



## Curriculum Vitae

**Walter E. Voit, Ph.D.**  
McDermott Faculty  
Department of Materials Science and Engineering  
Department of Mechanical Engineering

University of Texas at Dallas  
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### Professional Preparation:

- 2006 - 2009     *(PhD) The Georgia Institute of Technology, Atlanta, GA*  
Presidential Fellow, TI:GER fellow, PhD In Materials Science & Engineering  
Advanced Materials Lab  
Advisor: Ken Gall - "Low Cost Optimizations and Enhanced Mechanical Properties of  
Shape Memory Polymers"
- 2005 - 2006     *(MS) The University of Texas at Dallas, Richardson, TX*  
Erik Jonsson Fellow; M.S. in Intelligent Systems; Advisor: I. Hal Sudborough -  
"Pipeline: A software tool to improve the pancake problem upper bound"
- 2001 - 2005     *(BS) The University of Texas at Dallas, Richardson, TX*  
Eugene McDermott Scholar; B.S. with Latin and CV honors; major - computer science,  
minor - mathematics; GPA: 3.85; selected as commencement speaker;
- 1997 - 2001     *Wando High School, Mt. Pleasant, SC*  
High School Valedictorian

### Appointments:

- Oct. 2012 -   2nd Vice President, Council on Ionizing Radiation Measurements and Standards  
(CIRMS)
- Aug. 2012 -   *Senior Design Faculty Sponsor, Mechanical Engineering Dept.*
- Aug. 2012 -   *Member, UT System Technology Assessment Committee*
- July 2012 -   *Member, UT System Horizon Fund Faculty Education Committee*
- June 2012 -   *Symposium Chair, TMS 2013, "2013 and Beyond: Flexible Electronics"*
- May 2012 -   *Advanced Materials Strand Leader, International Meeting on Radiation Processing*  
2013, Shanghai, China
- Feb. 2012 -   *Associate Site Director, NSF IUCRC Center for Energy Harvesting Materials and*  
Systems (CEHMS)
- Nov. 2011 -   *Mechanical Thrust Leader, CEHMS*
- Aug. 2011 -   *Member, DFW Biomaterials Interest Group*
- Oct. 2011 -   *Science and Technology Chair, Council of Ionizing Radiation Measurements and*  
Standards (CIRMS)
- Oct. 2010 -   *Treasurer, CIRMS*
- June 2010 -   *Assistant Professor, Department of Materials Science & Engineering, Department of*  
Mechanical Engineering, University of Texas at Dallas, Richardson, TX

**Professional Recognition and Honors:**

- 2012 - *UTD Honors Faculty Member*
- 2011 - *Faculty Inductee, Phi Kappa Phi*
- 2011 - *Expert, International Atomic Energy Agency*
- 2010 - *McDermott Faculty, University of Texas at Dallas*
- 2008 - *Member, Materials Research Society (MRS)*
- 2008 - *Member, TMS*
- 2007 - *Chief Technology Officer, Syzygy Memory Plastics*
- 2007 - 2009 NSF IGERT-Funded TI:GER Fellow, The Georgia Institute of Technology
- 2006 - 2009 Presidential Fellow, Georgia Institute of Technology
- 2005 - 2006 Erik Jonsson Fellow, University of Texas at Dallas
- 2001 - 2005 McDermott Scholar, University of Texas at Dallas

**Journal Publications:**

1. Simon, D, T Ware, R Marcotte, BR Lund, J Dennis W. Smith, MD Prima, RL Rennaker and W Voit (2012). "A Comparison of Polymer Substrates for Photolithographic Processing of Flexible Bioelectronics." *Biomedical Microdevices* in review
2. Ware, T, D Simon, C Liu, T Musa, S Vasudevan, A Sloan, EW Keefer, RLR II and W Voit (2012). "Thiol-Ene/Acrylate Substrates for Softening Intracortical Electrodes." *Journal of Biomedical Materials Research* in review
3. Dei, DK, BR Lund, J Wu, D Simon, T Ware, WE Voit, D MacFarlane, SM Liff and DW Smith Jr (2012). "High Performance and Multipurpose Triarylamine-Enchained Semifluorinated Polymers." *ACS Macro Letters* **2**(1): 35-39
4. Adrian Avendano-Bolivar, Taylor Ware, David Arreaga-Salas, D Simon and W Voit (2012). "Mechanical Cycling Stability of Organic Thin Film Transistors on Shape Memory Polymers." *Advanced Materials* accepted
5. Márcio D Lima, NL, Monica Jung De Andrade, Shaoli Fang, Jiyoung Oh, Geoffrey M Spinks, Mikhail E Kozlov, Carter S Haines, Dongseok Suh, Javad Foroughi, Seon Jeong Kim, Yongsheng Chen, Taylor Ware, Min Kyoon Shin, Leonardo D Machado, Alexandre F Fonseca, John DW Madden, Walter E Voit, Douglas S Galvão, Ray H Baughman (2012). "Electrically, Chemically, and Photonically Powered Torsional and Tensile Actuation of Hybrid Carbon Nanotube Yarn Muscles." *Science* **338**(6109): 928-932
6. Taylor Ware, Dustin Simon, Robert Rennaker and W Voit (2012). "Smart Polymers for Neural Interfaces." *Polymer Reviews* accepted
7. Hearon, K, LD Nash, BL Volk, T Ware, JP Lewicki, WE Voit, TS Wilson and DJ Maitland (2012). "Electron Beam Crosslinked Polyurethane Shape Memory Polymers with Tunable Mechanical Properties." *Macromolecular Chemistry and Physics* early view online

