

## Timothy P. Szczykutowicz, Ph.D.

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CONTACT INFORMATION	Department of Radiology UW Madison 1005 WIMR  1111 Highland Ave. Madison, WI 53705 USA	Cell: (716) 560-7751 E-mail: <a href="mailto:tszczykutowicz@uwhealth.org">tszczykutowicz@uwhealth.org</a> WWW: <a href="http://www.quarkquark.com">www.quarkquark.com</a>
POSITIONS	<b>Department of Radiology University of Wisconsin-Madison</b> Assistant Professor <span style="float: right;"><b>March 2014-Present</b></span> <b>Department of Medical Physics University of Wisconsin-Madison</b> Post Doctoral Researcher <span style="float: right;"><b>January 2013-February 2014</b></span> Imaging Physics Resident <span style="float: right;"><b>January 2013-February 2014</b></span>	
OBJECTIVE	A career as a diagnostic imaging physicist. I hope to apply my technical image reconstruction; imaging system design; and imaging physics knowledge towards improving patient care in a clinical/research setting.	
RESEARCH INTERESTS	X-ray Computed Tomography, focusing on: intensity modulated (fluence field modulated ) CT; cancer imaging protocols (mega voltage CT, dual energy diagnostic imaging), reconstruction algorithms; spectral CT applications, clinical CT protocol optimization, CT dose monitoring.	
BOARD CERTIFICATIONS	Passed parts 1 and 2 of the ABR Diagnostic Physics Boards. I will take part 3 in May of 2016. Currently, I am able to test CT scanners using the affiliate pathway clause for the ACR and Joint Commission.	
EDUCATION	<b>SUNY University at Buffalo</b> , Buffalo, New York USA B.Sc., Physics <span style="float: right;"><b>June 2008</b></span> <ul style="list-style-type: none"><li>• <i>Summa cum Laude</i></li><li>• Minor in Mathematics</li></ul> <b>University of Wisconsin-Madison</b> , Madison, Wisconsin USA M.Sc., Medical Physics (CAMPEP Approved) <span style="float: right;"><b>May 2010</b></span> Ph.D., Medical Physics (CAMPEP Approved) <span style="float: right;"><b>December 2012</b></span> <ul style="list-style-type: none"><li>• Advised by Professor Charles Mistretta</li><li>• Advised by Professor Guang-Hong Chen</li><li>• Dissertation title: Fluence field modulated computed tomography: implemented using digital beam attenuation</li></ul>	
AWARDS	<b>Radiological Society of North America (RSNA)</b> Cum Laude education exhibit award <span style="float: right;"><b>2014</b></span> <b>Society of Photographic Instrumentation Engineers (SPIE)</b> Honorable Mention Poster Award <span style="float: right;"><b>2014</b></span> Honorable Mention Poster Award <span style="float: right;"><b>2013</b></span> <b>SUNY University at Buffalo</b> Phi Beta Kappa <span style="float: right;"><b>Inducted 2008</b></span> Society of Physics Students Leadership Scholarship <span style="float: right;"><b>2007</b></span> Physics Department Sekula Scholarship <span style="float: right;"><b>2006-7</b></span> Grace W. Capen Women's Club Academic Award <span style="float: right;"><b>2006</b></span> Dean's List <span style="float: right;"><b>2004-8</b></span> <b>Boy Scouts Of America</b> Eagle Scout <span style="float: right;"><b>2004</b></span>	
CLINICAL AND RESEARCH EXPERIENCE	<b>Department of Radiology University of Wisconsin-Madison</b>	

- CT physicist **March 2014-Present**
- PI on an industrial research grant with GE Healthcare (DoseWatch), co-investigator on a grant with GE Healthcare (CT division)
  - Physicist for UW-Madison CT protocol development team (deliver/sell optimized CT protocols to GE Healthcare) [Link](#)
  - 20% Appointment with UW Radiation Oncology supporting CT/x-ray imaging needs
  - Internal auditor (ISO 9001:2008 trained) representing UW for GE audits of UW-Madison CT protocol development project
  - Provide support local community hospitals in CT
  - Design CT technologist training materials to ensure equipment quality assurance and proper patient scanning techniques

**Departments of Radiology and Medical Physics University of Wisconsin Madison**

- Imaging resident/CT protocol developer/PostDoc **January 2013-February 2014**
- Member of CT protocol development team
  - PostDoc under Professor Chuck Mistretta
  - Internal auditor (ISO 9001:2008 trained) representing UW for GE audits of our CT protocol development project
  - Assist in annual CT testing and acceptance testing
  - Assist in designing CT technologist training programs relative to quality assurance and proper patient scanning techniques

