# Curriculum Vitae

**GARY DON SEIDEL**, PH.D.

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## PERSONAL

Date/Place of Birth: October 8th, 1975 in Houston, TX
Citizenship: United States of America
Additional Information: Married, No Children

## EDUCATION

**Doctor of Philosophy**, Aerospace Engineering (4.0/4.0) (2002-2007)
Texas A&M University, College Station, TX
Thesis Topic: *Micromechanics Modeling of the Multifunctional Nature of Carbon Nanotube-Polymer Nanocomposites*
Thesis Chair: Dr. Dimitris C. Lagoudas
Thesis Committee: Drs. J.N. Reddy, John Slattery, and James Boyd
Recipient, Sandia National Laboratories/Texas A&M University Doctoral Fellowship in Engineering

**Master of Science**, Aerospace Engineering (3.5/4.0) (1999-2002)
Texas A&M University, College Station, TX
Thesis Topic: *A Model for Predicting the Evolution of Damage in the Plastic Bonded Explosive LX17*
Thesis Chair: Dr. David H. Allen
Thesis Committee: Drs. Dimitris C. Lagoudas and J.N. Reddy

**Bachelor of Science**, Aerospace Engineering (3.75/4.0) (1994-1999)
Texas A&M University, College Station, TX
Magna Cum Laude

**Diploma**, St. Thomas High School, Houston, TX (3.96/4.0) (1990-1994)
Graduated top 3% of the Class of 1994

## RESEARCH INTERESTS

- Micromechanics Analysis of Nanocomposites
- Fracture Mechanics using Cohesive Zone Models
- Bridging Atomistic and Continuum Length and Time Scales in Nanocomposites
- Multi-scale Modeling of Multifunctional Composites and Biomaterials
- Micromechanics of Materials with Time-Varying Effective Properties

## PROFESSIONAL EXPERIENCE

- **Postdoctoral Research Associate** (2007-Present)
  Texas Institute of Intelligent Bio-Nano Materials and Structures for Aerospace Vehicles (TiiMS), Aerospace Engineering Department, Texas A&M University
  - Generated journal publications based on dissertation work.
  - Assisted in the recruitment and supervision of undergraduate students.
  - Actively engaged in preparing proposals for REU and RET supplements.
  - Actively engaged in preparing proposal for industry funding.
- **Graduate Assistant Research** (2002-2007)
  Aerospace Engineering Department, Texas A&M University
  - Investigated the role of micromechanics in multiscale modeling of nanocomposites.
  - Participated in collaborative efforts with researchers at Sandia National Laboratories, NASA Langley Research Center, and the National Institute of Aerospace.
  - Assisted in the supervision of undergraduate students.
  - Contributed to writing of two funded proposals.
- **Graduate Assistant Research** (1999-2002)
  Aerospace Engineering Department, Texas A&M University
  - Investigated the role of cohesive zone modeling of damage evolution and fracture in particulate composites.
  - Assisted in the supervision of undergraduate students.
- **Graduate Student Intern** (Summer 2000)
  Engineering Sciences Summer Institute, Sandia National Laboratories, Livermore, CA
  - Contributed to the investigation of the role of cohesive zone modeling of chemical aging in rubber o-rings for lifetime predictions.
  - Manager: Dr. Jim Handrock; Supervisor: Dr. Vera Revelli
- **Student Intern** (Summer 1999)
  Science and Technology Outreach Program, Sandia National Laboratories, Albuquerque, NM
  - Contributed to the investigation of the role of cohesive zone modeling in predicting the evolution of damage and permeability in rock salt.
  - Manager: Dr. Joe Tillerson & Dr. John Holmes; Supervisor: Mrs. L. Diane Hurtado
- **Undergraduate Student Research Assistant** (1997-1999)
  Aerospace Engineering Department, Texas A&M University
  - Assisted graduate students through the programming of subroutines in support of the group's efforts towards modeling of particulate composites.
  - Graduate Student Supervisor: Dr. Kayleen Helms