8. Ware, T, D Simon, K Hearon, C Liu, S Shah, J Reeder, N Khodaparast, MP Kilgard, DJ Maitland, RLR II and WE Voit (2012). "Three-Dimensional Flexible Electronics Enabled by Shape Memory Polymer Substrates for Responsive Neural Interfaces." *Macromolecular Materials and Engineering* **297**(12): 1193-1202
9. Ware, T, D Simon, DE Arreaga-Salas, J Reeder, R Rennaker, EW Keefer and W Voit (2012). "Fabrication of Responsive, Softening Neural Interfaces." *Advanced Functional Materials* **22**(16): 3470-3479
10. Ware, T, K Hearon, A Lonacker, KL Wooley, DJ Maitland and W Voit (2012). "Triple-Shape Memory Polymers Based on Self-Complementary Hydrogen Bonding." *Macromolecules* **45**(2): 1062-1069
11. Ware, T, G Ellson, A Kwasnik, S Drewicz, K Gall and W Voit (2011). "Tough Shape-Memory Polymer—Fiber Composites." *Journal of Reinforced Plastics and Composites* **30**(5): 371
12. Voit, W, T Ware and K Gall (2010). "Radiation Crosslinked Shape-Memory Polymers." *Polymer* **51**(15): 3551-3559
13. Ware, T, W Voit and K Gall (2010). "Effects of Sensitizer Length on Radiation Crosslinked Shape-Memory Polymers." *Radiation Physics and Chemistry* **79**(4): 446-453
14. Voit, W, T Ware, RR Dasari, P Smith, L Danz, D Simon, S Barlow, SR Marder and K Gall (2010). "High-Strain Shape-Memory Polymers." *Advanced Functional Materials* **20**(1): 162-171
15. Chitturi, B, W Fahle, Z Meng, L Morales, CO Shields, IH Sudborough and W Voit (2009). "An (18/11)N Upper Bound for Sorting by Prefix Reversals." *Theoretical Computer Science* **410**(36): 3372-3390
16. Chitturi, B, H Sudborough, W Voit and X Feng (2008). "Adjacent Swaps on Strings." *Computing and Combinatorics* **5092**(1): 299-308

#### Conference Presentations:

##### 2012

1. Voit, W (2012). "Enabling Complex 3-D Geometries of Flexible Electronics for Biomedical Devices Using Shape Memory Polymers." *UT Dallas - UT Pan American Workgroup*: Richardson, TX.
2. Ware, TH, D Simon, J Reeder, R Rennaker, EW Keefer and W Voit (2012). "Self-Softening 3D Flexible Electronics for Chronic Neural Interfaces: Combining Click Chemistry, Biomimicry and Photolithography." Metroplex Days: University of Texas at Arlington.
3. Voit, W, D Simon, T Ware, Y Hanein, M David-Pur and E Keefer (2012). "Engineering Improved Strain Capacity Carbon Nanotube Electrodes on Shape Memory Polymers for Cortical Brain Probes, Cochlear Implants, Flexible Antennas and Multi-Electrode Arrays." *TMS Annual Spring Meeting*: Orlando, FL.
4. Arreaga-Salas, DE, T Ware, D Simon, A Avendano and W Voit (2012). "High Surface Area Tin Electrodes as an Interface Material for Softening Neural Flexible Electronics." Physical Electronics Conference: University of Texas at Dallas.

