

People

Faculty

Emeritus Faculty

Part-Time Lecturer

Post-Doctoral Fellows

Staff

Faculty

**Luis Dorfmann**

Associate Professor, Department of Civil and Environmental Engineering  
Adjunct Associate Professor, Department of Biomedical Engineering

**Education**

Ph.D., 1992, Structural Mechanics, University of California, Los Angeles  
M.Sc., 1989, Structural Mechanics, University of California, Los Angeles  
Laurea, 1987, Structural Engineering, University of Padova, Italy

**Registrations**

Registered Professional Engineer, CA, License Number: 60775

**Teaching**

- Strength of Materials
- Mechanical Behavior of Materials
- Biomechanics of Soft Tissue
- Nonlinear Finite Element Methods

**Research Interests**

- Nonlinear Magneto-and Electroelastic Deformations
- Mechanics of Rubberlike Solids
- Fiber-Reinforced Composites
- Mechanics of Biological Tissues
- Mechanics of Biocompatible Materials

Visit the [Mechanics of Soft Materials Laboratory](#) web site to learn more about Professor Dorfmann's research.

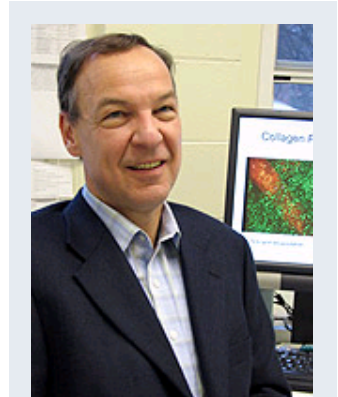
**Selected Publications**

- Dorfmann A., Trimmer B.A., Woods W.A.: Muscle Performance in a Soft-Bodied Terrestrial Crawler: Constitutive Modeling of Strain-Rate Dependency, *Journal of Royal Society Interface* **5** (2008), 349-362.
- Dorfmann A., Trimmer B.A., Woods W.A.: A Constitutive Model for Muscle Properties in a Soft Bodied Arthropod, *Journal of Royal Society Interface* **4** (2007), 257-269.
- Dorfmann A., Haughton D.M.: Stability and Bifurcation of Compressed Elastic Cylindrical Tubes, *International Journal of Engineering Science* **44** (2006), 1353-1365.
- Bustamante R., Dorfmann A.: Ogden R.W., Universal Relations in Isotropic Nonlinear Magnetoelasticity, *The Quarterly Journal of Mechanics and Applied Mathematics* **59** (2006), 435-450.
- Dorfmann A., Ogden R.W.: Nonlinear Electroelasticity, *Acta Mechanica* **174** (2005), 167-183.
- Dorfmann A., Ogden R.W.: Nonlinear Magnetoelastic Deformations, *The Quarterly Journal of Mechanics and Applied Mathematics* **57** (2004), 599-622.
- Dorfmann A., Ogden R.W.: A Constitutive Model for the Mullins Effect with Permanent Set in Particle-Reinforced Rubber, *International Journal of Solids and Structures* **41** (2004), 1855-1878.
- Drozdov A.D., Dorfmann A.: A Micromechanical Model for the Response of Filled Elastomers at Finite Strains, *International Journal of Plasticity* **19** (2003), 1037-1067.

**Selected Professional Activities**

- Organizer and Co-Chair with Prof. Ray W. Ogden: *Nonlinear Electroelastic and Magnetoelastic Deformations*, 7th EUROMECH Solid Mechanics Conference (ESMC2009), Lisbon, Portugal, September 7-11, 2009.

- Organizer and Co-Chair with Prof. Ray W. Ogden: *Nonlinear Electroelastic and Magnetoelastic Deformations*, 7<sup>th</sup>



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EUROMECH Solid Mechanics Conference (ESMC2009), Lisbon, Portugal, September 7-11, 2009.

- Organizer and Co-Chair with Prof. Ray W. Ogden: *Electro-and Magneto-Mechanical Interactions in Solids*, 3<sup>rd</sup> Canadian Conference on Nonlinear Solid Mechanics (CanCNSM), Toronto, Canada, June 18-22, 2008.
- Organizer and Co-Chair with Prof. Ray W. Ogden and Prof. Alan Wineman: *New Directions in Large Deformation Solid Mechanics*, 44<sup>th</sup> Annual Meeting of the Society of Engineering Science, Texas A&M University, College Station, Texas, October 21-24, 2007.
- Organizer: Workshop on *Physical Aspects of Multiscale Modeling*. Bled, Slovenia, September 2004.
- Organizer and Co-Chair with Prof. Aleksey D. Drozdov: Advanced Course on *Mechanics of Solid Polymers: The Kinetics of Irreversible Processes*. International Center for Mechanical Sciences (CISM), Udine, Italy, 2003.
- Organizer and Co-Chair with Prof. Aleksey D. Drozdov and Prof. Ray W. Ogden: Workshop: *Inelasticity and Viscoelasticity of Rubber: From Theory to Application*, Vienna 2002.
- Organizer and Co-Chair with Prof. Aleksey D. Drozdov and Prof. Ray W. Ogden: EUROMECH Colloquium 438: *Constitutive Equations for Polymer Microcomposites: On the Border of Mechanics and Chemistry*, Vienna 2002.
- Organizer and Co-Chair with Dr. Alan Muhr: *European Conference on Constitutive Models for Rubber*, ECCMR, Vienna, 1999.

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