (Undergraduate course)

REFEREED  
ARTICLES IN INT'L  
JOURNALS

1. **Faghihi, D.**, Feng, X., Lima, E., Yankeelov, T., Oden, J. T. A Thermodynamical Consistent Coupled Theory for Diffusion-Interface and Deformations: Application to Tumor Growth and Treatment *Journal of the Mechanics and Physics of Solids*.
2. **Faghihi, D.**, Carey, V., Michoski, C., Hager, R., Janhunen, S., Chang, C. S., and Moser, R. D. Moment Preserving Constrained Resampling with Applications to Particle-in-Cell Methods. *Journal of Computational Physics*.
3. Faghihi, D., Sarkar, S., Naderi, M., Rankin, J.E., Hackel, L. and Iyyer, N., 2018. A probabilistic design method for fatigue life of metallic component. *ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering*, 4(3), p.031005.
4. Oden, J.T., Lima, E.A., Almeida, R.C., Feng, Y., Rylander, M.N., Fuentes, D., **Faghihi, D.**, Rahman, M.M., DeWitt, M., Gadde, M. and Zhou, J.C., 2016. Toward Predictive Multiscale Modeling of Vascular Tumor Growth. *Archives of Computational Methods in Engineering*, 23(4), pp.735-779.
5. Oden, J.T., Farrell, K. and **Faghihi, D.**, 2015. Estimation of Error in Observables of Coarse-Grained Models of Atomic Systems. *Advanced Modeling and Simulation in Engineering Sciences*, 2(1), p.5.
6. Farrell, K., Oden, J.T. and **Faghihi, D.**, 2015. A Bayesian Framework for Adaptive Selection, Calibration, and Validation of Coarse-Grained Models of Atomistic Systems. *Journal of Computational Physics*, 295, pp.189-208.
7. Prudencio, E.E., Bauman, P.T., Williams, S.V., **Faghihi, D.**, Ravi-Chandar, K. and Oden, J.T., 2014. Real-time Inference of Stochastic Damage in Composite Materials. *Composites Part B: Engineering*, 67, pp.209-219.
8. Prudencio, E.E., Bauman, P.T., **Faghihi, D.**, Ravi-Chandar, K. and Oden, J.T., 2015. A Computational Framework for Dynamic Data-Driven Material Damage Control, Based on Bayesian Inference and Model Selection. *International Journal for Numerical Methods in Engineering*, 102(3-4), pp.379-403.
9. Voyiadjis, G.Z. and **Faghihi, D.**, 2014. Overview of Enhanced Continuum Theories for Thermal and Mechanical Responses of the Microsystems in the Fast-Transient Process. *Journal of Engineering Materials and Technology*, 136(4), p.041003.
10. Voyiadjis, G.Z., **Faghihi, D.** and Zhang, Y., 2014. A Theory for Grain Boundaries with Strain-Gradient Plasticity. *International Journal of Solids and Structures*, 51(10), pp.1872-1889.
11. **Faghihi, D.** and Voyiadjis, G.Z., 2014. A Thermodynamic Consistent Model for Coupled Strain-Gradient Plasticity With Temperature. *Journal of Engineering Materials and Technology*, 136(1), p.011002.
12. **Faghihi, D.**, Voyiadjis, G.Z. and Park, T., 2013. Coupled Thermomechanical Modeling of Small Volume FCC Metals. *Journal of Engineering Materials and Technology*, 135(2), p.021003.