5. Voit, W (2012). "Self-Softening, Self-Positioning 3D Flexible Bioelectronics Enabled by Shape Memory Polymers." *CIMTEC - 4th International Conference on Smart Materials, Structures and Systems*: Montecatini Terme, Italy.
6. Simon, D, T Ware, D Arreaga-Salas, A Avendano-Bolivar and W Voit (2012). "Poster Blitz: Physiologically Responsive Neural Interfaces with Functional Electrode Materials." 2012 Neural Interfaces Conferences: Salt Lake City, UT.

### 2011

7. Raj, A and W Voit (2011). "Shape Memory Triggered Coating Failure for Active Biomaterials." *TMS 2011*: San Diego, CA.
8. Voit, W, T Ware and K Gall (2011). "Fully Recoverable High Strain Shape Memory Polymers." *TMS 2011*: San Diego, CA.
9. Ware, B and W Voit (2011). "Temperature-Sensitive Shape Memory Polymer Based Acoustic Metamaterials." *TMS 2011*: San Diego, CA.
10. Ware, T, K Hearon, DJ Maitland and W Voit (2011). "Triple Shape Memory Polymers Based on Self-Complimentary Hydrogen Bonding." *TMS 2011*: San Diego, CA.
11. Voit, W, T Ware and K Gall (2011). "Radiation Crosslinked Shape Memory Polymers for Biomedical Applications." *Society for Biomaterials*: Orlando, FL.
12. Ware, T, K Hearon and W Voit (2011). "Triple Shape Memory Polymers Based on Self-Complimentary Hydrogen Bonding." *Society for Biomaterials*: Orlando, FL.
13. Raj, A, T Ware and W Voit (2011). "Shape Memory Triggered Coating Failure for Active Biomaterials." *Frontiers in Polymer Science*: Lyon, France.
14. Voit, W, T Ware and K Gall (2011). "Radiation Crosslinked Shape Memory Polymers." *Frontiers in Polymer Science*: Lyon, France.
15. Ware, T, K Hearon, D Maitland and W Voit (2011). "Triple Shape Memory Polymers Based on Self-Complimentary Hydrogen Bonding." *Frontiers in Polymer Science*: Lyon, France.
16. Voit, W (2011). "Mnemosynation™: From a Greek Goddess to Efficient Earpieces through Ionizing Radiation." *International Meeting on Radiation Processing (IMRP)*: Montreal, Canada.
17. Simon, D, T Ware and W Voit (2011). "Thermoresponsive Polymer Substrate with a Tunable Swelling Profile for Flexible Electronics." *North American Thermal Analysis Society (NATAS)*: Des Moines, IA.
18. Ware, T, K Hearon, D Maitland and W Voit (2011). "Triple Shape Memory Polymers Based on Self-Complementary Hydrogen Bonding." *North American Thermal Analysis Society (NATAS)*: Des Moines, IA.
19. Lee, K, W Voit, T Ware and E Keefer (2011). "Pharmacological and Electrical Stimulus Responses of Spontaneously Active Spiral Ganglion Neurons on Cnt Electrode Arrays." *Conference on Implantable Auditory Prostheses*: Asilomar, CA.
20. Voit, W (2011). "From Heat Shrink to Shape Memory to Flexible Bioelectronics: Why Radiation Doesn't Deserve a Bad Wrap." *Council on Ionizing Radiation Measurements and Standards (CIRMS)*: Gaithersburg, MD.
21. Rennaker, R, W Voit and C Hutchens (2011). "Wireless Distributed Neural Interface System." *Society for Neuroscience*: New Orleans, LA.
22. Manz, C, B Ware, J Gonzales and W Voit (2011). "Shape Memory Polymer Coated Local Sonic Resonators to Enable Dynamic Acoustic Metamaterial Fabrication." *Materials Research Society (MRS) 2011*: Boston, MA.
23. Reeder, J, D Simon, T Ware and W Voit (2011). "3D Printable Shape Memory Polymers with Thermoset Properties." *Materials Research Society (MRS) 2011*: Boston, MA.

24. Simon, D, T Ware, J Reeder, D Arreaga and W Voit (2011). "On the Fabrication and Processing of Novel Shape Memory Polymer Multi-Electrode Arrays." *Materials Research Society (MRS) 2011*: Boston, MA.
25. Ware, B, T Ware, C Manz and W Voit (2011). "Dynamic Acoustic Metamaterials with Temperature-Sensitive Damping." *Materials Research Society (MRS) 2011*: Boston, MA.
26. Ware, T, D Simon, D Gehlhausen and W Voit (2011). "Utilizing Shape Memory to Enable 3D Geometries for Flexible Electronics " *Materials Research Society (MRS) 2011*: Boston, MA.

