

SIMON M. DANNER

CONTACT INFORMATION

Drexel University College of Medicine
Dept. of Neurobiology and Anatomy
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EDUCATION

Vienna University of Technology, Vienna, Austria

Doctoral studies in Engineering Sciences **March 2010 to October 2013**

Degree: Doctor technicae (Dr.techn.) equiv. to PhD/DSc

Graduation with distinction

Thesis: *Locomotor rhythm and pattern generating networks of the human lumbar spinal cord*
(Supervisor: Frank Rattay)

Master studies in Computer Science Management **March 2009 to April 2011**

Degree: Magister rerum socialium economicarumque (Mag.rer.soc.oec.) equiv. to MSocEcSc

Graduation with distinction

Thesis: *An application for learning and teaching extracellular stimulation of axons* (Supervisor: Frank Rattay)

Master studies in Medicine and Computer Science **October 2008 to February 2010**

Degree: Diplom Ingenieur (Dipl.-Ing.) equiv. to MSc

Graduation with distinction

Thesis: *Computer simulation of electrically stimulated nerve fibers in the human spinal cord*
(Supervisor: Frank Rattay)

Bachelor studies in Medicine and Computer Science **October 2005 to July 2008**

Degree: BSc

Thesis: *Cartoon style rendering* (Supervisor: Muhammad Muddassir Malik)

EXPERIENCE

Drexel University College of Medicine, Dept. of Neurobiology and Anatomy, Philadelphia, PA

Instructor **since January 2018**

Research associate (postdoc) **May 2015 to December 2017**

Computational Neuroscience (Rybak lab)

Vienna University of Technology, Institute for Analysis and Scientific Computing, Vienna, Austria

Lecturer **since October 2011**

Research associate (postdoc) **November 2013 to April 2015**

Research associate (predoc) **September 2011 to October 2013**

Computational Neuroscience (Rattay lab)

Medical University of Vienna, Ctr. for Medical Physics & Biomedical Engineering, Vienna, Austria

Research associate (postdoc) **November 2013 to April 2015**

Research associate (predoc) **August 2011 to October 2013**

Clinical neurophysiology (Minassian lab) and biomedical engineering (Mayr lab)

M. L. Zumtobel Liegenschaftsbeteiligungs GmbH, Vienna, Austria

Software development

May 2011 to June 2011

Baylor College of Medicine, Houston, TX

Study stay

November 2010 to April 2011

Medicinska fakulteta Univerza v Ljubljani, Ljubljana, Slovenia

Study stay

September 2010 to October 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

Education, care and help for adolescents with cognitive/developmental disabilities

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.

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); 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.*

Best master thesis presentation; 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 CONFERENCES Member of the scientific committee for the 12th Vienna International Workshop on FES, 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.
- REFEREED JOURNAL PUBLICATIONS **Danner, S. M.**, Shevtsova, N. A., Frigon, A. and Rybak, I. A. (2017). Computational modeling of spinal circuits controlling limb coordination and gaits in quadrupeds. *eLife* 6, e31050. DOI: 10.7554/eLife.31050
- Danner, S. M.**, Wilshin, S. D., Shevtsova, N. A. and Rybak, I. A. (2016). Central control of interlimb coordination and speed-dependent gait expression in quadrupeds. *The Journal of Physiology* 594(23), 6947–6967. 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.

SUBMITTED ARTICLES Hurteau, M.-F., Thibaudier, Y., Dambreville, C., **Danner, S. M.**, Ilya, I. A. and Frigon, A. (submitted). Intralimb and interlimb cutaneous reflexes during locomotion in the intact cat.

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.

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 & ISRN 2014*, 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. *International Symposium on Spasticity and Neural Control of Movement with the 30th Dr. Janez Faganel Memorial Lecture*, Sept. 4–6, Ljubljana, Slovenia.

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.

CONFERENCE ABSTRACTS **Danner, S. M.**, Shevtsova, N. A. and Rybak, I. A. (2017). Computational modeling study of the role of long propriospinal neurons in speed-dependent gait expression. *Neuroscience 2017*, Nov. 11–15, Washington, DC.

Shevtsova, N. A., **Danner, S. M.** and Rybak, I. A. (2017). Computational modeling of interactions between cervical and lumbar CPG circuits in the rodent spinal cord in vitro. *Neuroscience 2017*, Nov. 11–15, Washington, DC.

Danner, S. M., Wilshin, S. D., Bellardita, C., Shevtsova, 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 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., 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 SGSMP, 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.

REFEREED
CONFERENCE
PAPERS

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*, 57–59. 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*, 54–56. 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*, 52–53. 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*, 64–65. 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*. Published in: *Biomedizinische Technik/Biomedical Engineering 58*(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*. Published in: *Biomedizinische Technik/Biomedical Engineering 58*(Suppl 1). DOI: 10.1515/bmt-2013-4014

Minassian, K., Hofstoetter, U. S., **Danner, S. M.**, Mayr, W., McKay, W. B., Tansey, K. and Dimitrijevic, M. R. (2013). Mechanisms of rhythm generation of the human lumbar spinal cord in response to tonic stimulation without and with step-related sensory feedback. *BMT 2013, Sept. 19–21, Graz, Austria*. Published in: *Biomedizinische Technik/Biomedical Engineering 58*(Suppl 1). DOI: 10.1515/bmt-2013-4013

Krenn, M., Toth, A., **Danner, S. M.**, Hofstoetter, U. S., Minassian, K. and Mayr, W. (2013). Selectivity of transcutaneous stimulation of lumbar posterior roots at different spinal levels in humans. *BMT 2013, Sept. 19–21, Graz, Austria*. Published in: *Biomedizinische Technik/Biomedical Engineering 58*(Suppl 1). DOI: 10.1515/bmt-2013-4010

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