13. Voyiadjis, G.Z. and **Faghihi, D.**, 2012. Thermo-mechanical Strain Gradient Plasticity with Energetic and Dissipative Length Scales. *International Journal of Plasticity*, 30, pp.218-247.
  14. **Faghihi, D.** and Voyiadjis, G.Z., 2012. Size Effects and Length Scales in Nanoindentation for Body-Centred Cubic Materials with Application to Iron. *Proceedings of the Institution of Mechanical Engineers, Part N: Journal of Nanoengineering and Nanosystems*, 224(1-2), pp.5-18.
  15. Voyiadjis, G.Z. and **Faghihi, D.**, 2013. Localization in Stainless Steel using Microstructural Based Viscoplastic Model. *International Journal of Impact Engineering*, 54, pp.114-129.
  16. Voyiadjis, G.Z., Almasri, A.H., **Faghihi, D.** and Palazotto, A.N., 2012. Analytical Solution for Shear Bands in Cold-Rolled 1018 Steel. *Journal of the Mechanical Behavior of Materials*, 20 (4-6), pp.89-102.
  17. Voyiadjis, G.Z. and **Faghihi, D.**, 2013. Gradient Plasticity for Thermo-mechanical Processes in Metals with Length and Time Scales. *Philosophical Magazine*, 93(9), pp.1013-1053.
  18. **Faghihi, D.** and Voyiadjis, G.Z., 2012. Thermal and Mechanical Responses of BCC Metals to the Fast-Transient Process in Small Volumes. *Journal of Nanomechanics and Micromechanics*, 2(3), pp.29-41.
  19. Voyiadjis, G.Z. and **Faghihi, D.**, 2013. The Effect of Temperature on Interfacial Gradient Plasticity in Metallic Thin Films. *Journal of Surfaces and Interfaces of Materials*, 1(1), pp.30-42.
  20. **Faghihi, D.** and Voyiadjis, G.Z., 2012. Determination of Nanoindentation Size Effects and Variable Material Intrinsic Length Scale for Body-Centered Cubic Metals. *Mechanics of Materials*, 44, pp.189-211.
  21. Voyiadjis, G.Z. and **Faghihi, D.**, 2010. Variable (Intrinsic) Material Length Scale for Face-Centred Cubic Metals using Nanoindentation. *Proceedings of the Institution of Mechanical Engineers, Part N: Journal of Nanoengineering and Nanosystems*, 224(3), pp.123-147.
  22. Voyiadjis, G.Z., **Faghihi, D.** and Zhang, C., 2011. Analytical and Experimental Determination of Rate and Temperature-Dependent Length Scales using Nanoindentation Experiments. *Journal of Nanomechanics and Micromechanics*, 1(1), pp.24-40.
  23. Voyiadjis, G.Z., Deliktas, B., **Faghihi, D.** and Lodygowski, A., 2010. Friction Coefficient Evaluation Using Physically-Based Viscoplasticity Model at the Contact Region During High Velocity Sliding. *Acta Mechanica*, 213(1-2), pp.39-52.
- BOOK CHAPTERS  
AND TECHNICAL  
REPORTS
1. Oden, J.T., Babuska, I. and **Faghihi, D.**, 2017. Predictive computational science: Computer predictions in the presence of uncertainty. *Encyclopedia of Computational Mechanics Second Edition*, pp.1-26.
  2. Sarkar, S., Iyyer, N., Naderi, Hackel, L. and **Faghihi, D.**, 2017. Analytical Tool for Design and Repair of Engine Hardware for Robust High Cycle Fatigue. *NAVAIR/SBIR report*. Department of Defense, Naval Air Systems Command.

3. Oden, J. T., Feng, Y., Rylander, M. N., Fuentes, D., Almeida, R., Lima, E., and **Faghihi, D.**, 2015. Toward Predictive Multiscale Modeling of Vascular tumor Growth: Computational and Experimental Oncology for Tumor Prediction, *ICES report 15-10*, Institute for Computational Engineering and Sciences, The University of Texas at Austin, Austin, TX.
4. Ravi-Chandar, K., **Faghihi, D.** and Oden, J.T., 2014. A System for Monitoring Damage in Composite Materials Using Statistical Calibrations and Bayesian Model Selection. *Dynamic Data Driven Applications Systems (DDDAS)*. Springer Berlin Heidelberg.
5. Bauman, P.T., **Faghihi, D.**, Oden, J. T., Prudencio E.E., Williams, S.V., and Ravi-Chandar, K., 2013. Development of a Stochastic Dynamic Data-Driven System for Prediction of Material Damage. *AFOSR report*, The Air Force Office of Scientific Research, Arlington, Va.
6. Voyiadjis, G. Z. and **Faghihi, D.**, 2013. The Effect of Temperature on Interfacial Gradient Plasticity in Metallic Thin Films. H. Altenbach and S. Kruch (eds.), *Advanced Materials Modelling for Structures*, Advanced Structured Materials, (19) pp. 337-349. Springer-Verlag Berlin Heidelberg.
7. Voyiadjis, G.Z. and **Faghihi, D.**, 2012, Microstructural Characterization of Metals Using Nano-indentation. *Handbook of Micromechanics and Nanomechanics*, pp. 569-606. Pan Stanford Publication Co.
8. Voyiadjis, G.Z., Cai, S., Alshibly, K., **Faghihi, D.**, 2011. Integral Abutment Bridge for Louisiana's Soft and Stiff Soils: Caminda Bay Bridge. *LTRC report*. Louisiana Transportation Research Center, Baton Rouge, LA.

