

Stanford



Jaimie Henderson, MD

John and Jene Blume - Robert and Ruth Halperin Professor, Professor of Neurosurgery and, by courtesy, of Neurology at the Stanford University Medical Center

CLINICAL OFFICES

- **Stanford Neuroscience Health Center**

213 Quarry Rd

4th Fl MC 5958

Palo Alto, CA 94304

Tel (650) 723-6469

Fax (650) 725-0390

ACADEMIC CONTACT INFORMATION

- **Administrative Contact**

Erika Siauciunas

Email siauciunas@stanford.edu

Tel 650-497-1466

Bio

CLINICAL FOCUS

- Functional Neurosurgery
- Movement Disorders
- Epilepsy
- Neurological Surgery
- Trigeminal Neuralgia
- Deep Brain Stimulation
- Neuromodulation

ACADEMIC APPOINTMENTS

- Professor - Med Center Line, Neurosurgery
- Professor - Med Center Line (By courtesy), Neurology & Neurological Sciences
- Member, Bio-X
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Director, Stereotactic and Functional Neurosurgery, (2004- present)

PROFESSIONAL EDUCATION

- Board Certification: Neurological Surgery, American Board of Neurological Surgery (2000)
- Residency: St Louis University Hospital (1995) MO
- Internship: Rush University Medical College (1989) IL
- Medical Education: Rush University Medical College (1988) IL
- M.D., Rush Medical College, Medicine (1988)

- B.A., Washington University, St. Louis , Biology (1984)

LINKS

- Get a Second Opinion: <https://stanfordhealthcare.org/second-opinion/overview.html>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

My research interests encompass several areas of stereotactic and functional neurosurgery, including frameless stereotactic approaches for therapy delivery to deep brain nuclei; cortical physiology and its relationship to normal and pathological movement; brain-computer interfaces; and the development of novel neuromodulatory techniques for the treatment of movement disorders, epilepsy, pain, and other neurological diseases.

Teaching

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Darrel Deo, Sergey Stavisky

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Neurosciences (Phd Program)

Publications

PUBLICATIONS

- **Hand Knob Area of Premotor Cortex Represents the Whole Body in a Compositional Way.** *Cell*
Willett, F. R., Deo, D. R., Avansino, D. T., Rezaei, P., Hochberg, L. R., Henderson, J. M., Shenoy, K. V.
2020
- **Neural ensemble dynamics in dorsal motor cortex during speech in people with paralysis.** *eLife*
Stavisky, S. D., Willett, F. R., Wilson, G. H., Murphy, B. A., Rezaei, P., Avansino, D. T., Memberg, W. D., Miller, J. P., Kirsch, R. F., Hochberg, L. R., Ajiboye, A. B., Druckmann, S., Shenoy, et al
2019; 8
- **Cortical control of a tablet computer by people with paralysis.** *PloS one*
Nuyujukian, P., Albites Sanabria, J., Saab, J., Pandarinath, C., Jarosiewicz, B., Blabe, C. H., Franco, B., Mernoff, S. T., Eskandar, E. N., Simeral, J. D., Hochberg, L. R., Shenoy, K. V., Henderson, et al
2018; 13 (11): e0204566
- **High performance communication by people with paralysis using an intracortical brain-computer interface.** *eLife*
Pandarinath, C., Nuyujukian, P., Blabe, C. H., Sorice, B. L., Saab, J., Willett, F. R., Hochberg, L. R., Shenoy, K. V., Henderson, J. M.
2017; 6
- **Clinical translation of a high-performance neural prosthesis.** *Nature medicine*
Gilja, V., Pandarinath, C., Blabe, C. H., Nuyujukian, P., Simeral, J. D., Sarma, A. A., Sorice, B. L., Perge, J. A., Jarosiewicz, B., Hochberg, L. R., Shenoy, K. V., Henderson, J. M.
2015; 21 (10): 1142-1145
- **Assessment of brain-machine interfaces from the perspective of people with paralysis** *JOURNAL OF NEURAL ENGINEERING*
Blabe, C. H., Gilja, V., Chestek, C. A., Shenoy, K. V., Anderson, K. D., Henderson, J. M.
2015; 12 (4)
- **Neural population dynamics in human motor cortex during movements in people with ALS** *ELIFE*
Pandarinath, C., Gilja, V., Blabe, C. H., Nuyujukian, P., Sarma, A. A., Sorice, B. L., Eskandar, E. N., Hochberg, L. R., Henderson, J. M., Shenoy, K. V.
2015; 4