## PUBLICATIONS

### Refereed Journal Publications

1. G.D. Seidel and D.C. Lagoudas. 2008. A micromechanics model for the electrical conductivity of nanotube-polymer nanocomposites. Journal of Composite Materials, In Press.
2. G.D. Seidel and D.C. Lagoudas. 2008. A micromechanics model for the thermal conductivity of nanotube-polymer nanocomposites. Journal of Applied Mechanics, In Press.
3. D. C. Hammerand, G. D. Seidel and D. C. Lagoudas. 2007. Computational micromechanics analysis of the effective elastic properties of carbon nanotube reinforced composites. Mechanics of Advanced Materials and Structures 14 277–294.
4. G.D. Seidel and D.C. Lagoudas. 2006. Micromechanical analysis of the effective elastic properties of carbon nanotube reinforced composites. Mechanics of Materials 38 884-907.
5. Y.-R. Kim, D.H. Allen, and G.D. Seidel. 2006. Damage-Induced modeling of elastic-viscoelastic randomly oriented particulate composites. ASME Journal of Engineering Materials and Technology 128 18-27.
6. G.D. Seidel, D.H. Allen, K.L.E. Helms, and S.E. Groves. 2005. A model for predicting the evolution of damage in viscoelastic particle-reinforced composites. Mechanics of Materials 37 163-178

### Journal Manuscripts Under Review/In Preparation

1. G.D. Seidel, S. Banda, Z. Ounaies, and D.C. Lagoudas. Characterization and modeling of aligned single-wall carbon nanotube polymer nanocomposites, To be submitted to Applied Physics Letters.
2. A. Benzerga, G.D. Seidel, and D.C. Lagoudas. Size effects in the dislocation structure stored energy of nanocomposites. To be submitted to Scripta Materialia.
3. G.D. Seidel, S.J.V. Frankland, J. Riddick, T.S. Gates, and D.C. Lagoudas. Multi-scale modeling of carbon nanotube/carbon fiber/epoxy lamina. In Preparation.
4. D.C. Lagoudas and G.D. Seidel. Modeling of effective mechanical, thermal and electrical properties of multifunctional nanocomposites. In Preparation.

### Papers in Conference Proceedings

1. G.D. Seidel and D.C. Lagoudas, “Micromechanics Modeling of Polymer Nanocomposites for use as Multifunctional Materials”, Proceedings Paper for the 49th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Schaumburg, Illinois, 7-10 April, 2008. (AIAA 2008-1947)
2. G.D. Seidel, Y. Bisrat, and D.C. Lagoudas, “Electrical and Thermal Conductivities of Carbon Nanotube-Epoxy Composites: Modeling and Characterization”, Proceedings Paper for IMECE2007: 2007 ASME International Mechanical Engineering Congress and Exposition, Seattle, Washington, 11-15 November, 2007. (IMECE2007-42339)
3. D.C. Lagoudas and G.D. Seidel, “Micromechanics Modeling of the Multi-Functional Nature of Carbon Nanotube-Epoxy Nanocomposites: Effective Elastic Thermal and Electrical Properties”, Proceedings Paper for COMP07: 6th International Symposium on Advanced Composites, Corfu, Greece, 16-18 May, 2007. (COMP2007-021)