### 2010

27. Voit, W, T Ware and K Gall (2010). "Radiation Crosslinked Shape Memory Polyacrylates." *TMS 2010*: Seattle, WA.
28. Ware, T, K Gall and W Voit (2010). "Triple Shape Polymers with Self-Complimentary Ureidopyrimidone Groups." *TMS 2010*: Seattle, WA.
29. Voit, W and TWK Gall (2010). "Radiation Crosslinked Shape Memory Polymers." *Council on Ionizing Radiation Measurements and Standards (CIRMS)*: Gaithersburg, MD.
30. Voit, W, T Ware and K Gall (2010). "Radiation Crosslinked Shape Memory Polymers." *Ionizing Radiation and Polymers (IRaP)*: College Park, MD.

### 2009

31. Voit, W, P Smith, L Danz, D Simon and K Gall (2009). "Using Response Surfaces to Maximize Recoverable Strain Capacity in Thermosetting Shape-Memory Polymers." *Integrative Biosystems Institute*: Atlanta, GA.
32. Voit, W, T Ware and K Gall (2009). "Tuning the Mechanical Properties of Electron Beam Crosslinked Shape-Memory Polymers." *TMS 2009. Symposium NN: Active Polymers*: San Francisco, CA.
33. Voit, W, T Ware and K Gall (2009). "High Strain Shape-Memory Polymers." *MSE Student Conference*: Georgia Institute of Technology.
34. Voit, W, A Varallo, T Ware and K Gall (2009). "Bestowing Shape Memory on Polyacrylates Using Ionizing Radiation." *Council on Ionizing Radiation Measurements and Standards*: Gaithersburg, MD.

### Invited Talks and Personal Communications:

### 2012

1. Voit, W (2012). "New Polymer Chemistries for Tissue Engineering Applications in Urology." Dallas, TX.
2. Voit, W (2012). "Self-Softening Flexible Neural Bioelectronics Using Shape Memory Polymers and Novel Photolithographic Techniques." *Kilby Labs at Texas Instruments*: Dallas, TX.
3. Voit, W (2012). "High Channel Count, Shape Memory Polymer, Carbon Nanotube Electrodes in Degradable Drug-Eluting Hydrogels as Reliable Central Nervous System Interfaces." *FUSION*: Richardson, TX.

### 2011

4. Voit, W (2011). "Advanced Polymer Research Lab: Thermal Characterization Capabilities." *Intel Meeting (at UT Dallas)*: Richardson, TX.
5. Voit, W (2011). "Enabling Complex 3-D Geometries of Stretchable Electronics Using Shape Memory Polymers." *Princeton University Invited Seminar Series (Host: S Wagner)*: Princeton, NJ.
6. Voit, W (2011). "Mnemosynation™: From a Greek Goddess to Efficient Earpieces through Plastics Processing." *McDermott Scholars*: Santa Fe, NM.
7. Cao, W (2011). "Stretchable Thin Film Electrode Arrays for Neuroscience Research." *UT Dallas Materials Science and Engineering Department Invited Seminar (Host: W. Voit)*: Richardson, TX.



8. Voit, W (2011). "Optimization of Mechanical Properties and Manufacturing Techniques to Enable Shape-Memory Polymer Processing." *King Abdulaziz City for Science and Technology (KACST)*: Riyadh, Saudi Arabia.
9. Voit, W (2011). "Thermomechanical Characterization of Shape Memory Polymers: Presenting DMA, DSC, TGA and UTM." *King Abdulaziz City for Science and Technology (KACST)*: Riyadh, Saudi Arabia.
10. Voit, W (2011). "Radiation, Flexible Electronics and Shape Memory Polymers." *King Abdulaziz City for Science and Technology (KACST)*: Riyadh, Saudi Arabia.
11. Voit, W (2011). "Shape Memory Polymer Functionalization and Processing : Scaffolding, Drug Delivery, and Implantable Devices to Aid in Cancer Research." *UT Southwestern Medical School, Department of Radiation Oncology*: Dallas, TX.
12. Voit, W (2011). "Center of Excellence in Airport Security Enhancement (Cease)." *DFW Airport Executive Board*: Dallas, TX.
13. Arreaga, D, W Cao, A Raj and W Voit (2011). "Piezoelectric Buckling Induced by Shape Memory Polymers." *Center For Energy Harvesting Materials and Systems Summit (Host: Virginia Tech)*: Blacksburg, VA.
14. Voit, W (2011). "Enabling Complex 3-D Geometries of Stretchable Electronics Using Shape Memory Polymers." *Sandia National Labs (Host: G Tucker)*: Albuquerque, NM.
15. Voit, W (2011). "Center of Excellence in Airport Security Enhancement (Cease)." *Blewater International*: Richardson, TX.
16. Voit, W (2011). "Materials for Mind Control: The Rise of Flexible Electronics." *UNIV 1010 Class at UT Dallas*: Richardson, TX.
17. Voit, W (2011). "Metamaterials, Shape Memory Polymers, Triple Shape Polymers and Flexible Electronics." *Society for Plastics Engineers*: Richardson, TX.
18. Voit, W (2011). "Enabling Complex 3-D Geometries of Flexible Electronics for Biomedical Devices and Sensors Using Shape Memory Polymers." *US Food and Drug Administration*: Silver Spring, MD.
19. Voit, W (2011). "Flexible Electronics and Novel Applications of Shape Memory Polymers " *UT Dallas Development Board (Host: Haynes and Boone LLP)*: Dallas, TX.
20. Voit, W (2011). "The Rise of Flexible Electronics and Smart Plastics." *History of Aviation at UT Dallas*: Richardson, TX.
21. Voit, W (2011). "Enabling Complex 3-D Geometries of Flexible Electronics for Biomedical Devices and Sensors Using Shape Memory Polymers." *Lintec America*: Richardson, TX.

