

# SIMON M. DANNER

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CONTACT INFORMATION	Drexel University College of Medicine Dept. of Neurobiology and Anatomy 2900 Queen Lane Philadelphia, PA 19129, USA	<i>E-mail:</i> simon.danner@gmail.com <i>E-mail:</i> simon.danner@drexelmed.edu <i>Phone:</i> (215) 991-8507
DAY OF BIRTH	December 26, 1985	
EDUCATION	<b>Vienna University of Technology</b> , Vienna, Austria	
	Doctoral studies in Engineering Sciences	<b>March 2010 to Oct. 2013</b>
	Degree: Doctor technicae (Dr.techn.) equiv. to PhD/DSc	
	Graduation with distinction	
	Thesis: <i>Locomotor rhythm and pattern generating networks of the human lumbar spinal cord</i> (Supervisor: Frank Rattay)	
	Master studies in Computer Science Management	<b>Mar. 2009 to Apr. 2011</b>
	Degree: Magister rerum socialium economicarumque (Mag.rer.soc.oec.) equiv. to MSocEcSc	
	Graduation with distinction	
	Thesis: <i>An application for learning and teaching extracellular stimulation of axons</i> (Supervisor: Frank Rattay)	
	Master studies in Medicine and Computer Science	<b>Oct. 2008 to Feb. 2010</b>
	Degree: Diplom Ingenieur (Dipl.-Ing.) equiv. to MSc	
	Graduation with distinction	
	Thesis: <i>Computer simulation of electrically stimulated nerve fibers in the human spinal cord</i> (Supervisor: Frank Rattay)	
	Bachelor studies in Medicine and Computer Science	<b>Oct. 2005 to July 2008</b>
	Degree: BSc	
	Thesis: <i>Cartoon style rendering</i> (Supervisor: Muhammad Muddassir Malik)	
EXPERIENCE	<b>Drexel University College of Medicine, Department of Neurobiology and Anatomy</b> , Philadelphia, PA	
	<i>Research associate (postdoc)</i>	<b>since May 2015</b>
	Computational Neuroscience (Rybak lab)	
	<b>Vienna University of Technology, Institute for Analysis and Scientific Computing</b> , Vienna, Austria	
	<i>Lecturer</i>	<b>since October 2011</b>
	<i>Research associate (postdoc)</i>	<b>November 2013 to April 2015</b>
	<i>Research associate (predoc)</i>	<b>September 2011 to October 2013</b>
	Computational Neuroscience (Rattay lab)	
	<b>Medical University of Vienna, Center for Medical Physics and Biomedical Engineering</b> , Vienna, Austria	
	<i>Research associate (postdoc)</i>	<b>November 2013 to April 2015</b>
	<i>Research associate (predoc)</i>	<b>August 2011 to October 2013</b>
	Clinical neurophysiology (Minassian lab) and biomedical engineering (Mayr lab)	
	<b>M. L. Zumtobel Liegenschaftsbeteiligungs GmbH</b> , Vienna, Austria	
	<i>Software development</i>	<b>May 2011 to June 2011</b>

**Baylor College of Medicine**, Houston, TX

*Study stay*

**Nov. 2010 to Apr. 2011**

**Medicinska fakulteta Univerza v Ljubljani**, Ljubljana, Slovenia

*Study stay*

**Sept. 2010 to Oct. 2010**

**Lehman Brothers International, London-Zurich Branch**, Zurich, Switzerland

*Software development*

**June 2007 to December 2007**

**Ausbildungszentrum Vorarlberg**, Bregenz, Austria

*Alternative civilian service*

**October 2004 to September 2005**

Care and help for handicapped adolescents

TEACHING  
EXPERIENCE

**Vienna University of Technology**, Vienna, Austria

Rattay, F., **Danner, S. M.**, Werginz, P., Hofstoetter, U. S., Minassian, K. & Hilscher, M. M. AKBIO Computational Neuroscience, 2016W. 3 ECTS, lecture.

**Danner, S. M.** Computational neuroscience, 2015S. 3 ECTS, lecture with exercise.

Rattay, F. & **Danner, S. M.** Computer simulation in medicine; lecture with demonstration, 2011W–2014W. 3 ECTS, lecture with demonstrations.