**Department of Human Oncology University of Wisconsin-Madison**

- TomoTherapy patient specific quality assurance **Spring 2010-Summer 2011**
- Responsible for planning, shooting, and analyzing patient quality assurance plans on a weekly basis

**Department of Medical Physics University of Wisconsin-Madison**

- Received CAMPEP approved didactic training in radiation therapy and medical imaging quality assurance methods **2008-12**
- Exposed to quality assurance testing and operation of MRI, Ultrasound, CT, PET, CBCT, Linac based RT, Tomotherapy RT, IMRT, shielding calculations, and safe handling of radioactive materials

TEACHING  
EXPERIENCE

**University of Wisconsin-Madison, Madison, Wisconsin USA**

- Assistant Professor of Radiology **2014-Present**
- Designed course curriculum for radiology residents following the new ABR exam format  
Lectures include: “What should your medical physicist do for you?”, “A physicist’s toolbox: Artifact identification”, “A Physicist’s toolbox: How to compare CT exams across vendor and time”, “Clinical indication specific protocol optimization”
- Research mentor for graduate and undergraduate students **2013-2014**
- Reviewed student papers, abstracts, and presentations
  - Taught scientific methods and philosophies of research
- Design Program Mentor, BME Department **Fall 2011 and Spring 2012**
- Taught basic x-ray physics and system optimization
  - Co-mentored 8 students on projects relating to my dissertation

**SUNY University at Buffalo, Buffalo, New York USA**

- Tutor, University Learning Center **September 2006 to May 2008**
- Tutored algebra, pre-calculus, and calculus
  - Worked approximately 12 hours a week with individuals and with small groups
- Teacher, Physics and Arts Summer Institute **Summer 2006**
- Taught special relativity and assisted in designing and building interactive displays, posters and simple particle detectors

IN THE NEWS

- “Dynamic bow-tie attenuation filter improves CT resolution” [AuntMinnie.com](#) November 6th, 2012

NON-PEER  
REVIEWED  
ARTICLES

- M Pozniak, F Ranallo, **TP Szczykutowicz**. University of Wisconsin Develops and Validates Dose Optimized Protocols. *GE Healthcare CT Clarity* November 2013 Issue.
- M Pozniak and **TP Szczykutowicz**. Save Time and Money with Dose Optimized Protocols from UW-Madison. *GE Healthcare CT Clarity* November 2015 Issue.

#### INVITED TALKS

- *Compliance with the AAPM CT clinical practice guidelines: a university hospital perspective* NEAAPM Chapter Meeting, Strubridge MA, May 29th, 2015

#### PROFESSIONAL INVOLVEMENT

- Guest member, AAPM Imaging Informatics Subcommittee 2015-present
- Radiographics judge panelist for RSNA 2015
- Symposium Chair, AAPM 2016 “Compliance with the AAPM CT clinical practice and Joint Commission guidelines”

#### BOOKS AND BOOK CHAPTERS

- **TP Szczykutowicz**. CT Protocol Optimization, Management, and Review. In progress, contract signed with *Medical Physics Publishing*
- **TP Szczykutowicz**. Comprehensive Biomedical Physics, Chapter 2.7 Dual energy and spectral imaging. A Brahme and D Panetta editors, *Elsevier*. 2014