### 2010

22. Voit, W (2010). "Optimization of Mechanical Properties and Manufacturing Techniques to Enable Shape Memory Polymer Processing." *Texas A&M University (Host: D Maitland)*: College Station, TX.
23. Voit, W (2010). "On College and Plastics." *Briarcliff Manor High School*: Briarcliff Manor, NY.
24. Voit, W (2010). "Radiation Crosslinked Shape Memory Polyacrylates." *Lawrence Livermore National Labs*: Livermore, CA.
25. Voit, W (2010). "Thermal Characterization Capabilities: UT Dallas Advanced Polymer Research Lab." *TriQuint Semiconductor*: Richardson, TX.
26. Voit, W (2010). "Smart Plastics in a Complex World." *UT Dallas Advisory Board*: Richardson, TX.
27. Voit, W (2010). "Mnemosynation™: From a Greek Goddess to Efficient Earpieces through Plastics Processing." *BioDFW*: Dallas, TX.
28. Voit, W (2010). "Mnemosynation™: From a Greek Goddess to Efficient Earpieces through Plastics Processing." *Rotary Richardson*: Richardson, TX.

### 2009

29. Voit, W (2009). "Rational Design of High-Strain Shape Memory Polymers." *Georgia Institute of Technology (Host: S Marder)*:

30. Voit, W, T Ware, RR Dasari, S Barlow, SR Marder and K Gall (2009). "Xini: A Novel Organic Crosslinker (X) and Initiator (Ini) for Acrylic Shape-Memory Polymer Networks." *Georgia Institute of Technology*: Atlanta, GA.

### Patents:

1. *Shape Memory Polymers and Process for Preparing*. Inventors: W. Voit, T. Ware, K. Gall (provisional filed Oct. 20, 2009, patent filed Oct. 16, 2010) (licensed from Georgia Tech) (Issued)
2. *Xini Synthesis and Incorporation*. Inventors: W. Voit, T. Ware, R. Dasari, S. Marder, S. Barlow, P. Smith, L. Danz, K. Gall (provisional filed Oct. 29, 2009)

### Grants (year submitted):

#### 2009

1. NSF SBIR Phase II. "Injection-Molded Thermoset Shape-Memory Polymers with Enhanced Acoustic Properties." (\$499,994: 7/1/2010- 6/30/2012). Duncan, B (PI). W Voit. *Syzygy Memory Plastics*. **accepted**.

#### 2010

2. NSF IIP - Partnerships for Innovation. "Multifunctional Microelectrode Arrays for Neuroscience Research and Technology Development." (\$599,783: 6/1/2011 – 6/30/2014). Gnade, B (PI). W Voit, R Rennaker and M Quevedo-Lopez. *UT Dallas*. **accepted**.