Rattay, F., **Danner, S. M.** & Wenger, C. Computer simulation; exercise, 2011W. 3 ECTS, exercise.

GRANTS

Co-PI, FWF P 29650: *Upper threshold phenomenon and its impact on neuroprostheses*. 2017–2021. (PI Frank Rattay.)

AWARDS AND  
SCHOLARSHIPS

Researcher of the month March 2016, Medical University of Vienna, Vienna, Austria.

Young investigator award 2015 (Stefan-Shuy-Preis) of the Austrian Society for Biomedical Engineering (OEGBMT) for Danner *et al.* (2015) *Brain* 138(3): 577–88.

Best poster award (1st prize) and travel award for the *2nd Annual Minnesota Neuromodulation Symposium, April 10–11, 2014, Minnesota, MN, 2014*.

First prize (60 participants) in the student competition of the *BMT 2013, Sept. 19–21, Graz, Austria*.

Travel award for the *22nd Annual Computational Neuroscience Meeting (CNS\*2013), July 13–18, Paris, France, 2013*.

Grad student travel award for *Cellular and Network Functions in the Spinal Cord May 22–25 2012, Madison, WI*.

Advancement award for the best master thesis presentation of the Austrian Society for Biomedical Engineering at the *Medizinische Physik 2011, 3 Ländertagung der ÖGMP, DGMP und SGSMP, Sept. 28–Oct. 1, Vienna, Austria*.

Merit scholarship from the Vienna University of Technology for the academic years of 2008/2009, 2009/2010, and 2012/2013.

SOCIETIES

Secretary: TU-BIOMED

Member: International Society for Restorative Neurology, Society for Neuroscience, Organization for Computational Neuroscience, Austrian Society for Biomedical Engineering, IEEE

- ORGANIZATION OF MEMBER OF THE SCIENTIFIC COMMITTEE FOR THE 12TH VIENNA INTERNATIONAL WORKSHOP ON FES, CONFERENCES SEPT. 7–9, 2016, VIENNA, AUSTRIA.
- MEMBER OF THE SCIENTIFIC COMMITTEE FOR THE 11TH VIENNA INTERNATIONAL WORKSHOP ON FES, SEPT. 18–21, 2013, GRAZ, AUSTRIA.
- MEMBER OF THE ORGANIZING COMMITTEE FOR THE INAUGURAL MEETING OF THE INTERNATIONAL SOCIETY FOR RESTORATIVE NEUROLOGY (ISRN), MAY 13–16, 2012, MELBOURNE, AUSTRALIA.
- PUBLICATIONS IN PEER-REVIEWED JOURNALS
- Hofstoetter, U. S., Freundl, B., **Danner, S. M.**, Krenn, M., Mayr, W. and Minassian, K. (submitted). Single and repetitive sessions of transcutaneous spinal cord stimulation reduce spasticity in spinal cord injured individuals. *Scientific Reports*.
- Danner, S. M.**, Wilshin, S. D., Shetsova, N. A. and Rybak, I. A. (2016). Central control of interlimb coordination and speed-dependent gait expression in quadrupeds. *The Journal of Physiology*. doi: 10.1113/JP272787
- Minassian, K., Hofstoetter, U. S., **Danner, S. M.**, Mayr, W., Bruce, J. A., McKay, W. B. and Tansey, K. E. (2016). Spinal rhythm generation by step-induced feedback and transcutaneous posterior root stimulation in complete spinal cord-injured individuals. *Neurorehabilitation & Neural Repair* 30(3), 233–243. doi: 10.1177/1545968315591706
- Danner, S. M.**, Krenn, M., Hofstoetter, U. S., Toth, A., Mayr, W. and Minassian, K. (2016). Body position influences which neural structures are recruited by lumbar transcutaneous spinal cord stimulation. *PLoS ONE* 11(1), e0147479. doi: 10.1371/journal.pone.0147479
- Dimitrijevic, M. R., **Danner, S. M.** and Mayr, W. (2015). Neurocontrol of movement in humans with spinal cord injury. *Artificial Organs* 39(10), 823–833. doi: 10.1111/aor.12614
- Hofstoetter, U. S., Krenn, M., **Danner, S. M.**, Hofer, C., Kern, H., McKay, W. B., Mayr, W. and Minassian, K. (2015). Augmentation of voluntary locomotor activity by transcutaneous spinal cord stimulation in motor-incomplete spinal cord injured individuals. *Artificial Organs* 39(10), E176–E186. doi: 10.1111/aor.12615
- Krenn, M., Hofstoetter, U. S., **Danner, S. M.**, Minassian, K. and Mayr, W. (2015). Multi-electrode array for transcutaneous lumbar posterior-root stimulation. *Artificial Organs* 39(10), 834–840. doi: 10.1111/aor.12616
- Hofstoetter, U. S., **Danner, S. M.**, Freundl, B., Binder, H., Mayr, W., Rattay, F. and Minassian, K. (2015). Periodic modulation of repetitively elicited monosynaptic reflexes of the human lumbosacral spinal cord. *Journal of Neurophysiology* 114(1), 400–410. doi: 10.1152/jn.00136.2015
- Danner, S. M.**, Hofstoetter, U. S., Freundl, B., Binder, H., Mayr, W., Rattay, F. and Minassian, K. (2015). Human spinal locomotor control is based on flexibly organized burst generators. *Brain* 138(3), 577–588. doi: 10.1093/brain/awu372
- Rattay, F. and **Danner, S. M.** (2014). Peak I of the human auditory brainstem response results from the somatic regions of type I spiral ganglion cells: evidence from computer modeling. *Hearing Research*, 315, 67–79. doi: 10.1016/j.heares.2014.07.001
- Köchler, B., **Danner, S. M.**, Jagsch, R., Brandt, L. and Fischer, G. (2014). Health-related and legal interventions: A comparison of allegedly delinquent and convicted opioid addicts in Austria. *Drug Science, Policy and Law* 1, 2050324514528449. doi: 10.1177/2050324514528449.
- Krouchev, N. I., **Danner, S. M.**, Vinet, A., Rattay, F. and Sawan, M. (2014). Energy-optimal electrical-stimulation pulses shaped by the least-action principle. *PLoS ONE* 9(3), e90480. doi: 10.1371/journal.pone.0090480