#### PEER REVIEWED PUBLICATIONS

- **TP Szczykutowicz**, and A Duplissis. The effect of patient positioning on HU number and image noise in CT. *Physics in Medicine and Biology* Submitted Fall 2015
- N Rubert, **TP Szczykutowicz**, and FN Ranallo. Position Dependent MTF Improvement in CT Imaging Using a High Resolution Scan Mode. *Journal of Applied Clinical Medical Physics* Accepted Winter 2015
- **TP Szczykutowicz**, ZE Labby, N Rubert, and C Wallace. Technical Note: Confirming the prescribed angle of CT localizer radiographs and c-arm projection acquisitions. *Medical Physics* 43 (p. 865) (2016) [[Link](#)]
- JR Hermus and **TP Szczykutowicz**. To dimensional Dynamic Fluid Bowtie Attenuators. *Journal of Medical Imaging (JMI)* 3 (1), 013502 (January 22, 2016) doi: 10.1117/1.JMI.3.1.013502 [[Link](#)]
- **TP Szczykutowicz**, N Rubert, D Belden, A Ciano, A Duplissis, A Hermanns, S Monette, E JanssenSaldivar. A wiki based solution to managing your institutions imaging protocols. *Journal of the American College of Radiology* 2016 [[Link](#)]
- **TP Szczykutowicz**, N Rubert, D Belden, A Ciano, A Duplissis, A Hermanns, S Monette, E JanssenSaldivar. A Wiki Based CT Protocol Management System. *Radiology Management* Nov/Dec Issue 2015
- **TP Szczykutowicz**, J Hermus, M Geurts, and J Smilowitz. Realization of fluence field modulated CT on a clinical TomoTherapy megavoltage CT system. *Physics in Medicine and Biology* **60(18)** 2015 [[Link](#)]
- **TP Szczykutowicz**, N Rubert, P Pozniak, R Bour, G Wendt, and F Ranallo. Optimizing CT protocols: simplifying the process using a master protocol concept. *Journal of Applied Clinical Medical Physics* **16(4)** 2015 [[Link](#)]
- **TP Szczykutowicz**, and J Siegelman. On the Same Page: Physicist and Radiologist Perspectives on Protocol Management and Review. *Journal of the American College of Radiology* **12(8)** 2015 [[Link](#)]
- **TP Szczykutowicz**, and JR Hermus. Creation of an atlas of filter positions for fluence field modulated CT. *Medical Physics* **42** 2015 [[Link](#)]
- F Ranallo and **TP Szczykutowicz**. The Correct Selection of Pitch for Optimal CT Scanning: Avoiding Common Misconceptions. *Journal of the American College of Radiology* Volume 12, Issue 4, April 2015 [[Link](#)]
- **TP Szczykutowicz**, R Bour, M Pozniak, and F Ranallo. Compliance with AAPM Practice guideline 1.a: “CT Protocol Management and Review” from the perspective of a University Hospital. *Journal of Applied Clinical Medical Physics* **16:2** 2015 [[Link](#)]

- **TP Szczykutowicz** and MA Mistretta. Experimental realization of fluence field modulated CT using digital beam attenuation. *Physics in Medicine and Biology* **59**:5 2014 [Link]
- **TP Szczykutowicz** and MA Mistretta. (Selected as “editor’s pick”) Design of a digital beam attenuation system for computed tomography: Part I. System design and simulation framework. *Medical Physics* **40** 2013 [Link]
- **TP Szczykutowicz** and MA Mistretta. (Selected as “editor’s pick”) Design of a digital beam attenuation system for computed tomography: Part II. Performance study and initial results. *Medical Physics* **40** 2013 [Link]
- **TP Szczykutowicz** and G-H Chen. Dual energy CT using slow kVp switching acquisition and prior image constrained compressed sensing (PICCS). *Physics in Medicine and Biology* **55** 6411 2010 [Link]
- G-H Chen, J Tang, B Nett, Z Qi, S Leng and **TP Szczykutowicz**. Prior image constrained compressed sensing (PICCS) and applications in x-ray computed tomography. *Current Medical Imaging Reviews* **6** 119-134 2010 [Link]