ARTICLES IN  
CONFERENCE  
PROCEEDINGS

1. Prudencio, E. E., Bauman, P. T., Williams, S. V., **Faghihi, D.**, Ravi-Chandar, K., Oden, J. T. (2013). A Dynamic Data Driven Application System for Real-time Monitoring of Stochastic Damage. *Procedia Computer Science*.
2. Voyiadjis, G. Z., **Faghihi, D.**, and Alshibli, K. (2015). Finite Element Analysis of Integral Abutment Bridge Substructure in Louisiana. *94th Transportation Research Board Annual Meeting*.
3. Voyiadjis, G. Z., and **Faghihi, D.** (2012). Microstructure to Macro-Scale Using Gradient Plasticity with Temperature and Rate Dependent Length Scale. *Procedia IUTAM*, 3, 205-227.
4. Voyiadjis, G. Z., and **Faghihi, D.**, (2012). Thermo-Mechanical Responses of Metals on Fast-Transient Process in Small Volume. *Proceedings of the International Congresses on Theoretical and Applied Mechanics (ICTAM)*.
5. Voyiadjis, G. Z., and **Faghihi, D.**, (2012). Coupled Viscoplastic Damage Model and Simulation for Metals and Composites. Plenary lecture in *Proceedings of International conference on Damage Mechanics (ICDM)*.

PRESENTATIONS IN  
CONFERENCES

1. **Faghihi, D.**, Farrell K., and Oden, J.T., Estimation of Error for Coarse-Grained Models of Atomic Systems *13th US National Congress on Computational Mechanics (USNCCM XIII): Symposium: Applications of Error Estimation and Model Adaptation in Computational Mechanics*. July 2015, San Diego, CA.

2. **Faghihi, D.**, Prudencio E.E., Bauman, P.T., Ravi-Chandar, K., and Oden, J.T., Real-Time Monitoring of Stochastic Damage in Composite Materials *American Society of Mechanical Engineering (ASME), International Mechanical Engineering Congress and Exposition (IMECE 2014): Symposium: Damage and Failure of Composites* . November 2014, Montreal, QC, Canada
3. **Faghihi, D.**, Voyiadjis, G.Z., Thermo-Mechanical Responses of Metallic Thin Films on the Fast Transient Process. *American Society of Mechanical Engineering (ASME), International Mechanical Engineering Congress and Exposition (IMECE 2014): Symposium: Modeling and experimental characterization for the behavior of the micro/nanostructured thin films* . November 2014, Montreal, QC, Canada
4. **Faghihi, D.**, Prudencio E.E., Bauman, P.T., Ravi-Chandar, K., and Oden, J.T., A Stochastic Framework for Material Damage Control in Composite Materials, Based on Bayesian Inference and Model Selection *American Society of Civil Engineering (ASCE), Engineering Mechanics Institute Conference (EMI 2014): Computational Methods and Application for Solid and Structural Mechanics* . August 2014, Hamilton, ON, Canada
5. **Faghihi, D.**, Voyiadjis, G.Z., Thermal and Mechanical Modeling of Micro-scale Materials Using Enhanced Continuum Theories. *American Society of Civil Engineering (ASCE), Engineering Mechanics Institute Conference (EMI 2014): Multi-scale Behaviour of Damage and Failure Mechanics*. August 2014, Hamilton, ON, Canada
6. **Faghihi, D.**, Prudencio E.E., Bauman, P.T., Ravi-Chandar, K., and Oden, J.T., Experimental and Computational Characterization of Damage in Composite Materials *American Society of Mechanical Engineering (ASME), International Mechanical Engineering Congress and Exposition (IMECE 2013): Effect of Defects, Damage Tolerance, and Repair of Composites*. November 2013, San Diego, CA.
7. **Faghihi, D.**, Voyiadjis, G.Z., A Gradient-Enhanced Continuum Model for Size and Rate Effects in Thin Metal Film-Substrate Systems. *American Society of Mechanical Engineering (ASME), International Mechanical Engineering Congress and Exposition (IMECE 2013): MEMS and MEMS packaging*. November 2013, San Diego, CA.
8. **Faghihi, D.** and Voyiadjis, G.Z., Thermo Mechanical Responses of Metals in Small Scale and Fast Transient Process. *Society of Engineering Science: 50th Annual Technical Meeting (SES 2013) and ASME-AMD Annual Summer Meeting*, July 2013, Brown University, Providence, RI.
9. **Faghihi, D.**, A Thermo-Mechanical Gradient Theory with Time and Length Scales. *Multiscale Modeling Group : Institute for Computational Engineering and Science (ICES), University of Texas at Austin*. April , 2013, Austin, TX.
10. **Faghihi, D.**, Microstructure to Macro-scale using Enhanced Continuum Theories. *Institute for Computational Engineering and Science (ICES), University of Texas at Austin*. January , 2013, Austin, TX.
11. **Faghihi, D.**, Voyiadjis, G.Z., Coupled Thermo–Mechanical Responses of Metals Crystal Structure using Strain Gradient Plasticity. *American Society of Mechanical Engineering (ASME): International Mechanical Engineering Congress and Exposition (IMECE 2012)*. November 2012, Houston, TX.