**Danner, S. M.**, Hofstoetter, U. S., Ladenbauer, J., Rattay, F. and Minassian, K. (2011). Can the human lumbar posterior columns be stimulated by transcutaneous spinal cord stimulation? A modeling study. *Artificial Organs* 35(3), 257–262. doi: 10.1111/j.1525-1594-2011.01213.x

BOOK (CHAPTERS) **Danner, S. M.**, Hofstoetter, U. S. and Minassian K. (2015). Finite Element Models of Transcutaneous Spinal Cord Stimulation. In: Jaeger D., Jung R. (Eds.) *Encyclopedia of Computational Neuroscience*, 1197–1202. New York: Springer. doi: 10.1007/978-1-4614-6675-8\_604

Rattay, F., **Danner, S. M.**, Hofstoetter, U. S. and Minassian K. (2015). Finite element modeling for extracellular stimulation. In: Jaeger D., Jung R. (Eds.) *Encyclopedia of Computational Neuroscience*, 1186–1195. New York: Springer. doi: 10.1007/978-1-4614-6675-8\_593

Hofstoetter, U. S., **Danner, S. M.** and Minassian, K. (2015). Paraspinal magnetic and transcutaneous electrical stimulation. In: Jaeger D., Jung R. (Eds.) *Encyclopedia of Computational Neuroscience*, 2194–2212. New York: Springer. doi: 10.1007/978-1-4614-6675-8\_603

**Danner, S. M.**, Wenger, C. and Rattay, F. (2011). *Electrical stimulation of myelinated axons: An interactive tutorial supported by computer simulation*. Saarbrücken: VDM Verlag.

Száva, Z., **Danner, S. M.** and Minassian, K. (2011). *Transcutaneous electrical spinal cord stimulation: Biophysics of a new rehabilitation method after spinal cord injury*. Saarbrücken: VDM Verlag.

Assistant editor of Dimitrijevic, M. R., Kakulas, B. A., McKay, W. B. and Vrbova, G. (eds.) (2011). *Restorative neurology of spinal cord injury*. New York: Oxford University Press.

INVITED LECTURES **Danner, S. M.** (2015). Human lumbar locomotor networks: neurophysiology and computer modeling. *Departmental seminar*, Department of Neurobiology and Anatomy, Drexel University College of Medicine, Philadelphia, PA, USA.