CONFERENCE

PRESENTATIONS

WITH

PROCEEDINGS

- **TP Szczykutowicz** and JR Hermus. Fluid dynamic bowtie attenuators (Talk). *SPIE Medical Imaging Conference* 9412-31 2015
- **TP Szczykutowicz** and JR Hermus. Fluence field modulated CT on a clinical TomoTherapy Radiation Therapy Machine (Talk). *SPIE Medical Imaging Conference* 9412-28 2015
- JR Hermus, CA Mistretta and **TP Szczykutowicz**. Scatter Correction of Vessel Dropout Behind Highly Attenuating Structures in 4D-DSA (Poster). *SPIE Medical Imaging Conference* 9412-170 2015
- **TP Szczykutowicz**, S Schafer, K Royalty, SR Nace, and TA Kennedy. Understanding the differences in radiation dose distribution between multi detector CT and C-arm CT for high contrast imaging (Educational exhibit) (**Presentation won cum laude honors and was invited for submission to Radiographics**). RSNA PHE-117 2014
- **TP Szczykutowicz** and CA Mistretta. Construction of an atlas of filter configurations for fluence field modulated CT (Poster). *The Third international conference on image formation in x-ray computed tomography* 2014. [Link]
- K Royalty, **TP Szczykutowicz**, C Rohkohl, and M Kowarschik. Vessel Overlap Sparsity Index - A Predictive Metric for 3D+T Accuracy (Poster). *The Third international conference on image formation in x-ray computed tomography* 2014. [Link]
- Y Tao, M Speidel, **TP Szczykutowicz**, and G-H Chen. Partial scan artifacts in dynamic CT myocardial perfusion imaging: causes and impacts (**Poster won honorable mention**). *SPIE* 9033-81 2014 [Link]
- James Hermus, **Timothy P. Szczykutowicz**, Brian Davis, Erick L. Oberstar, Martin Wagner, Charles M. Strother, and Charles Mistretta. Correction of angle dependent signal loss created by highly attenuating anatomy in 4D DSA (Poster). *SPIE* 9033-86 2014
- **TP Szczykutowicz** and CA Mistretta. Intensity modulated CT implemented with a dynamic bowtie filter (Talk). *SPIE* 8313-161 2013. [Link]
- **TP Szczykutowicz** and CA Mistretta. Volume of interest CT implemented with a dynamic bowtie filter (**Poster won honorable mention**). *SPIE* 8668-97 2013. [Link]
- J Tang, Z Qi, **TP Szczykutowicz**, and G-H Chen. New consistency theorem of motion contaminated projection data and applications in motion artifacts correction (Talk). *SPIE* 8313-50 2012. [Link]
- **TP Szczykutowicz** and MA Mistretta. Practical considerations for intensity modulated CT (Poster). *SPIE* 8313-161 2012. [Link]
- **TP Szczykutowicz**, Z Qi and G-H Chen. A simple image based method for obtaining electron density and atomic number in dual energy CT (Poster). *SPIE* 7961-3A 2011. [Link]
- **TP Szczykutowicz** and G-H Chen. Spectral CT imaging using a slow kVp switching technique and PICCS image reconstruction (Talk). *The first international conference on image formation in x-ray computed tomography* 2010. [Link]
- **TP Szczykutowicz**, J Hsieh and G-H Chen. The dependence of image quality on the number of high and low kVp projections in dual energy CT using the prior image constrained compressed sensing (PICCS) algorithm (Talk). *SPIE* 7622-72 2010. [Link]