4. G.D. Seidel and D.C. Lagoudas, "Micromechanics Aspects of Multi-scale Modeling of Multi-functional Nanocomposites: Effective Thermal Conductivity", Proceedings Paper for the 48th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Honolulu, Hawaii, 23-26 April, 2007. (AIAA 2007-2172)
5. G.D. Seidel, D.C. Lagoudas, S.J.V. Frankland, and T.S. Gates, "Micromechanics modeling of functionally graded interphase regions in carbon nanotube-polymer composites", Proceedings Paper for the 47th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Newport, Rhode Island, 1-4 May, 2006. (AIAA 2006-1678)
6. G. D. Seidel, D.C. Lagoudas, S.J.V. Frankland, and T.S. Gates, "Modeling functionally graded interphase regions in carbon nanotube reinforced composites", Proceedings Paper for the 20th American Society for Composites Technical Conference, Drexel University, Philadelphia, PA, 7-9 September, 2005.
7. D. Lagoudas and G. Seidel, "Effective Elastic Properties of Carbon Nanotubes and Carbon Nanotube Reinforced Composites," AIAA Paper 2004-1782, 45th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics & Materials Conference, Palm Springs, CA, April 19-22, 2004.
8. D.C. Lagoudas and G. D. Seidel, 2003, "A Micromechanical Study on the Clustering Effect of Carbon Nanotube Reinforced Composites," ASME International Mechanical Engineering Congress, Washington, D.C., Nov. 16-22, 2003.

## PRESENTATIONS

### Professional Conferences

1. "Micromechanics Modeling of Polymer Nanocomposites for use as Multifunctional Materials", G.D. Seidel and D.C. Lagoudas, 49th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Schaumburg, Illinois, 7-10 April, 2008. (Presented by D.C. Lagoudas) (AIAA 2008-1947)
2. "Electrical and Thermal Conductivities of Carbon Nanotube-Epoxy Composites: Modeling and Characterization", G.D. Seidel, Y. Bisrat, and D.C. Lagoudas, Advanced Composites and Nanostructured Materials Session 1-3-4 of the 2007 ASME International Mechanical Engineering Congress and Exposition, Seattle, Washington, 11-15 November, 2007. (IMECE2007-42339)
3. "Micromechanics Modeling of Electrical and Thermal Conductivities of Carbon Nanotube-Epoxy Composites", G.D. Seidel and D.C. Lagoudas, Active Nanocomposites Session of the 43rd Technical Meeting of the Society of Engineering Science, College Station, Texas, 22-24 October, 2007.
4. "Micromechanics Modeling of Thermal Conductivities of Carbon Nanotube-Epoxy Nanocomposites: Influence of Thermal Resistance and Functionalizations", G.D. Seidel and D.C. Lagoudas, Multi-Scale Modeling and Characterization of Nanostructured Polymer Composites Session of the 43rd Technical Meeting of the Society of Engineering Science, College Station, Texas, 22-24 October, 2007.
5. "Micromechanical Analysis of Interphase Effects on the Multi-functional Nature of Carbon Nanotube Composites", G.D. Seidel and D.C. Lagoudas, Keynote Address for Session 19-3-1 Active Nanocomposites I: Modeling of Carbon-Nanotube Based Composites at McMat 2007: ASME Applied Mechanics and Materials Conference, Austin, Texas, 3-7 June, 2007. (Presented by D.C. Lagoudas) (MCMAT2007-30503)