**Danner, S. M.** (2014). Mathematical models of the human locomotor network. *APOSM 2014 & ISRN, Nov. 28–30*, Taipei, Taiwan.

**Danner, S. M.**, Rattay, F., Hofstoetter, U. S., Mayr, W. and Minassian, K. (2014). Modelling locomotor pattern generating networks of the human lumbar spinal cord. In Zidar, J. (ed.). *International Symposium on Spasticity and Neural Control of Movement with the 30th Dr. Janez Faganel Memorial Lecture, Sept. 4–6, Ljubljana, Slovenia*, 30–31. Ljubljana, Slovenia: Section for Clinical Neurophysiology of the Slovenian Medical Association.

CONFERENCE  
ABSTRACTS

**Danner, S. M.**, Wilshin, S. D., Bellardita, C., Shetsova, N. A., Kiehn, O. and Rybak, I. A. (2016). Spinal circuits controlling speed-dependent gait expression in quadrupeds: insights from computational modeling. *Neuroscience 2016, Nov. 12–16*, San Diego, CA.

**Danner, S. M.**, Shevtsova, N. A. and Rybak, I. A. (2016). Comparative modeling of spinal mechanisms for speed-dependent gait transitions in quadrupeds. *Motor Systems Symposium 2016, Nov. 11*, San Diego, CA.

**Danner, S. M.**, Shevtsova, N. A. and Rybak, I. A. (2015). The role of commissural interneurons in speed-dependent changes of inter-limb coordination and locomotor gait: insights from computational modeling. *Pre-meeting on Rhythmic Motor Circuits, Oct. 16*, Chicago, IL.

Krenn, M., **Danner, S. M.**, Vargas-Luna, J. L., Toth, A., Hofstoetter, U. S., Minassian, K. and Mayr, W. (2015). Variation of the stimulation site changes the excitation of the lumbosacral spinal reflexes. *Progress in Motor Control X, July 22–25*, Budapest, Hungary.

Vargas-Luna, J. L., Krenn, M., **Danner, S. M.**, Hofstoetter, U. S., Minassian, K., Mayr, W. and Helgason, T. (2015). Comparison of cathodic and anodic transspinal electrical stimulation to evoke posterior root-muscle reflexes. *Progress in Motor Control X, July 22–25*, Budapest, Hungary.

**Danner, S. M.**, Dimitrijevic, M. R., Hofstoetter, U. S., Krenn, M., Mayr, W., Minassian, K., Rattay, F. and Rothwell, J. C. (2014). Long-latency spinal reflexes predict rhythmicity in response to epidural lumbar cord stimulation. *Neuroscience 2014, Nov. 15–19*, Washington, DC.

Hofstoetter, U. S., Krenn, M., **Danner, S. M.**, Freundl, B., Binder, H., Rattay, F., Mayr, W. and Minassian, K. (2014). Short- and long-term effects of intermittent transcutaneous spinal cord stimulation on spinal spasticity and residual motor control. *Neuroscience 2014, Nov. 15–19*, Washington, DC.

Krenn, M., **Danner, S. M.**, Schlaff, C., Hofstoetter, U. S., Minassian, K., Mayr, W. and Dimitrijevic, M. R. (2014). Altering spinal cord excitability by peripheral nerve stimulation. *Neuroscience 2014, Nov. 15–19*, Washington, DC.

Köchler, B., **Danner, S. M.**, Jagsch, R., Brandt, L. and Fischer, G. (2014). Health-related and legal interventions: A comparison of allegedly delinquent and convicted opioid addicts in Austria. *The 17th EASAR conference, May 15–17, Lüneburg, Germany*.

**Danner, S. M.**, Dimitrijevic, M. R., Hofstoetter, U. S., Krenn, M., Mayr, W., Minassian, K., Rattay, F. and Rothwell, J. C. (2014). Motor behavior of the human lumbar spinal cord network responding to externally controlled activity: A neurophysiological study. *2nd Minnesota Neuromodulation Symposium, April 10–11, Minneapolis, MN*.

**Danner, S. M.**, Rattay, F., Hofstoetter, U. S., Dimitrijevic, M. R. and Minassian, K. (2013). Modeling locomotor pattern generating networks of the human lumbar spinal cord. *Neuroscience 2013, Nov. 9–13, San Diego, CA*.