- **TP Szczykutowicz**, J Hermus, M Geurts, J Smilowitz. Intensity Modulated Imaging?: Clinical Workflow for Fluence Field Modulated CT On a TomoTherapy System. *Medical Physics* **42** (6) Presented at the 2015 AAPM Summer Meeting. 2015. TH-EF-BRB-6
- **TP Szczykutowicz**, N Rubert, F Ranallo. Quantitative Image Quality Metrics Are for Physicists, Not Radiologists: How to Communicate to Your Radiologists Using Their Language. *Medical Physics* **42** (6) Presented at the 2015 AAPM Summer Meeting. 2015. MO-D-213-6
- JC Bastida, D Gomez-Cardona, K Li, **TP Szczykutowicz**, G-H Chen. Optimal CT Scan Mode and Reconstruction Kernel Selection for Bone Fracture Detection Task Under Both Centered and Off-Centered Conditions. *Medical Physics* **42** (6) Presented at the 2015 AAPM Summer Meeting. 2015. SU-F-207-12
- N Rubert, **TP Szczykutowicz**, F Ranallo. Avoiding a Common Pitfall in Performing MTF Measurements with High Resolution Kernels. *Medical Physics* **42** (6) Presented at the 2015 AAPM Summer Meeting. 2015. SU-E-I-14
- **TP Szczykutowicz** and CA Mistretta. The feasibility of 2D fluence field modulated CT using attenuating filter. *RSNA SSA19-08* 2014
- **TP Szczykutowicz**, M Pozniak, and FN Ranallo. The master CT protocol concept in practice: how a small set of optimized protocols can be used to create parameters for a wide range of clinical indications. *RSNA SSQ18-02* 2014
- **TP Szczykutowicz**, M Pozniak, and FN Ranallo. A comparison of three methods for measuring patient positioning from localizer imaging in CT: which correlates best with image quality? *RSNA SSQ18-08* 2014
- **TP Szczykutowicz**, and FN Ranallo. A metric for measuring the noise non-uniformity in clinical CT images. *RSNA PHS-191* 2014
- FN Ranallo, and **TP Szczykutowicz**. The correct selection of pitch and rotation time for optimal CT scanning-“The big misconception”; the effects of pitch on image quality and patient dose in both manual mA and AEC mA modulation scanning modes. *RSNA SSG14-07* 2014
- FN Ranallo, KL Schreiber, and **TP Szczykutowicz**. A degradation of diagnostic image quality in musculoskeletal CT imaging: Loss of image sharpness in CT bone imaging due to positioning within the scan field of view - causes and several possible solutions. *RSNA PHS-166* 2014
- TA Kennedy, **TP Szczykutowicz**, SR Nace, K Royalty, S Schafer, SP Gubbels, and B Gartrell. Comparative cadaver study of MDCT and c-arm CT imaging of the temporal bone before and after cochlear electrode implantation: image quality and dose distribution. *RSNA SSA06-12* 2014
- F Ranallo and **TP Szczykutowicz**. Loss of Image Sharpness in CT Bone Imaging Due to Positioning Within the Scan Field of View - Possible Solutions *Medical Physics* **41** (6) Presented at the 2014 AAPM Summer Meeting. 2014. SU-F-18C-3
- F Ranallo and **TP Szczykutowicz**. The Correct Selection of Pitch and Rotation Time for Optimal CT Scanning : The Big Misconception *Medical Physics* **41** (6) Presented at the 2014 AAPM Summer Meeting. 2014. SU-E-I-60
- TA Kennedy, **TP Szczykutowicz**, K Royalty, S Schafer, SR Nace, B Gartrell, SP Gubbels. C-Arm CT Imaging of the Temporal Bone: Image Quality and 3D Radiation Dose Distribution. *ASNR* 2014
- N Connell, TA Kennedy, **TP Szczykutowicz**, K Royalty, S Schafer, S Nace, B Gartrell, S Gubbels. Flat Panel Computed Tomography Imaging of the Temporal Bone: Comparison of Image Quality and Radiation Exposure to Conventional MultiDetector Compute Tomography. Educational Exhibit . *14th Symposium on Cochlear Implants in Children*. Nashville, TN. December 2014.
- N Connell, TA Kennedy, **TP Szczykutowicz**, K Royalty, S Schafer, S Nace, B Gartrell, S Gubbels. Can the Scalar Location of Cochlear Implant Electrodes be Determined Using Computed Tomography? A Comparison of Educational Multi-detector Computed Tomography and Flat Panel Computed Tomography. Educational Exhibit (**Won Best Poster Award**). *14th Symposium on Cochlear Implants in Children*. Nashville, TN. December 2014.
- N Connell, S Gubbels, **TP Szczykutowicz**, S Nace, K Royalty, S Schafer, B Gartrell and TA Kennedy. Evaluation of Flat-Panel Computed Tomography for Cochlear Implant Imaging. *48th annual American Society of Head and Neck Radiology (ASHNR) Meeting*. Seattle, Washington.

September 2014.

- **TP Szczykutowicz**, F N Ranallo, W W Peppler, R J Bruce, and M A Pozniak. MDCT protocol optimization using an automated IT solution provided size specific patient doses, automatic tube current modulation information, and radiologist feedback. *RSNA 2013 S405AB-08*
- **TP Szczykutowicz**, F N Ranallo, K Gill, and M A Pozniak. The influence of kV and patient positioning on CT image quality and dose: why low kV CT scans have a higher sensitivity to patient positioning. *RSNA 2013 S403B-07*
- F Ranallo and **TP Szczykutowicz**. The optimization of CT protocols using plots of CTDIvol and of max and min mA versus patient size for actual clinical scans using automatic exposure control (AEC). *Medical Physics*. **40** (6) 2013. WE-C-103-4 [Link]
- N Bevins, **TP Szczykutowicz**, and MP Supanich. A simple method for simulating reduced-dose images for evaluation of clinical CT protocols. *Medical Physics*. **40** (6) 2013. TU-C-103-6 [Link]
- F Ranallo, **TP Szczykutowicz**, M Pozniak, and R Bruce. An overview of a CT protocol optimization process at a major university hospital medical center; including details on physics support, IT support, and a radiologist based quality assurance program. *Medical Physics*. **40** (6) 2013. SU-E-I-56 [Link]
- **TP Szczykutowicz**, and F Ranallo. Guidance for CT departments desiring to optimize protocols for multiple scanner architectures. *Medical Physics*. **40** (6) 2013. SU-C-134-6 [Link]
- **TP Szczykutowicz**, C Chow, K Lake, A Mulchrone, M Scherer, and CA Mistretta. Dynamic bowtie attenuation for CT: system design and initial results (Talk). *RSNA*. 2012. SSG17-01
- O Ozkan, K Royalty, B Davis, M Kowarschik, E Oberstar, **TP Szczykutowicz**, CA Mistretta, C Strother. 4D-DSA and 4D (omni-plane) fluoroscopy: initial experiences (Talk). *Journal of Vascular and Interventional Radiology*. 2012. **23**:3
- **TP Szczykutowicz** and G-H Chen. Radiation dose reduction in dual-energy CT using PICCS reconstruction (Talk). *RSNA*. 2011. SSM20-03
- G-H. Chen and **TP Szczykutowicz** (delivered by TPS). Prior image constrained compressed sensing (PICCS): basics and applications (Invited Talk). *Algorithm Development for Security Applications Conference*. Oct. 5-6 2010. [Link]
- **TP Szczykutowicz**, J. Tang, B. Nett, J. Hsieh and G-H. Chen. Dose reduction in dual-energy CT using prior image constrained compressed sensing (PICCS) (Talk). *RSNA*. 2009. SSM20-04
- **TP Szczykutowicz**, A Kuhls-Gilcrist, D Bednarek and S. Rudin. Instrumentation noise equivalent exposure (INEE) for routine quality assurance: INEE measurements on a clinical flat panel detector (Talk). *Medical Physics*. **35**, 2879 2008. MO-E-332-7 [Link]
- **TP Szczykutowicz**, S Rudin, G Yadava, V Patel, C Ionita, K Hoffmann and D Bednarek. Effect of threshold setting on 3D visualization and diameter measurement accuracy of blood vessels for CT derived images (Poster). *Medical Physics*. **34**, 2366-2367 2007. SU-FF-I-126 [Link]