6. "Micromechanics Modeling of the Multi-Functional Nature of Carbon Nanotube-Epoxy Nanocomposites: Effective Elastic Thermal and Electrical Properties", D.C. Lagoudas and G.D. Seidel, COMP07: 6th International Symposium on Advanced Composites, Corfu, Greece, 16-18 May, 2007. (COMP2007-021)
7. "Micromechanics Aspects of Multi-scale Modeling of Multi-functional Nanocomposites: Effective Thermal Conductivity", G.D. Seidel and D.C. Lagoudas, 48th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Honolulu, Hawaii, 23-26 April, 2007. (Presented by D.C. Lagoudas) (AIAA 2007-2172)
8. "Micromechanical Characterization and Analysis of the Elastic Behavior of Carbon Nanotube Composites", D.C. Lagoudas, G.D. Seidel, and P.R. Thakre, ASME International Mechanical Engineering Congress and Exposition (IMECE06), November 5th-10th, 2006, Chicago, Illinois. (Presented by D.C. Lagoudas)
9. "Micromechanical Analysis of Interphase and Interface Effects on Load Transfer in Carbon Nanotube Composites", G.D. Seidel, D.C. Lagoudas, The 43rd Annual Technical Meeting of the Society of Engineering Science, State College, Pennsylvania, August 13-16, 2006.
10. "Micromechanics modeling of functionally graded interphase regions in carbon nanotube-polymer composites", G.D. Seidel, D.C. Lagoudas, S.J.V. Frankland, and T.S. Gates, 47th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Newport, Rhode Island, 1-4 May, 2006. (AIAA 2006-1678)
11. "Modeling the Effects of Clustering and Gradient Interphase Regions on the Effective Elastic Properties of Carbon Nanotube Reinforced Epoxy Composites", D.C. Lagoudas and G.D. Seidel, The 2005 ASME International Mechanical Engineering Congress and Exposition, Orlando, Florida, November 5-11, 2005.
12. "Modeling functionally graded interphase regions in carbon nanotube reinforced composites", G. D. Seidel, D.C. Lagoudas, S.J.V. Frankland, and T.S. Gates, 20th American Society for Composites Technical Conference, Drexel University, September, 2005.
13. "Micromechanical analysis of clustering and load transfer in carbon nanotube composites" G.D. Seidel , D.C. Lagoudas and D.C. Hammerand. ASME/ASCE/SES Conference, June 2005, Baton Rouge, Louisiana.
14. "Finite element micromechanical analysis of clustering and load transfer in carbon nanotube composites" D.C. Hammerand, G.D. Seidel and D.C. Lagoudas. National Congress on Computational Mechanics, June 2005, Austin, Texas. (Presented by D.C. Hammerand)
15. "Micromechanical Analysis of Clustering and Load Transfer in Carbon Nanotube Composites" D.C. Lagoudas, G.D. Seidel, and D.C. Hammerand. 41st Annual Technical Meeting of the Society of Engineering Science, October 10-13, 2004, Lincoln, Nebraska (Presented by D.C. Lagoudas)
16. "Micromechanical Analysis of Clustering and Load Transfer in Carbon Nanotube Composites" G.D. Seidel, D.C. Lagoudas, and D.C. Hammerand. Graduate Student Session of the 41st Annual Technical Meeting of the Society of Engineering Science, October 10-13, 2004, Lincoln, Nebraska.
17. "Effective Elastic Properties of Carbon Nanotube Reinforced Composites" D. Lagoudas and G. Seidel. 45th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics &

Materials Conference, Palm Springs, CA, April 19-22, 2004. (Presented by D.C. Lagoudas)

18. "A Micromechanical Study on the Clustering Effect of Carbon Nanotube Reinforced Composites," D.C. Lagoudas and G. D. Seidel. ASME Winter Conference, Washington, D.C., Nov. 16-22, 2003.
19. "A Model for Predicting the Evolution of Damage in Viscoelastic Particle Reinforced Compsoites" G.D. Seidel, D.H. Allen, and S.E. Groves. ASME Winter Conference, Washington, D.C., Nov. 16-22, 2003. (Presented by D.H. Allen)
20. "Raman Spectroscopy approach to mechanics of single wall carbon nanotubes composites," V. Hadjiev, D. Lagoudas, D. Davis, G. Seidel, ASME Summer Meetings, Scottsdale, AZ, June 17-20, 2003 (Presented by V. Hadjiev)
21. "Elastic Properties of Single Wall Carbon Nanotubes: Transitioning Atomic to Continuum Scales" E.-S. Oh, A.P. Awasthi, G.D. Seidel, D.C. Lagoudas, and J.C. Slattery. ICCES '03 Corfu, Greece, July 24-29, 2003 (Presented by D.C. Lagoudas).

