# DUSTIN J. TYLER, PH.D. BME

Research Interests	<ul> <li>Neuroprosthesis for dynamic control of aspiration, design and clinical implementation</li> <li>Neuroprosthesis design and implementation, particularly nerve electrodes, for</li> </ul>	
	restoration of function in SCI and Stroke patients	
	• Biomimetic, integrated neural interfaces, utilizing nano- and micro- fabricated systems	
Education	PhD, Biomedical Engineering, Case Western Reserve University, Cleveland, OH BS, Electrical Engineering, Michigan Technological University, Houghton, MI	1999 1992
Academic Appointments	Assistant Professor, Dept. of Biomedical Engineering, Case Western Reserve University, Cleveland, OH	2004 - Present
	<ul> <li>Research Scientist, Functional Electrical Stimulation Center of the Louis Stokes Department of Veteran Affairs Medical Center, Cleveland, Ohio</li> <li>Develop independent research program in neuroprostheses</li> <li>Develop independent research program in biomimetic interfaces</li> <li>Research and development of peripheral nerve electrodes in clinical neuroprostheses</li> <li>Expertise in clinical and animal research</li> <li>Expertise in regulatory and industrial aspects of translational research</li> <li>Design controls for medical devices</li> </ul>	2002 – Present
	<b>Adjunct Assistant Professor</b> , Dept. of Biomedical Engineering, Case Western Reserve University, Cleveland, OH	2003 - 2004
	<b>Graduate Research Assistant</b> , Applied Neural Control Laboratory, Advisor: DM Durand, Case Western Reserve University, Cleveland, OH	1992-1999
	• Functionally Selective Peripheral Nerve Stimulation: Electrodes that Alter Peripheral Nerve Geometry	
	• Training in animal handling and surgical technique, pattern recognition, artificial intelligence, numeric methods, computational neuroscience, adaptive control	
Industrial Appointments	<ul> <li>Design, fabrication, and safety evaluation of neural implants Manager, Software Engineering, NeuroControl Corporation, Cleveland, Ohio. Evaluated and implemented several life-cycle management processes, including Requirements Management, Version Management, and Error Tracking.</li> <li>Managed two employees and four on-site contract software developers</li> </ul>	2001-2002
	<ul> <li>Manage software and firmware development for all medical devices in the company</li> <li>Principle Investigator of clinical research for dynamic closure of the vocal folds for prevention of post-stroke aspiration</li> </ul>	
	Biomedical Engineer III, Research and Development, NeuroControl	1998-2001
	<ul> <li>Project leader for product development of software simplifying grasp</li> <li>programming</li> </ul>	
	<ul> <li>Principle Investigator of clinical research projects for application of functional electrical stimulation</li> </ul>	
	Principle Investigator for pre-clinical research projects	

	Founder, President, Bear Software, LLC, Highland Heights, Ohio.	1997-present
	<b>PC Manager and Assistant Network Administrator</b> , Applied Neural Control Laboratory, Case Western Reserve University, Cleveland, Ohio.	1992-1996
Professional Training	• Medical Device Software: A Practical Guide to Software Process Control and Documentation, Underwriters Laboratories, Northbrook, IL.	2001
Professional Memberships	<ul> <li>Biomedical Engineering Society (BMES)</li> <li>American Association for Advancement of Science (AAAS)</li> <li>IEEE - Engineering in Medicine and Biology Society (IEEE-EMBS)</li> <li>Tau Beta Pi</li> </ul>	2004-Present 2001-present 1993-present 1990-present
Academic Honors and Awards	<ul> <li>Nat'l Academies Keck Futures Initiative - Smart Prostheses</li> <li>Scholarship to Neural Interfaces Workshop in Kunming, China</li> <li>Recognized as an Outstanding Professor by the Sisters of AXΩ, CWRU</li> <li>Whitaker Foundation Graduate Research Fellowship.</li> <li>Finalist in the Whitaker Foundation Student Paper Competition, 16<sup>th</sup> Annual IEEE-EMBS International Conference, Baltimore, MD.</li> <li>Winner of the Whitaker Foundation Student Paper Competition, 15<sup>th</sup> Annual IEEE-EMBS International Conference, San Diego, CA.</li> <li>National Science Foundation Graduate Student Fellowship.</li> <li>NIH Graduate Trainee Fellowship, Case Western Reserve University.</li> <li>Michigan Technological University Scholar Award.</li> <li>MTU Merit Award for campus leadership and service.</li> </ul>	Nov 9-12, 2006 2006 1993-1998 1994 1993 1993 1993 1992-1993 1988-1992 1992
Service – Professional	<ul> <li>International Conference Organizing Committees</li> <li>Co-chair, Symposium U: Advance Materials for Neural Interfaces, Materials Research Society Spring Meeting, San Francisco, CA, April 2007</li> <li>Associate Editor, Track 10.0 Neural and Rehabilitation Engineering, and Neuromuscular Systems, 28<sup>th</sup> Annual IEEE-EMBS International Conference, New York, New York, Aug 30 – Sept 3, 2006.</li> </ul>	
	Reviewer for Professional Journals	
	<ul> <li>IEEE Transactions of Neural Engineering and Rehabilitation</li> <li>IEEE Transaction of Biomedical Engineering</li> <li>Journal of Rehabilitation Research and Development</li> <li>Clinical Anatomy</li> </ul>	
	Reviewer for Research Proposals	
	<ul> <li>BDCN K-10, Standing Memeber, 2005 to Present (NIH)</li> <li>Ad hoc proposal review, 2005 (NSF)</li> <li>SSS5 - 10, Special Reviews 5, SBIR/STTR, 2002 to Present (NIH)</li> <li>MRS, Musculoskeletal Rehabilitation Sciences, Invited Temporary Member (NIH)</li> </ul>	
Service – University	<ul> <li>BME Co-op Advisor</li> <li>BME Sages Advisor</li> <li>High School BME Visitor Committee</li> <li>Chair BME subcommittee for Case High School Scholarship Committee</li> </ul>	2005-present 2005-present 2005 2005