#### 2011

3. NSF Major Research Instrumentation. "MRI: Acquisition of Electron-Beam Lithography for Nanofabrication in the North Texas Region." (\$775k from NSF 1/27/2011 purchase). Overzet, L (PI). *UT Dallas*.
4. American Asthma Foundation. "Radiation Crosslinked Electrospun Shape Memory Polymer Nanofiber Meshes as a Research Tool to Study the Pathogenesis of Asthma." (\$749,869: 7/1/11 to 6/31/14). Smith, D (PI). W Voit. *UT Dallas*. **declined**.
5. NSF Mechanics of Materials. "Shape Memory Polymer Acoustic Metamaterials: Linking Three Modeling Frameworks to Explain Temperature Dependent Frequency Bandgaps." (\$311,929: 10/01/11 to 5/31/14). Voit, W (PI). D McDowell. *UT Dallas*. **declined**.
6. NSF Nanomanufacturing. "Radiation-Crosslinked, Electrospun Shape Memory Polymers for Enhanced Nasal Filtration." (\$345,861: 10/01/11 to 5/31/14). Voit, W (PI). D Smith. *UT Dallas*. **declined**.
7. Sandia National Labs. "Nanomechanics of Shape Memory Polymer Fibers." (collaboration: 3/15/11 to 3/14/12). Voit, W (PI). J Hsu and D Smith. *UT Dallas*. **accepted**.
8. FDA Medical Countermeasures Initiative - Regulatory Science. "Expanded Emergency Capacity of Medical Device Production through 3D Printing of Radiation Crosslinked Polymers." (\$59,999: 4/1/2011 – 3/31/2012). Voit, W (PI). M DiPrima. *UT Dallas*. **accepted**.
9. NSF SBIR. "Shape Memory Polymer Cochlear Implants with Nanotube Coated High Capacitance Electrodes." (\$24,908 of \$150,000: 1/1/12 to 6/30/12). Keefer, E (PI). W Voit. *Plexon*. **declined**.
10. DARPA. "High Channel Count, Shape Memory Polymer, Carbon Nanotube Electrodes in Degradable Drug-Eluting Hydrogels as Reliable Central Nervous System Interfaces." (\$2,101,023: 10/01/2011 to 9/30/2013). Voit, W (PI). E Keefer, J Elisseff, B Wester, Y Hanein and R Rennaker. *UT Dallas, Johns Hopkins, Tel-Aviv, Plexon*. **declined**.
11. NSF NUE. "Undergraduate Nanotech Revitalization at UT Dallas." (\$199,928: 1/1/12 to 12/31/13). Voit, W (PI). M Kim. *UT Dallas*. **declined**.
12. NIH. "Distributed Neural Interfaces Using Shape Memory Polymers." (\$3,259,224: 5/1/12 to 5/29/17). Rennaker, R (PI). W Voit and C Hutchens. *UT Dallas*. **declined**.

13. ARL Materials in Extreme Dynamic Environments. "Design of Interface Mediated Light Weight Materials Systems for Protection in Extreme Dynamic Environments." (\$241,444 subaward to UT Dallas: 7/1/12 to 6/30/14). McDowell, D (PI). I- Georgia Tech, Penn State, Washington State, Florida, Mississippi State, Nebraska-Lincoln, Tuskegee, Florida International, Illinois, Drexel, UT Dallas, Clemson. **pending**.
14. AFOSR MURI. "Complexity Overarching Multiscale Phenomena: Leveraging Experiments into Theory." (preproposal: 1/1/12 to 12/31/17). Voit, W (PI). K Cho, A Hooshyar, D Lary, H Lu, M Leamy, D McDowell and M Ruzzene. *UT Dallas and Georgia Tech*. **not invited**.
15. NSF ERC for Nanosystems. "Conformal Large Area Sensors and Systems (Class)." (preproposal: 1/1/13 to 12/31/18). Gnade, B (PI). M Quevedo, W Voit, D Allee, K O, S Chou, S Iyer, Y Chabal, W Hu and D Kuila. *UT Dallas, Princeton, Arizona State*. **not invited**.
16. NSF GARDE. "Reconfigurable Shape Memory Polymer Prostheses and Orthoses with Flexible Sensors." (\$299,877: 4/01/12 to 3/31/15). Voit, W (PI). D Katz, D Virostek, T Herring and TSRHf Children. *UT Dallas*. **declined**.
17. ARO MURI. "Metamaterials for Electromagnetic Thermo-Responsive Attenuation." (preproposal: Voit, W (PI). A Blanchard, D MacFarlane, B Gnade, A Adibi, K Gall, M Ruzzene, M Leamy, M Tentzeris, M Allen, S Wagner, J Sturm and R Olsson. *UT Dallas, Georgia Tech, Princeton*. **not invited**.
18. NSF GRFP. "NSF Graduate Research Fellowship." (\$120,000: 6/11/11 to 5/31/14). Ware, T (PI). W Voit. *UT Dallas*. **accepted**.
19. NIH. "Chronic DRG Electrode Development." (\$2.5 million: 7/1/12 to 6/30/17). Rennaker, R (PI). W Voit, D Weber and C Hutchens. *UT Dallas, Pitt, Oklahoma State*. **pending**.
20. NSF MSE. "Multifunctional Magnetic Nanoparticle-Loaded Multi-Cycle Shape Memory Polymers for Magnetic Targeting and Controlled Drug Delivery." (\$300,000: 4/1/2012 to 3/31/15). Voit, W (PI). C Hinkle. *UT Dallas*. **declined**.
21. NSF EFRI. "Bio-Inspired Probes." (preproposal: 7/1/12 to 6/31/17). Sarles, A (PI). W Voit, M Quevedo and J Chae. *UT Knoxville, UT Dallas, Arizona State*. **not invited**.
22. FUSION - Translational Research Award. "High Channel Count, Shape Memory Polymer, Carbon Nanotube Electrodes in Degradable Drug-Eluting Hydrogels as Reliable Central Nervous System Interfaces." (\$100,000: 1/1/12 to 12/31/12). Voit, W (PI). *UT Dallas*. **accepted**.
23. UT Dallas Behavior and Brain Sciences Department. "Aquisition of Nanolithography Laser System." (\$100,000 purchased Feb. 2012). Voit, W (PI). R Rennaker. *UT Dallas*. **accepted**.