**Student Conferences and Poster Sessions**

1. "Multiscale Modeling of Carbon Nanotube Sprayed Carbon Fiber Composites via Micromechanics", G.D. Seidel an D.C. Lagoudas, Nanohour at the Beckman Institute, University of Illinois Urbana-Champaign, October 18th, 2006.
2. "Multiscale Modeling of Carbon Nanotube Sprayed Carbon Fiber Composites via Micromechanics", Student Research Week – Texas A&M University, March 28, 2006, College Station, Texas. (1st Place in Session)
3. "Micromechanical Analysis of Clustering and Load Transfer in Carbon Nanotube Composites" G.D. Seidel. Poster Session at 3rd Annual TiiMS-URETI Review Meeting, August 2-3, 2005, College Station, Texas. (3rd Place Poster in Division)
4. "Modeling the Effects of Clustering and Gradient Interphase Regions on the Effective Elastic Properties of Carbon Nanotube Reinforced Epoxy Composites" Student Research Week – Texas A&M University, March 29, 2005, College Station, Texas. (1st Place in Session)
5. "Modeling of carbon nanotube composites" G. Seidel and D. Lagoudas. Poster Session at NASA URETI Workshop, October 13-15, 2004, College Park, Maryland.
6. "Micromechanical Analysis of the Effective Elastic Properties of Carbon Nanotube Reinforced Composites" G.D. Seidel and S. Vaitkunas. Poster Session at 2nd Annual TiiMS-URETI Review Meeting, July 28-29, 2004, Houston, Texas. (Honorable Mention)
7. "Micromechanics of Carbon Nanotube-Reinforced Composites" G.D. Seidel. Student Research Week – Texas A&M University, March 30, 2004, College Station, Texas. (2nd Place in Session)
8. "Modeling of Carbon Nanotube Composites", G.D. Seidel, E.-S. Oh, A.P. Awasthi, and D.C. Lagoudas, Student Poster Session at 1st Annual TiiMS-URETI Review Meeting, July 14-15, 2003, Houston, Texas. (1st Place Poster)
9. "A Model for the Predicting of the Evolution of Damage in Particle-Reinforced Composites" G.D. Seidel. Student Research Week – Texas A&M University, March 24, 2003, College Station, Texas.

**Informal Presentations**

1. "Effective Elastic Properties of Carbon Nanotubes and Nanocomposites" While visiting Sandia National Laboratories, August 22, 2004.
2. "Effective Elastic Properties of Caron Nanotubes and Carbon Nanotube Reinforced Composites" D.C. Lagoudas, E-S Oh, G.D. Seidel, A. Awasthi, Y. Bisrat, and C-G Chao. While visiting NASA Langley, July, 2004. (Presented by D.C. Lagoudas)

## TEACHING INTERESTS

- Mechanics of Materials & Strength of Materials
- Continuum Mechanics
- Micromechanics Analysis of Composites & Fracture Mechanics Models
- Introduction to Finite Element Analysis & Nonlinear Finite Elements
- Viscoelasticity

## TEACHING EXPERIENCE

**Lecturer – Undergraduate Courses**

- AERO 214: Aerospace Engineering Principles of Continuum Mechanics (Fall 2007)
  - Fully responsible for all aspects of course development and instruction.
  - Course Data: Enrollment 37; 75min Lecture 2x per week; 75min Recitation 1 per week

**Teaching Assistant – Undergraduate Courses**

- ENGR 214: Conservation Principles for Continuous Media (6 Semesters, 1999-2002)
  - Prepared and conducted recitation lectures and conducted exam review sessions.
  - Generated homework assignments, quizzes, and their solutions.
  - Evaluated student performance on quizzes and homework assignments.
  - Assisted in team project design and administration.
  - Engaged students in one-on-one/small group discussions of course material, homework and projects in office hours.
  - Organized students into teams for in-class team exercises and team project.
  - Supervised assigned homework grader.
  - Assisted five different teachers of record: Drs. Dimitris Lagoudas, David Allen, Walter Haisler, John Whitcomb, and Kayleen Helms.
  - Course Data: Average enrollment 77 (Mixture of Engineering Disciplines); 2hr Lecture 2x per week

**Teaching Assistant – Graduate Courses**

- AERO 603\MEMA 602: Continuum Mechanics (Fall 2003)
  - Generated homework assignments and their solutions.
  - Evaluated student performance on homework assignments.
  - Assisted Dr. Dimitris Lagoudas on a volunteer basis.
  - Course Data: 32 Students; 1hr 15min Lecture 2x per week.
- MEMA 625: Micromechanics (Spring 2005)
  - Generated homework assignments and their solutions.
  - Evaluated student performance on homework assignments.
  - Began process of compiling lecture notes into electronic format.
  - Assisted Dr. Dimitris Lagoudas on a volunteer basis.
  - Course Data: 7 Students; 1hr 15min Lecture 2x per week.