	BME Undergraduate Education Committee	2004-present
	• Co-chair of Neural Engineering and Rehabilitation Day, Case Western Reserve	2003-present
	University.	2002
	• Conflict of Interest Administrator, Cleveland VA Medical Center.	2003-present
	<ul> <li>Co-orgainzer of the Neural Prosthesis Seminar Series, FESC, Case Western Reserve University</li> </ul>	2003-2006
	<ul> <li>Founding editor of the "BioPotential," monthly newsletter of the Biomedical</li> <li>Engineering Conducts Student Acception Cone Western Deserve University</li> </ul>	1994-1997
	<ul> <li>Co-Chair, Biomedical Engineering Graduate Student Association, Case Western</li> </ul>	1993-1994
	<ul><li>University Search Committee for Dean of College of Engineering, Michigan</li></ul>	1991-1992
	<ul> <li>Founding member and chairperson of the President's Student Advisory</li> </ul>	1991-1992
	<ul><li>Committee, Michigan Technological University.</li><li>President, MI Beta Chapter of Tau Beta Pi, Michigan Technological University.</li></ul>	1990-1991
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TEACHING	EBME309 – Modeling Biomedical Systems	S' 2004 (53 tot)
EXPERIENCE		S' 2005 (65 tot)
		S' 2006 (104 tot)
	• EBME359 – Modeling Biomedical Systems Lab	5 2004 (12 tot) S' 2005 (65 tot)
		S' 2005 (05 tot)
	• FDME280 Design for Pierredical Engineers	F' 2004 (12 tot)
	• EDME360 - Design for Diomedical Engineers	F' 2005 (48 tot)
		F' 2006 (48 tot)
STUDENT ADVISING	Academic/Research Advising	(10 000)
	Katie Polasek	M.S. 2004
		PhD 2006, exp.
	Matthew Schiefer	PhD 2007, exp.
	Ieffrey Huynh	MS 2007, exp.
	<u> </u>	PhD 2010, exp.
	Edward Arguello	MS 2007, exp.
	• James Harris	PhD 2009, exp.
	Nina Zobenica	MS 2007, exp.
		PhD 2010, exp.
	<u>Committee membership</u>	
	• Beth Lewandowski, PhD	
	• Wondi Tesfayesus, PhD	
	• Hyunjoo Park, PhD	
	• Kevin Wang, MS	
	Deat Deat Advising	
	<u>Post-Doc Advising</u>	
Recent Funding	• Jenney Capadona	
Receiver Fortenito	Current	
	<ul> <li>Peripheral Nerve Implementation of Functional Neuroprostheses, PI: Tyler, NIH R21 \$424 875</li> </ul>	2007-2009
	<ul> <li>Stimulus-responsive, mechanically-dynamic Nanocomposite for Cortial Electrodes PI: Tyler NIH R21 \$424.875</li> </ul>	2006-2008
	<ul> <li>Electrical Stimulation of the Bilaterally Paralyzed Larynx Paced with Respiration, Subcontract PL Tyler NIH Translational Grapt \$590,004</li> </ul>	2006-2011
	Rehabilitation Engineering Platform Technology Center of Excellence, PL	2004 2000
	Remaination Digineering Futtorin Technology Center of Excelence, FI.	2007-2009