## 2012

1. "High Channel Count, Shape Memory Polymer, Carbon Nanotube Electrodes in Degradable Drug-Eluting Hydrogels as Reliable Central Nervous System Interfaces." (**\$100,000: 1 year**). Voit, W (PI). *UT Dallas*. Submitted: 2011.09.01 - **completed**. Effort: 0 months / year.
2. "Minimally Invasive, Self-Softening 3d Flexible Electronics for Neural Interfaces Using Biocompatible, Functionalized Shape Memory Polymer Click Chemistries and Novel Photolithographic Techniques." (**\$299,912: 3 years**). Voit, W (PI). *UT Dallas*. Submitted: 2012.01.19 - **not funded**. Effort: 3 months/year.
3. "Reliable Neural-Interface Technology Based on Self-Softening Shape Memory Polymer Flexible Electronics." (**In kind device testing: 1 year**). Voit, W (PI). *UT Dallas*. Submitted: 2012.04.02 - **not funded**. Effort:
4. "Nue: Undergraduate Nanotech Revitalization at Ut Dallas." (**\$199,928.16: 2 years**). Voit, W and M Kim (PI). *UT Dallas*. Submitted: 2012.04.23 - **not funded**. Effort: 0.10 months/year.



5. "Career: Chronic Biological (in Vivo) and Cellular (in Vitro) Responses to Neural Interfaces." (**\$399,942**: Voit, W (PI). *UT Dallas*. Submitted: 2012.07.23 - **not funded**. Effort: .75 months/year.
6. "Unattended Monitoring of History Indicators Via Modular Surface Responsive Polymeric Nanocomposite Materials " (**\$500,000**: 2 years). Smith, D and W Voit (PI). *UT Dallas*. Submitted: 2012.09.01 - **not funded**. Effort: 0 months/year.
7. "Subaward: Shape Memory Polymer Cochlear Implants with Nanotube Coated High Capacitance Electrodes." (**\$24,908**: 6 months). Voit, W (PI). *Plexon*. Submitted: 2012.10.09 - **pending**. Effort: 0.2 months / year.
8. "Efri-Bioflex Preliminary Proposal: Sustainable in-Vivo Stent Control Architecture." (**\$320,002.56**: Voit, W (PI). *Virginia Tech, VIACOM, UT Dallas*. Submitted: 2012.10.22 - **not invited**. Effort: 0.10 months / year.
9. "Wireless Energy Harvesting." (**\$40,000**: 1 year). Voit, W (PI). *UT Dallas*. Submitted: 2012.10.30 - **funded**. Effort: 0 months / year.
10. "Shape Memory Polymer Metamaterial Rfid Antennas for Directional, High Efficiency Power Transfer." (**\$40,000**: 1 year). Voit, W (PI). *UT Dallas*. Submitted: 2012.10.30 - **funded**. Effort: 0 months/year.
11. "Suschem: Mixed Conductor Leds for Lighting and Flexible Electronics." (**\$424,128.24**: Slinker, J, W Voit and B Holliday (PI). *UT Dallas, UT Austin*. Submitted: 2012.10.31 - **pending**. Effort: 0 months / year.
12. "Polymerization Chemistry of Perfluoroalkenes." (**\$502,005**: 3 years). Smith, D and W Voit (PI). *UT Dallas*. Submitted: 2012.10.31 - **pending**. Effort: 0.5 months/year.
13. "Shape Memory Polymer Based Cochlear Implants." (**\$200,000**: 1 year). Rennaker, R and W Voit (PI). *UT Dallas*. Submitted: 2012.11.1 - **pending**. Effort: 0 months / year.