12. **Faghihi, D.**, Voyiadjis, G.Z., Multiscale Modeling of the Size and Interface Effects in Thin Metal Film-Substrate Systems in the Fast Transient Process. *American Society of Mechanical Engineering (ASME): International Mechanical Engineering Congress and Exposition (IMECE 2012)*. November 2012, Houston, TX.
13. **Faghihi, D.**, Voyiadjis, G.Z., Thermo – Mechanical Responses of Small Volume Metals on The Fast Transient Process. *Society of Engineering Science: 49th Annual Technical Meeting (SES 2012)*. October 2012, Georgia Tech, Atlanta, GA.
14. **Faghihi, D.**, Voyiadjis, G.Z., Strain Gradient Plasticity with Energetic and Dissipative Length Scales. *2012 Joint Conference of the Engineering Mechanics Institute and 11th ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability (EMI/PMC 2012)*. June 2012, University of Notre Dame, South Bend, IN.

INVITED  
LECTURES,  
SEMINARS, AND  
COLLOQUIA

1. **Faghihi, D.**, Predictive Multiscale Modeling of Materials and Structures. *Department of Civil, Architectural and Environmental Engineering, University of Texas at Austin*. April, 2018, Austin, TX
2. **Faghihi, D.**, Colloquium, Data-enabled Predictive Modeling of Advanced Manufacturing of Materials. *Department of Mechanical and Aerospace Engineering, University at Buffalo*. February, 2018, Buffalo, NY
3. **Faghihi, D.**, Oden, J.T., A Bayesian Framework for Adaptive Model Selection, Validation, and for Prediction in Presence of Uncertainties. *Department of Energy: ASCR Applied Mathematics Principal Investigators Meeting*. September, 2017, Rockville, MD.
4. **Faghihi, D.**, Colloquium, Predictive Computational Material Engineering. *ExxonMobil Research and Engineering Company, Corporate Strategic Research*. July, 2015, Annandale, NJ.
5. **Faghihi, D.**, Colloquium, Predictive Computational Material Modeling: Theories and Applications. *Department of Civil and Environmental Engineering, University of Southern California*. March, 2015, Los Angeles, CA.
6. **Faghihi, D.**, Colloquium, Predictive Computational Material Modeling: Theory, Computation, and Uncertainty Quantification. *Department of Mechanical Engineering, Mississippi State University*. March, 2015, MS.
7. **Faghihi, D.**, Colloquium, Predictive Computational Material Modeling: Theory, Computation, and Uncertainty Quantification. *Department of Civil and Environmental Engineering, Sharif University of Technology*. January, 2015, Tehran, IRAN.
8. **Faghihi, D.**, Colloquium, An Enhanced Continuum Theory for Thermo-Mechanical Responses of Micro-scale Materials. *Department of Civil and Environmental Engineering, Sharif University of Technology*. July, 2014, Tehran, IRAN.
9. **Faghihi, D.**, Colloquium, Micro-structure to Macro-scale using Enhanced Continuum Theories. *Civil Engineering Department, Michigan State University*. April, 2014, East Lansing, MI.

10. **Faghihi, D.**, Colloquium, Generalized Continuum Theories: bridge between micro and macro simulation *Mechanical Engineering Department, California State University, Los Angeles*. April, 2014, Los Angeles, LA.
11. **Faghihi, D.**, Colloquium, Micro-structure to Macro-scale using Enhanced Continuum Theories. *Mechanical Engineering Department, University of Massachusetts Dartmouth*. April, 2014, North Dartmouth, MA.
12. **Faghihi, D.**, Colloquium, Microstructure to Macro-scale using Enhanced Continuum Theories. *Civil Engineering Department, New Mexico State University*. November , 2013, Las Cruces, NM.
13. **Faghihi, D.**, Voyiadjis, G.Z., Thermo–Viscoplastic Deformation of Steel Alloys. *Graduate Student Research Conference, Louisiana Transportation Research Center (LTRC)*. April 2011, Baton Rouge, LA.
14. **Faghihi, D.**, Voyiadjis, G.Z., Characterization of Material Behavior from Microstructure to Macro-scale with Variable Length Scales. Technical topics series, *Department of Civil and Environmental Engineering, Louisiana State University*, January 2011, Baton Rouge, LA.