## TEACHING Experience

Triolo, \$4,250,000.	
Dynamic Vocal Fold Abduction for Bilateral Paralysis, Co-Investigator, PI:	2005-2007
Broniatowski, NIH R21, \$279,500	
<ul> <li>Dynamic Laryngotracheal Closure Using BION Technology, PI: Tyler, VA Merit Review, \$441,400.</li> </ul>	2004-2006
<ul> <li>Vocal fold adduction for prevention of aspiration, Co-Investigator, PI: Broniatowski, NIH R21, \$225,000.</li> </ul>	2004-2006
• Enhancing Neuroprosthesis Performance with Nerve Cuff Electrodes, Co- Investigator, Co-Investigator, PI: Triolo, \$1,128,525.	2003-2006
Past	
<ul> <li>Restoration of Hand and Arm Function by Functional Neuromuscular Stimulation, PI: Kirsch, NIH Contract #N01-NS-1-2333.</li> </ul>	2003-2005
<ul> <li>Topography of the Nerves of the Tongue and Larynx for Neuroprostheses, PI, VA RIP Grant, \$10,000.</li> </ul>	2003-2004
• Stimulator to Prevent Aspiration, PI, SBIR #1 R43NS38776-01, \$100,000.	1999-2000

#### RECENT REFEREED PUBLICATIONS

### **Book Chapters**

• Tyler, DJ, "Neuroprostheses for management of dysphagia resulting from cerebrovascular disorders," Springer-Verlag, in press, December 2006.

#### Journal Articles

- <u>Polasek, K</u>, H Hoyen, R Kirsch, **DJ Tyler**, "Nerve Thresholds and Selective Activation in the Human with the Spiral Nerve Cuff Electrode," IEEE Trans Neural Eng and Rehab, accepted, to be published December, 2006.
- Broniatowski, M, S. Grundfest-Broniatowski, H. Tucker, **DJ Tyler**, "Artificial Voice Modulation in the Canine by Recurrent Laryngeal Nerve Stimulation: Electrophysiological Confirmation of Anatomical Data," Annals of Otology, Rhinology, and Laryngology, accepted 2006.
- Tyler, DJ and D. M. Durand (2003). "Chronic response of the rat sciatic nerve to the flat interface nerve electrode." <u>Ann Biomed Eng</u> 31(6): 633-42.
- Tyler, DJ and DM Durand, "Functionally Selective Peripheral Nerve Stimulation with A Flat Interface Nerve Electrode," IEEE Transactions on Neural Systems and Rehabilitation Engineering, 10(4), 294-303, 2002.
- Broniatowski, M., S. Grundfest-Broniatowski, **D. Tyler**, et al. (2001). "Dynamic laryngotracheal closure for aspiration: a preliminary report." Laryngoscope 111(11 Pt 1): 2032-40.
- Qi, H, **DJ Tyler**, and DM Durand, "Neurofuzzy adaptive controlling of selective stimulation for FES: a case study," IEEE Transactions of Rehabilitation Engineering, 7(2), 183-192, 1999.
- Tyler, DJ and DM Durand, "A Slowly Penetrating Interfascicular Nerve Electrode for Selective Activation of Peripheral Nerve Axons," IEEE Transactions of Rehabilitation Engineering, 5(1), 51-61, 1997.
- Tyler, DJ and DM Durand, "Interfascicular Electrical Stimulation For Selective Activation of Surface and Deep Axon Populations," IEEE Engineering in Medicine and Biology Magazine, 13(4), pp. 575-583, 1994.