## JOURNAL REVIEWS

1. Philosophical Magazine (2)
2. Journal of Intelligent Material Systems and Structures (2)

## HONORS AND AWARDS

### Graduate Awards

- Sandia National Laboratories/Texas A&M University Doctoral Fellowship in Engineering (2002-2006)
- Texas A&M Association of Former Students Distinguished Graduate Student Award for Excellence in Doctoral Research, 2007-2008
- Texas A&M University Regents Fellowship (1999-2000)
- Elected to Membership in: Phi Kappa Phi
- 1st Place, Student Research Week, Texas A&M University, 2006
- 1st Place, Student Research Week, Texas A&M University, 2005
- 2nd Place, Student Research Week, Texas A&M University, 2004
- 3rd Place, Student Poster Session, 3rd Annual TiiMS-URETI Review Meeting, 2005
- Honorable Mention, Student Poster Session, 2nd Annual TiiMS-URETI Review Meeting, 2004
- 1st Place, Student Poster Session, 1st Annual TiiMS-URETI Review Meeting, 2003
- Selected for Engineering Sciences Summer Institute, Sandia National Laboratories, 2000

### Undergraduate Awards

- Graduated Magna Cum Laude
- Selected for Science and Technology Outreach Program, Sandia National Laboratories, 1999
- Harrison Study Abroad Scholarship, 1998
- France ’98 Study Abroad Scholarship, 1998
- TEES Summer Research Fellowship, 1997
- Aggie Spirit Scholarship, 1999
- Weingarten Reality Scholarship, 1999
- Greater Heights Chamber of Commerce Scholarship, 1994
- Elected to Membership in: Tau Beta Pi, Sigma Gamma Tau, Golden Key National Honor Society
- 1st Place, Bovay Ethics Essay Award, 1998

## LEADERSHIP POSITIONS

- President: Tau Beta Pi, Texas Delta Chapter, Texas A&M University, (2 Terms, 1998, 1999)
- Vice President/Webmaster: Nanotechnology and Nanoscience Student Association (NaNSA), Texas A&M University (2006)
- Speaker Chair: Student Chapter of AIAA, Texas A&M University, (1997)
- Rituals Committee Chair: 1998 Tau Beta Pi National Conference, Manhattan, Kansas
- Counselor: Fish Camp ’95, Texas A&M University
- Tour Coordinator: MSC Hospitality, Texas A&M University, (1995-1997)
- Organizer: Hotard Hall Haunted House (1996)
- Hotard Hall Council (1994)

**GRADUATE COURSES**

- Advanced Materials Science and Engineering (Dr. Don Naugle)
- Applied Polymer Science (Dr. Roger Morgan)
- Calculus of Variations (Dr. William Perry)
- Chemistry of Materials (Drs. Abraham Clearfield and Raymond Schaak)
- Continuum Mechanics (Dr. David Allen)
- Fundamentals of Engineering Fracture Mechanics (Dr. Vikram Kinra)
- Introduction to the Finite Element Method (Dr. J.N. Reddy)
- Mathematical Foundations of Continuum Mechanics (Dr. Jay Walton)
- Mechanics of Active Materials (Dr. Dimitris Lagoudas)
- Micromechanics (Dr. Dimitris Lagoudas)
- Nanomechanics (Dr. Amine Benzerga)
- Nonlinear Finite Element Methods in Structural Mechanics (Dr. J.N. Reddy)
- Plasticity Theory (Dr. Dimitris Lagoudas)
- Spacecraft Dynamics and Control (Dr. John Hurtado)
- Theory of Elasticity (Dr. J.N. Reddy)
- Viscoelasticity of Solids and Structures I (Dr. David Allen)