## AWARDS

- |  |           |
|--|-----------|
| Society of Engineering Science (SES) travel award  | 2013      |
| SES 50th Annual Technical Meeting and ASME Summer Meeting,<br>Brown University, Providence, RI   |           |
| National Science Foundation (NSF) Summer Institute Fellowship  | 2013      |
| U.S. National Science Foundation<br>Summer Institute on Nanomaterials, and Micro/Nanomanufacturing,<br>Northwestern University, Evanston, IL |           |
| Student Awards — Louisiana State University, Graduate School   |           |
| • Doctoral Dissertation Year Fellowship  | 2012–2013 |
| • School of Engineering nominee for Distinguished Dissertation Award   | 2013      |
| • Graduate School Enhancement Award  | 2008–2012 |

## CONTRACTS AND GRANTS

- **Data-Enabled Multiscale Modeling of Nanopatterning of Copolymer Materials**  
**D. Faghihi(PI)**, J. T. Oden (CoPI), and G. Willson(CoPI)  
Submitted to: *National Science Foundation (CDS&E)*
- White Paper: **Selection and Validation of Predictive Multiscale Models: Application to Tumor Growth**  
J. T. Oden (PI) and **D. Faghihi(CoPI)**  
Submitted to: *Department of Energy (DOE), Advanced Scientific Computing Research (ASCR)*
- White Paper: **Adaptive Modeling of Stochastic Multiscale Material Systems: Bayesian Machine Learning to Accelerate Monte Carlo Methods**  
J. T. Oden (PI) and **D. Faghihi(CoPI)**  
Submitted to: *Department of Energy (DOE), Advanced Scientific Computing Research (ASCR)*



- **Development of Stochastic Multiscale Design Framework for Manufacturing of Metal-Based Microsystems**  
**D. Faghihi(PI)**  
 Submitted to: *Air Force Fiscal Year 2017 Young Investigator Research Program*
- **Analytical Tool for Design and Repair of Engine Hardware for Robust High Cycle Fatigue Performance**  
 Technical Data Analysis, Inc. (PI), **D. Faghihi (consultant)**  
 Sponsor: *Office of Naval Research – SBIR*  
 Award Amount: \$79,948.00
- **Predictive Multiscale Modeling of Copolymer Materials for Design of Nanomanufacturing Process**  
 J. T. Oden (PI), G. Willson(PI), and **D. Faghihi(CoPI)**  
 Submitted to: *National Science Foundation (CDS&E)*
- **White Paper: A Stochastic Dynamic Data Driven System for Treating Cancer.**  
**D. Faghihi (PI)**, J. T. Oden (CoPI), T. Yankeelov (CoPI)  
 Submitted to: *Dynamic Data Driven Applications Systems Department of Defense –Air Force Office of Scientific Research*

PROFESSIONAL  
SERVICE  
ACTIVITIES

- **Symposium Co-organizer** 2014
  - ASME 2014 International Mechanical Engineering Congress & Exposition  
 Area: Materials – Genetics to Structures  
 Symposium: *Modeling and experimental characterization for the behavior of the micro/nanostructured thin films*
  - ASME 2014 International Mechanical Engineering Congress & Exposition  
 Symposium: *Damage and failure of composites*
- **Technical Committee Member** 2014-present
  - Committee on Computing in Applied Mechanics - *ASME*
  - Nanomechanics And Micromechanics Committee - *ASCE/Engineering Mechanics Institute (EMI)*
  - Modeling Inelasticity and Multiscale Behavior Committee - *ASCE/Engineering Mechanics Institute (EMI)*
- **Professional Peer Referee** 2013-present
  - International Journal of Plasticity (Elsevier)
  - International Journal of Mechanical Sciences (Elsevier)
  - International Journal of Materials & Design (Elsevier)
  - Journal of Nanomechanics and Micromechanics (ASCE)
  - Journal of Engineering Mechanics (ASCE)
  - Journal of Computer Methods in Applied Mechanics and Engineering (Elsevier)
  - International Journal of Fracture (Springer)
  - Robotics and Computer-Integrated Manufacturing (Elsevier)
  - Materials Science and Engineering A (Elsevier)
  - International Journal of Experimental and Computational Biomechanics
  - International Mechanical Engineering Congress & Exposition (ASME/IMECE)

## REFERENCES

**Professor J. Tinsley Oden**

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Last Update: June 30, 2018