### Granted

PATENTS

	• Tyler, DJ and DM Durand, "Corrugated Nerve Electrode," U. S. Patent No. 5,634,46.	3 June 1997
	• Durand, DM and <b>DJ Tyler</b> , "Slowly Penetrating Interfascicular Nerve Electrode," U.S. Patent No. 5,400,784.	28 Mar 1995
	• Tyler, DJ and DM Durand, "Flat Interface Nerve Electrode and A Method for Use," U.S. Patent No. 6,456,866.	23 Sept 2002
	• Fang, ZP, G Thrope, A Ignagni, S Pourmehdi, <b>D Tyler</b> , R Strother, M Walker, T Winter, J Demchak, J Mrva, A Spzak, "System and Methods for Performing Prosthetic or Therapeutic Neuromuscular Stimulation Using a Programmable Universal External Controller Using an External, Battery Powered Controller with Power Conservation Features," U.S. Patent No. 6,587,728.	1 July 2003
	• Fang, ZP, G Thrope, A Ignagni, S Pourmehdi, <b>D Tyler</b> , R Strother, M Walker, T Winter, J Demchak, J Mrva, A Spzak, "System and Methods for Performing Prosthetic or Therapeutic Neuromuscular Stimulation Using a Programmable Universal External Controller Providing Different Selectable Neuromuscular Stimulation Functions," U.S. Patent No. 6,625,494.	23 Sept 2003
	• Fang, ZP, G Thrope, A Ignagni, S Pourmehdi, <b>D Tyler</b> , R Strother, M Walker, T Winter, J Demchak, J Mrva, A Spzak, "System and Methods for Performing Prosthetic or Therapeutic Neuromuscular Stimulation Using a Programmable Universal External Controller Having a Graphical User Interface," U.S. Patent No. 6,678,563 B2.	13 Jan 2004
	• Fang, ZP, G Thrope, A Ignagni, S Pourmehdi, <b>D Tyler</b> , R Strother, M Walker, T Winter, J Demchak, J Mrva, A Spzak, "System and Methods for Performing Prosthetic or Therapeutic Neuromuscular Stimulation Using a Programmable Universal External Controller Accommodating Different Control Inputs and/or Different Control Outputs," U.S. Patent No. 6,701,189.	2 March 2004
Invited Seminar Presentations	<ul> <li>Tyler, D. J., "Clinical Progress in Peripheral Nerve Electrodes," BMES, Chicago</li> <li>Tyler, D. J., Department of Biomedical Engineering, Univ of Texas, Dallas.</li> <li>Tyler, D. J., J. Capadona, S. Rowan, C. Weder, "Stimulus-responsive, Mechanically-dynamic Nanocomposite for Cortical Electrodes," Materials Research Society, Electrobiological Interfaces Symposium San Francisco, CA</li> </ul>	Oct, 2006 June 2006 April 2006
	<ul> <li>Tyler, D. J., "Electrical Stimulation for Dysphagia Management following Stroke," 7th Meeting of the International Neuromodulation Society, Rome, Italy.</li> <li>Tyler, D. J., "New Strategies for Treatment of Dysphagia after Stroke," Scientific</li> </ul>	June 2005
	Basis of Neurorehabilitation for Spinal Cord Injury and Stroke, American Society of Neurorehabilitation, Cleveland, OH.	Aug 2003
Abstracts and Presentations	<ul> <li>Jeffrey C Huynh, Nina S. Zobenica, Dr. Michael Broniatowski, Dr. Dustin Tyler, "Reduction of Aspiration through Stimulation of the Recurrent Laryngeal Nerves: A Chronic Analysis" – Neural Interfaces Workshop, Besthesda, Maryland.</li> </ul>	Sept 2005
	• Polasek K, Kirsch R, Hoyen H, Keith M, and <b>Tyler D.</b> Intraoperative Testing of Selective Nerve Cuff Electrodes for Neuroprostheses, presented at Research ShowCase, Cleveland OH.	April 2004
	• Polasek K, Kirsch R, Hoyen H, Keith M, and <b>Tyler D.</b> Intraoperative Testing of Selective Nerve Cuff Electrodes for Neuroprostheses, presented at Neural Engineering and Rehabilitation Day, Cleveland OH.	Aug 2004
	• Polasek K, Kirsch R, Hoyen H, and <b>Tyler D.</b> Intraoperative Testing of Selective Nerve Cuff Electrodes for Neuroprostheses, presented at NIH Neural Prosthetics	Nov 2004

Workshop, Bethesda MD.