Dimitrijevic, M. R., Hofstoetter, U. S., Mayr, W., Minassian, K., Rattay, F. and **Danner, S. M.** (2013). Epidural stimulation of the human lumbar spinal cord can elicit characteristic tonic motor outputs. *Neuroscience 2013, Nov. 9–13, San Diego, CA*.

Hofstoetter, U. S., Minassian, K., **Danner, S. M.**, Rattay, F. and Dimitrijevic, M. R. (2013). Alternating modulations of posterior root-muscle reflexes of the human lumbosacral spinal cord: Inhibitory circuits outside the lumbar locomotor pattern generator. *Neuroscience 2013, Nov. 9–13, San Diego, CA*.

Minassian, K., **Danner, S. M.**, Hofstoetter, U. S., Rattay, F. and Dimitrijevic, M. R. (2013). Central rhythm and pattern generating capabilities of the human lumbar spinal cord. *Neuroscience 2013, Nov. 9–13, San Diego, CA*.

Krenn, M., Toth, A., **Danner, S. M.**, Hofstoetter, U. S., Minassian, K. and Mayr, W. (2013). Selectivity of transcutaneous lumbar spinal cord stimulation for eliciting posterior root-muscle reflexes in humans. *Neuroscience 2013, Nov. 9–13, San Diego, CA*.

**Danner, S. M.** and Dimitrijevic, M. R. (2013). Segmental and plurisegmental processing capabilities of the human lumbar cord isolated from brain motor control. *52nd Annual Scientific Meeting of ISCOS, October 28–30, Istanbul, Turkey*.

**Danner, S. M.**, McKay, W. B., Minassian, K., Hofstoetter, U. S., Mayr, W., Rattay, F. and Dimitrijevic, M. R. (2013). Neurophysiology model of the human lumbar cord separated from brain control by traumatic injury. *SiNAPSA Neuroscience Conference '13 (SNC'13), September 27–29, Ljubljana, Slovenia*.

Krenn, M., Minassian, K., Hofstoetter, U. S., **Danner, S. M.**, Dimitrijevic, M. R. and Mayr, W. (2013). Electrophysiology of posterior roots-muscle reflex of the human lumbosacral cord. *SiNAPSA Neuroscience Conference '13 (SNC'13), September 27–29, Ljubljana, Slovenia*.

**Danner, S. M.**, Rattay, F., Hofstoetter, U. S., Dimitrijevic, M. R. and Minassian, K. (2013). Locomotor rhythm and pattern generating networks of the human lumbar spinal cord: an electrophysiological and computer modeling study. *22nd Annual Computational Neuroscience*

meeting: *CNS\*2013, July 13–18, Paris, France. BMC Neuroscience, 14* (Suppl 1), P274. doi: 10.1186/1471-2202-14-S1-P274

Mayr, W., **Danner, S. M.**, Hofstoetter, U. S., Krenn, M., Minassian, K., Tansey, K., Freundl, B. and Binder, H. (2013). Non-invasive spinal cord stimulation and assisted treadmill stepping to generate rhythmic activities in motor complete spinal cord injured people. *Wings for Life scientific meeting, April 23–24 2013, Salzburg, Austria.*

**Danner, S. M.** (2013). Locomotor rhythm and pattern generating networks of the human lumbar spinal cord: Computer modeling study. *Workshop on Recent advances in the pathophysiology and neurorehabilitation of spinal lesions, April 13, 2013, Trieste, Italy.*

**Danner, S. M.**, Sarabon, N., Panjan, A., Mayr, W., Hofstoetter, U. S., Minassian, K., Krenn, M., Rattay, F., Tansey, K. E. and Dimitrijevic, M. R. (2012). Modification of posterior root-muscle reflexes by volitional motor tasks. *Program Number 890.01. Neuroscience Meeting Planner, New Orleans, LA.*

Mayr, W., Minassian, K., Tansey, K., Rattay, F., **Danner, S.**, Krenn, M., Hofstoetter, U., Dimitrijevic, M. (2012). Non-invasive transcutaneous stimulation of the human lumbar spinal cord facilitates locomotor output in spinal cord injury. *DGBMT Jahrestagung (BMT 2012), Jena, Germany.*