#### OTHER

- PRESENTATIONS • **TP Szczykutowicz**, L Balogh, and W Lesniak. Interactions of PAMAM dendrimers with bovine serum albumin at physiologic pH values. *Roswell Park Cancer Institute Summer Research Symposium*. August 6-9 2007

#### TECHNICAL SKILLS

**Programming:** Proficient (dcm4che PACS toolkit, C++, Matlab<sup>TM</sup>), Familiar (UNIX shell scripting, CUDA (GPU programming), Linux, HTML, Database entry and query) **Applications:** GE CT scanner control, Siemens Zeego C-arm control, Tomotherapy DQA TPS and DQA analyzing software, McKesson Horizon Rad Station, L<sup>A</sup>T<sub>E</sub>X, B<sub>I</sub>B<sub>T</sub>E<sub>X</sub>, Imagej, Microsoft Office, and other common productivity packages for Windows **Experimental:** Basic understanding and ability to operate the following: lathe, mill, drill press, table saw, band saw, and solder. Basic working knowledge of simple circuits, motor actuation, and device control.

#### ACTIVITIES, MEMBERSHIPS AND CERTIFICATIONS

Judge for WARF research competition  
Journal reviewer for JACMP  
General Class HAM radio operator

**2015**  
**2015-Present**  
**Obtained Spring 2012**



Radiological Society of North America	<b>Member 2010-Present</b>
Society of Photographic Instrumentation Engineers	<b>2010-Present</b>
Journal reviewer for Medical Physics	<b>2009-Present</b>
American Association of Medical Physicists	<b>2008-Present</b>
American Physical Society	<b>2006-Present</b>
ISO 9001:2008 Internal Auditor (RABQSA)	<b>June 19th 2013</b>
Badger Amateur Radio Society	<b>Member 2012-2013</b>
Dane County Libertarian Party	<b>Chairman 2009-11</b>
Assistant Boy Scout Leader for Troop 2 Madison, WI	<b>2008-10</b>
Society of Physics Students (Buffalo)	<b>2004-6, President 2006-8</b>
<ul style="list-style-type: none"> <li>• Organized lectures, trips and projects</li> <li>• Acted as a liaison between physics majors and the physics department</li> <li>• Assisted in designing and building an interactive physics display case for the 2005-6 world year of physics</li> </ul>	
Outdoor Adventure Club	<b>Trip Organizer 2006-8</b>
Assistant Boy Scout Leader for Troop 254 Grand Island, NY	<b>2003-8</b>
<ul style="list-style-type: none"> <li>• Merit badge counselor for Nuclear Science and Wilderness Survival</li> </ul>	
Grand Island, NY political party committee (elected position)	<b>2006-7</b>
Webmaster for the Boston Mud Run	<b>2005-2012</b>
<ul style="list-style-type: none"> <li>• Race proceeds go towards medical emergency helicopter airlifts</li> </ul>	
American Cancer Society Relay for Life	<b>Team Captain 2004-6</b>