• Polasek K, Kirsch R, Hoyen H, Keith M, and <b>Tyler D.</b> Intraoperative Testing of Selective Nerve Cuff Electrodes for Neuroprostheses, presented at Research ShowCase, Cleveland OH.	April 2005
• Polasek K, Kirsch R, Hoyen H, Keith M, and <b>Tyler D.</b> Intraoperative Testing of Selective Nerve Cuff Electrodes for Neuroprostheses, presented at Neural Engineering Research Lectures, Cleveland OH, June 3, 2005	June 2005
• Polasek K, Kirsch R, Hoyen H, Keith M, and <b>Tyler D.</b> Intraoperative Testing of Selective Nerve Cuff Electrodes for Neuroprostheses, presented at NIH Neural Prosthetics Workshop, Bethesda MD.	Sept 2005
• Polasek K, Kirsch R, Hoyen H, Keith M, and <b>Tyler D.</b> Chronic Human testing of Nerve Cuff Electrodes for an Upper Extremity Neuroprosthesis, presented at Case Biomedical Engineering Research Day, October 15, 2005	Oct 2005
• Polasek K, Hoyen H, Kirsch R, and <b>Tyler D.</b> Intraoperative Testing of Selectivity of Spiral Nerve Cuff Electrodes, 26th Annual International Conference: IEEE Engineering in Medicine and Biology Society, San Francisco, CA USA, September 2004.	Sept 2004
• Polasek K, Kirsch R, Hoyen H, Keith M, and <b>Tyler D.</b> Intraoperative Testing of Selectivity of Spiral Nerve Cuff Electrodes, presented at IEEE Conference on Neural Engineering, Washington D.C.	March 2005
• Polasek K, Hoyen H, Keith M, Kirsch R, and <b>Tyler D.</b> Intraoperative Testing of Selectivity of Spiral Nerve Cuff Electrodes, presented at 10th Annual Conference of the International FES Society, Montreal, Canada, July 6-9, 2005	
• M.A. Schiefer, R.J. Triolo, K.J. Gustafson, <b>D.J. Tyler</b> "Optimized Contact Location on a Flat Interface Nerve-Cuff Electrode for Use in Standing Neuroprosthetic Systems," Neural Engineering and Rehabilitation Day, Cleveland, OH	2004
• M.A. Schiefer, R.J. Triolo, D.M. Durand, <b>D.J. Tyler</b> "Optimized Contact Location on a Flat Interface Nerve-Cuff Electrode for Use in Standing Neuroprosthetic Systems," 35th Annual NIH Neural Prosthesis Workshop, Washington, DC.	2004
• M.A. Schiefer, R.J. Triolo, D.M. Durand, <b>D.J. Tyler</b> "Modeling Selective Stimulation with a Flat Interface Nerve Electrode for Standing Neuroprosthetic Systems," 2nd International IEEE/EMBS Conference on Neural Engineering, Washington, DC.	2005
• M.A. Schiefer, R.J. Triolo, D.M. Durand, <b>D.J. Tyler</b> "Models of Selective Stimulation with a Flat Interface Nerve Electrode for Standing Neuroprosthetic Systems," ShowCASE (highlight of research at Case Western Reserve University)	2005
• M.A. Schiefer, K.J. Gustafson, R.J. Triolo, D.M. Durand, <b>D.J. Tyler</b> "Models of Selective Stimulation with a Flat Interface Nerve Electrode for Standing Neuroprosthetic Systems," 28th Annual Biomedical Graduate Student Symposium	2005
• M.A. Schiefer, R.J. Triolo, D.M. Durand, <b>D.J. Tyler</b> "Modeling Selective Stimulation with a FINE for Standing Neuroprosthetics," 10th Annual Conference of the International Functional Electrical Stimulation Society, Montreal, Quebec, CA.	2005
• M.A. Schiefer, R.J. Triolo, D.M. Durand, D.J. Tyler (2005) "Modeling Selective Stimulation with a FINE for Standing Neuroprosthetics," Neural Engineering	2005