**SELECTED CLASS PROJECTS AND STUDENT RESEARCH**

- *Dislocation Dynamics Size Effects in the Stored Energy of Nanocomposites,* Class Project in Nanomechanics, Texas A&M University, Fall 2004.
- *A study of the effects of clustering on the effective elastic properties of composites with aligned fibers*, Class Project in Micromechanics (w/ Jongil Lim and Tom Lowery), Texas A&M University, Spring 2003.
- *Application of Active Materials in the Development of a Robotic Clamp-Hand*, Class Project in Mechanics of Active Materials, Texas A&M University, Spring 2000.
- *Aging Studies and Lifetime Prediction of Weapon O-Rings*, Summer Research Project, Sandia National Laboratories, Summer 2000.
- *A Micromechanical Model for Predicting the Evolution of Damage and Permeability in Rock Salt*, Summer Research Project (w/ Jay Foulk III), Sandia National Laboratories, Summer 1999.

**PROFESSIONAL SERVICE**

- Session Co-Chair, Session I of the Multiscale Modeling of Engineering Materials Symposium at the 43rd Technical Meeting of the Society of Engineering Science
- Co-organizer for student poster competition for Nano Summit 2007 held at Texas A&M University, August 7-8, 2007.
- Judge for Student Research Week 2008 held at Texas A&M University, March 25, 2008.
- Judge for Student Research Week 2006 held at Texas A&M University, March 28, 2006.
- Judge for Student Research Week 2005 held at Texas A&M University, March 29, 2005.

**PROFESSIONAL SOCIETIES**

- American Institute of Aeronautics and Astronautics (AIAA)
- American Society of Mechanical Engineers (ASME)
- Society of Engineering Science (SES)
- American Society for Engineering Education (ASEE)
- Society for Natural Philosophy (SNP)

## SELECTED PROGRAMS AND SUBROUTINES

- 2D Finite Element Code for Elastic Particles with Viscoelastic Cohesive Zones and Damage Evolution
- N-Layer Generalized Self-Consistent Composite Cylinders Code with Graded Interphase Regions
- Supplemental Codes: Voronoi Tessellation Code, Random Orientation Micromechanics Code, Contour Plotter Code, Mohr's Circle Code

## COMPUTER SKILLS

**Operating Systems:** Windows, Unix, MAC, DOS
**Languages:** FORTRAN, Maple, HTML
**Scientific Computing:** Maple, MathCAD, LabView, AutoCAD
**FEM Software:** ABAQUS, FEMap, PATRAN, JAS3D (Sandia)
**Software:** MS Office, LaTex

## LANGUAGE SKILLS

English (Native), Spanish (Proficient), Some French

## HOBBIES AND INTERESTS

- Love to travel, especially in France, or to go skiing
- Certifiable college football fan
- Enjoy training for and participating in 5K races
- Enjoy reading about astronomy and cosmology
- Enjoy reading about art and visiting museums
- Big fan of historical and science fiction strategy games
- Amateur percussionist, expert noise maker
- "Technical Support Staff" for the Academy of Music Performance

## REFERENCES

- **Dr. Dimitris C. Lagoudas**
  John and Bea Slattery Chair of Aerospace Engineering
  Director, Texas Institute for Intelligent
  Bio-Nano Materials and Structures for Aerospace Vehicles
  Department of Aerospace Engineering
  Texas A&M University
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  Email: d-lagoudas@tamu.edu
- **Dr. David H. Allen**
  Dean, College of Engineering and Technology
  University of Nebraska-Lincoln
  114 Othmer Hall
  820 North 16th St.
  Lincoln, NE 68588-0642
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  Email: dhallen@unl.edu
- **Dr.Walter Haisler**
  Professor and Director of Graduate Programs
  Department of Aerospace Engineering
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