**Danner, S. M.**, Hofstoetter, U. S., Minassian, K., Rattay, F., Mayr, W. and Dimitrijevic, M. R. (2012). The human lumbar cord circuitry disconnected from the brain can generate a variety of motor outputs in response to non-patterned spinal cord stimulation at different frequencies. *Cellular and Network Functions in the Spinal Cord, May 22–25, Madison, WI.*

Mayr, W., **Danner, S. M.**, Sarabon, N., Panjan, A., Krenn, M., Hofstoetter, U. S., Minassian, K., Rattay, F. and Dimitrijevic, M. R. (2012). Effect of functional electrical stimulation on the central state of excitability of the spinal cord. *World Congress for Medical Physics and Biomedical Engineering, Beijing, China.*

**Danner, S. M.**, Rattay, F., Bijak, M., Mayr, W., Minassian, K., Hofstoetter, U. S. and Dimitrijevic, M. R. (2011). Human lumbar cord can process spinal cord stimulation of different frequencies. *Program No. 182.06. 2011 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2011. Online.*

**Danner, S. M.** and Rattay, F. (2011). An application for learning and teaching extracellular stimulation of axons. *Medizinische Physik 2011, 3 Ländertagung der ÖGMP, DGMP und SGSM, Sept. 28–Oct. 1, Vienna, Austria.*

**Danner, S. M.** (2011). An application for learning and teaching extracellular stimulation of axons. *EPILOG, Präsentation der Diplomarbeiten der Fakultät Informatik, Sommersemester 2011, Vienna, Austria, 82.*

Dimitrijevic, M. R. and **Danner, S. M.** (2011). Spinal interneuronal network activity elicited by epidural lumbar posterior root stimulation. *8th International Symposium on Experimental Spinal Cord Repair and Regeneration, Brescia, Italy.*

Dimitrijevic, M. R. and **Danner, S. M.** (2011). Neurocontrol of gait in patients with initial complete upper motor neuron lesion after spinal cord injury. *8th international symposium on experimental spinal cord repair and regeneration, Brescia, Italy.*

Rattay, F., Minassian, K., Hofstoetter, U. S., **Danner, S. M.**, Mayr, W. and Dimitrijevic, M. R. (2010). Computation in neuroscience of conducting and processing capabilities of the human nervous system. *10th Vienna international workshop on functional electrical stimulation and 15th annual conference of the international FES society, Vienna, Austria.*

**Danner, S. M.** (2010). Biologically based simulation of human locomotor neural circuits activated by spinal cord stimulation. *MEiCogSci Conference, Dubrovnik, Croatia, 14.*

**Danner, S. M.** (2010). Computer simulation of electrically stimulated nerve fibers in the human spinal cord. *EPILOG, Präsentation der Diplomarbeiten der Fakultät für Informatik, Sommersemester 2010, Vienna, Austria*, 80.

**Danner, S. M.**, Rattay, F., Hofstoetter, U. S., Mayr, W. and Minassian, K. (2014). Modelling locomotor pattern generating networks of the human lumbar spinal cord. *International Symposium on Spasticity and Neural Control of Movement with the 30th Dr. Janez Faganel Memorial Lecture, Sept. 4–6, Ljubljana, Slovenia*, 60–61. Ljubljana, Slovenia: Section for Clinical Neurophysiology of the Slovenian Medical Association.

Rattay, F., **Danner, S. M.**, Hofstoetter, U. S. and Minassian, K. (2014). Research in fundamentals of muscle and nerve electrical stimulation. In Zidar, J. (ed.). *International Symposium on Spasticity and Neural Control of Movement with the 30th Dr. Janez Faganel Memorial Lecture, Sept. 4–6, Ljubljana, Slovenia*, 30–31. Ljubljana, Slovenia: Section for Clinical Neurophysiology of the Slovenian Medical Association.

Minassian, K., Hofstoetter, U. S., **Danner, S. M.**, Freundl, B., Binder, H., Mayr, W., Rattay, F. and Dimitrijevic, M. R. (2014). Neurophysiology of the human lumbar spinal rhythm and pattern generation under sustained, repetitive stimulation. In Zidar, J. (ed.). *International Symposium on Spasticity and Neural Control of Movement with the 30th Dr. Janez Faganel Memorial Lecture, Sept. 4–6, Ljubljana, Slovenia*, 30–31. Ljubljana, Slovenia: Section for Clinical Neurophysiology of the Slovenian Medical Association.