and Dahahilitation Day Claudand OH	
and Renabilitation Day, Cleveland, OH	2005
• M.A. Schiefer, R.J. Triolo, D.M. Durand, <b>D.J. Tyler</b> "Modeling Selective Stimulation with a FINE for Standing Neuroprosthetics," BMES Annual Conference	
<ul> <li>M.A. Schiefer, K.J. Gustafson, R.J. Triolo, D.M. Durand, D.J. Tyler "Modeling Selective Stimulation with a FINE for Standing Neuroprosthetics," BME Research ShowCASE</li> </ul>	2005
<ul> <li>Michael Broniatowski, MD, FACS, Sharon Grundfest-Broniatowski, MD, FACS, Harvey M Tucker, MD, FACS, Dustin J Tyler, PhD, "The Case For Electronic Manipulation Of The Larynx In Voice Disorders," London UK Royal Academy of Music, London, Sept.</li> </ul>	2005
<ul> <li>Michael Broniatowski, MD, FACS, Sharon Grundfest-Broniatowski, MD, FACS, PhD, Harvey M Tucker, MD, FACS, Christopher Green, Dustin J Tyler, PhD, "Artificial Voice Modulation in the Canine By Recurrent Laryngeal Nerve Stimulation: Electrophysiological Confirmation of Anatomical Data," Combined Otolaryngological Spring Meeting (COSM), American Laryngological Association, Chicago, IL.</li> </ul>	2006
<ul> <li>Michael Broniatowski, MD, FACS, Sharon Grundfest-Broniatowski, MD, FACS, Dustin J Tyler, PhD, Harvey M Tucker, MD, FACS, Sheryl Brodsky, MA- CCCP/SLP, "A Human Laryngeal Pacemaker: Dynamic Laryngotracheal Closure for the Control of Aspiration," 7th International Workshop on Voice Surgery and Voice Care. Paris, France.</li> </ul>	2002
• Tyler, DJ, Broniatowski, M, Grundfest-Broniatowski, S, Brodsky, S, "Recurrent Laryngeal Nerve Stimulation To Reduce Aspiration: Demonstration Of Clinical Feasibility," IFESS Meeting, Cleveland, OH.	2001
<ul> <li>Broniatowski, M, Grundfest-Broniatowski, S, Tyler, DJ, Tucker, HM, Scolieri, P, Brodsky, S, "Clinical use of an implanted pacemaker for aspiration. A Preliminary Report," 104<sup>th</sup> Annual Meeting of the American Laryngological, Rhinological, and Otological Society, Palm Desert, CA.</li> </ul>	2001
• <b>Tyler, DJ</b> and DM Durand, "Small, Asymmetric Force Applied to a Peripheral Nerve: Chronic Affects of Nerve Reshaping Electrodes," Annals of Biomedical Engineering, 26 (S1), S-132.	1998
• Tyler, DJ and DM Durand, "Alteration of Nerve Geometry for Selective Stimulation," Proc. of IEEE-EMBS 19 <sup>th</sup> Int'l Conference, Chicago, IL, USA.	1997
<ul> <li>Qi, H, DJ Tyler, and DM Durand, "NeuroFuzzy Adaptive Control of Selective Stimulation: A Case Study," 2<sup>nd</sup> International Functional Electrical Stimulation Society Conference, Vancouver, Canada.</li> </ul>	1997
• <b>Tyler, DJ</b> and DM Durand, "Functional Peripheral Nerve Recruitment from a Flat Interface Nerve Electrode," 1 <sup>st</sup> International Functional Electrical Stimulation Society Conference, Cleveland, Ohio.	1996
• <b>Tyler, DJ</b> and DM Durand, "Selective Stimulation with a Chronic Slowly Penetration Interfascicular Nerve Electrode," Proc. of IEEE-EMBS 18 <sup>th</sup> Int'l Conference, Amsterdam, Netherlands.	1996
• Tyler, DJ and DM Durand, "Electrodes that Alter Peripheral Nerve Geometry to Enhance Functional Selectivity of Peripheral Nerve Stimulation," Biomedical Engineering Research Day, Case Western Reserve University.	1996
TI DI ADV Deserat "Combined Madations (Data With ID)	

	Amplitude to Enhance Functional Selectivity of Neural Stimulation," Proc. of IEEE-EMBS 17 <sup>th</sup> Int'l Conference, Montreal, Quebec, Canada.	1995
•	<b>Tyler, DJ</b> and DM Durand, "Selective Activation of Fasciculated Peripheral Nerves by an Interfascicular Electrode," Engineering Foundation Conference on Neural Prostheses, Motor Systems IV, Mt. Sterling, Ohio.	1994
•	<b>Tyler, DJ</b> and DM Durand, "A Method of Quantifying Electrode Performance Based on Non-Invasive Three dimensional Isometric Torque Data," Proc. of IEEE-EMBS 16 <sup>th</sup> Int'l Conference, Baltimore, MD.	1994
•	<b>Tyler, DJ</b> and DM Durand, "Design and Acute Tests of a Slowly Penetrating Interfascicular Nerve Electrode," Biomedical Engineering Research Day, Case Western Reserve University.	1994
•	<b>Tyler, DJ</b> and DM Durand, "Design and Acute Test of a Radially Penetrating Interfascicular Nerve Electrode," Proc. of IEEE-EMBS 15 <sup>th</sup> Int'l Conference, San Diego, CA.	1993