### UT Dallas Collaborators

Bruce Gnade, Department of Materials Science & Engineering, *University of Texas at Dallas*  
Manuel Quevedo, Department of Materials Science & Engineering, *University of Texas at Dallas*  
Chris Hinkle, Department of Materials Science & Engineering, *University of Texas at Dallas*  
Julia Hsu, Department of Materials Science & Engineering, *University of Texas at Dallas*  
Yves Chabal, Department of Materials Science & Engineering, *University of Texas at Dallas*  
Hongbing Lu, Department of Mechanical Engineering, *University of Texas at Dallas*  
Duncan MacFarlane, Department of Electrical Engineering, *University of Texas at Dallas*  
Dennis Smith, Department of Chemistry, *University of Texas at Dallas*  
Rob Rennaker, School of Behavioral and Brain Sciences, *University of Texas at Dallas*  
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Jason Slinker, Department of Physics, *University of Texas at Dallas*  
Gil Lee, Department of Electrical Engineering, *University of Texas at Dallas*  
Ray Baughman, Department of Chemistry, *University of Texas at Dallas*  
John Ferraris, Department of Chemistry, *University of Texas at Dallas*  
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Jonathan Cheng, Plastic Surgery, *UT Southwestern Medical Center*  
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Philippe Zimmern, Urology, *UT Southwestern Medical Center*  
Robert Bucholz, Orthopaedic Surgery, *UT Southwestern Medical Center*  
Timothy Solberg, Radiation Oncology, *UT Southwestern Medical Center*

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Ken Gall, Department of Materials Science and Engineering, *Georgia Institute of Technology*  
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Jim Sturm, Department of Electrical Engineering, *Princeton University*

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Karen Wooley, Department of Chemistry, *Texas A&M University*

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Eric Burgett, Nuclear Engineering, *Idaho State University*  
Roberto Uribe-Rendon, College of Applied Engineering, Sustainability and Technology, *Kent State University*  
Larry DeWerd, Medical Physics, *University of Wisconsin*  
Geoffrey Ibbott, Radiation Physics, *MD Anderson*

Ahmed A. Basfar, Radiation Technology Center, Atomic Energy Research Institute, *King Abdulaziz City for Science and Technology (KACST)*  
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**Government Collaborators**

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Michael Unterweger, Radioactivity, *NIST*  
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Kim Morehouse, CFSAN/ORS/DAC, *FDA*  
Chris Sommers, *USDA*

**Corporate Collaborators**

Brent Duncan, *Syzygy Memory Plastics*, Dallas, TX  
Ed Keefer, *Plexon, Inc.*, Dallas, TX  
Chip Starns, *ScanTech Sciences*, Atlanta, GA  
Christo Bojkov, *Triquint Semiconductor*, Richardson, TX



Jeanne Pitz, Kilby Labs, Texas Instruments, Richardson, TX
Liam Skoyles, Raytheon, McKinney, TX
Jon Jansson, Baxter Healthcare Corp., Roundlake, IL
Sander Perle, Mirion Technologies, Irvine, CA

Courses Taught

Table with 3 columns: Semester, Course ID, and Course Title. Rows include Fall 2010 MECH 3310 Thermodynamics, Spring 2011 MECH 7V80/4V95 Materials Design and Manufacturing, etc.

Advisors

Masters Advisor: I. Hal Sudborough, Department of Engineering and Computer Science, University of Texas at Dallas
Graduate Advisor: Ken Gall, Department of Materials Science and Engineering, Department of Mechanical Engineering, The Georgia Institute of Technology.

Thesis Advisor

Table with 4 columns: Name, Title, Institution, and Dates. Rows include Taylor Ware (NSF Graduate Fellow, University of Texas at Dallas, 2010-present), Connie King (Graduate Student, University of Texas at Dallas, 2010-present), etc.

Advised 35 undergraduate students since 2007: 11 received prestigious President's Undergraduate Research Awards with \$1,500 funding each. Mentored a high school student during the Summer 2009 who has placed in the Intel Science Fair Talent Search and won first place in the Junior Science and Humanities Symposia in New York.