Hofstoetter, U. S., Minassian, K., **Danner, S. M.**, Krenn, M., Freundl, B., Binder, H., Mayr, W., Rattay, F. and Dimitrijevic, M. R. (2014). Non-invasive spinal cord stimulation for spasticity control and augmentation of motor control in spinal cord injured individuals. In Zidar, J. (ed.). *International Symposium on Spasticity and Neural Control of Movement with the 30th Dr. Janez Faganel Memorial Lecture, Sept. 4–6, Ljubljana, Slovenia*, 30–31. Ljubljana, Slovenia: Section for Clinical Neurophysiology of the Slovenian Medical Association.

Krenn, M., Minassian, K., Hofstoetter, U. S., **Danner, S. M.**, Dimitrijevic, M. R. and Mayr, W. (2014). Electrophysiology of posterior root-muscle reflexes. In Zidar, J. (ed.). *International Symposium on Spasticity and Neural Control of Movement with the 30th Dr. Janez Faganel Memorial Lecture, Sept. 4–6, Ljubljana, Slovenia*, 30–31. Ljubljana, Slovenia: Section for Clinical Neurophysiology of the Slovenian Medical Association.

Mayr, W., Krenn, M., Minassian, K., Hofstoetter, U. S., **Danner, S. M.** and Dimitrijevic, M. R. (2014). Instrumentation for transcutaneous spinal cord stimulation. In Zidar, J. (ed.). *International Symposium on Spasticity and Neural Control of Movement with the 30th Dr. Janez Faganel Memorial Lecture, Sept. 4–6, Ljubljana, Slovenia*, 30–31. Ljubljana, Slovenia: Section for Clinical Neurophysiology of the Slovenian Medical Association.

Krouchev, N. I., **Danner, S. M.**, Vinet, A., Sawan, M. and Rattay, F. (2014). Synthesis of high-frequency blockade in the mammalian axon. *35th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, August 26–30, Chicago, IL*.

**Danner, S. M.**, Hofstoetter, U. S., Krenn, M., Mayr, W., Rattay, F. and Minassian, K. (2014). Potential distribution and nerve fiber responses in transcutaneous lumbosacral spinal cord stimulation. *4th International Conference on Advancements of Medicine and Health Care through Technology (Meditech 2014), June 5–7, Cluj-Napoca, Romania. IFMBE Proceedings, 44*, 203–208. doi: 10.1007/978-3-319-07653-9\_41

Krenn, M., **Danner, S. M.**, Schweiger, A., Hofstoetter, U. S., Minassian, K. and Mayr, W. (2014). Design of a multi-site electrical stimulation system for transcutaneous lumbar posterior roots stimulation. *4th International Conference on Advancements of Medicine and Health Care through Technology (Meditech 2014), June 5–7, Cluj-Napoca, Romania. IFMBE Proceedings, 44*, 43–46. doi: 10.1007/978-3-319-07653-9\_9

**Danner, S. M.**, Hofstoetter, U. S., Rattay, F. and Minassian, K. (2013). Modeling of transcutaneous spinal cord stimulation. *The 6th International IEEE EMBS Neural Engineering Conference, November 6–8, San Diego, CA*.

**Danner, S. M.**, Rattay, F., Hofstoetter, U. S., Dimitrijevic, M. R. and Minassian, K. (2013). Pattern generating networks in the human lumbar spinal cord: electrophysiology and computer modeling. *BMT 2013, Sept. 19–21, Graz, Austria. Biomedizinische Technik/Biomedical Engineering* (Suppl 1). doi: 10.1515/bmt-2013-4012.

Hofstoetter, U. S., Hofer, C., Kern, H., **Danner, S. M.**, Mayr, W., Dimitrijevic, M. R. and Minassian, K. (2013). Effects of transcutaneous spinal cord stimulation on voluntary locomotor activity in an incomplete spinal cord injured individual. *BMT 2013, Sept. 19–21, Graz, Austria. Biomedizinische Technik/Biomedical Engineering* (Suppl 1). doi: 10.1515/bmt-2013-4014.

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