- **Deep posteromedial cortical rhythm in dissociation.** *Nature*
Vesuna, S., Kauvar, I. V., Richman, E., Gore, F., Oskotsky, T., Sava-Segal, C., Luo, L., Malenka, R. C., Henderson, J. M., Nuyujukian, P., Parvizi, J., Deisseroth, K.
2020
- **Power-saving design opportunities for wireless intracortical brain-computer interfaces.** *Nature biomedical engineering*
Even-Chen, N., Muratore, D. G., Stavisky, S. D., Hochberg, L. R., Henderson, J. M., Murmann, B., Shenoy, K. V.
2020
- **Speech-related dorsal motor cortex activity does not interfere with iBCI cursor control.** *Journal of neural engineering*
Stavisky, S. D., Willett, F. R., Avansino, D. T., Hochberg, L. R., Shenoy, K. V., Henderson, J. M.
2020; 17 (1): 016049
- **Neural Representation of Observed, Imagined, and Attempted Grasping Force in Motor Cortex of Individuals with Chronic Tetraplegia.** *Scientific reports*
Rastogi, A., Vargas-Irwin, C. E., Willett, F. R., Abreu, J., Crowder, D. C., Murphy, B. A., Memberg, W. D., Miller, J. P., Sweet, J. A., Walter, B. L., Cash, S. S., Rezaii, P. G., Franco, et al
2020; 10 (1): 1429
- **Improved Vim targeting for focused ultrasound ablation treatment of essential tremor: A probabilistic and patient-specific approach.** *Human brain mapping*
Su, J. H., Choi, E. Y., Tourdias, T., Saranathan, M., Halpern, C. H., Henderson, J. M., Pauly, K. B., Ghanouni, P., Rutt, B. K.
2020
- **Anatomic and Thermometric Analysis of Cranial Nerve Palsy after Laser Amygdalohippocampotomy for Mesial Temporal Lobe Epilepsy.** *Operative neurosurgery (Hagerstown, Md.)*
Huang, Y., Leung, S. A., Parker, J. J., Ho, A. L., Wintermark, M., Patel, S. H., Pauly, K. B., Kakusa, B. W., Beres, S. J., Henderson, J. M., Grant, G. A., Halpern, C. H.
2019
- **Volitional control of single-electrode high gamma local field potentials by people with paralysis** *JOURNAL OF NEUROPHYSIOLOGY*
Milekovic, T., Bacher, D., Sarma, A. A., Simeral, J. D., Saab, J., Pandarinath, C., Yvert, B., Sorice, B. L., Blabe, C., Oakley, E. M., Tringale, K. R., Eskandar, E., Cash, et al
2019; 121 (4): 1428–50
- **Robot-assisted versus manual navigated stereoelectroencephalography in adult medically-refractory epilepsy patients.** *Epilepsy research*
Kim, L. H., Feng, A. Y., Ho, A. L., Parker, J. J., Kumar, K. K., Chen, K. S., Grant, G. A., Henderson, J. M., Halpern, C. H.
2019; 159: 106253
- **Impact of skull density ratio on efficacy and safety of magnetic resonance-guided focused ultrasound treatment of essential tremor.** *Journal of neurosurgery*
D'Souza, M., Chen, K. S., Rosenberg, J., Elias, W. J., Eisenberg, H. M., Gwinn, R., Taira, T., Chang, J. W., Lipsman, N., Krishna, V., Igase, K., Yamada, K., Kishima, et al
2019: 1–6
- **Principled BCI Decoder Design and Parameter Selection Using a Feedback Control Model.** *Scientific reports*
Willett, F. R., Young, D. R., Murphy, B. A., Memberg, W. D., Blabe, C. H., Pandarinath, C., Stavisky, S. D., Rezaii, P., Saab, J., Walter, B. L., Sweet, J. A., Miller, J. P., Henderson, et al
2019; 9 (1): 8881
- **Cortical control of a tablet computer by people with paralysis** *PLOS ONE*
Nuyujukian, P., Sanabria, J., Saab, J., Pandarinath, C., Jarosiewicz, B., Blabe, C. H., Franco, B., Mernoff, S. T., Eskandar, E. N., Simeral, J. D., Hochberg, L. R., Shenoy, K., Henderson, et al
2018; 13 (11)
- **Brain-machine interface cursor position only weakly affects monkey and human motor cortical activity in the absence of arm movements.** *Scientific reports*
Stavisky, S. D., Kao, J. C., Nuyujukian, P., Pandarinath, C., Blabe, C., Ryu, S. I., Hochberg, L. R., Henderson, J. M., Shenoy, K. V.
2018; 8 (1): 16357
- **Laser interstitial thermal therapy (LITT): Seizure outcomes for refractory mesial temporal lobe epilepsy.** *Epilepsy & behavior : E&B*
Le, S., Ho, A. L., Fisher, R. S., Miller, K. J., Henderson, J. M., Grant, G. A., Meador, K. J., Halpern, C. H.
2018; 89: 37–41

- **Inferring single-trial neural population dynamics using sequential auto-encoders** *NATURE METHODS*
Pandarinath, C., O'Shea, D. J., Collins, J., Jozefowicz, R., Stavisky, S. D., Kao, J. C., Trautmann, E. M., Kaufman, M. T., Ryu, S. I., Hochberg, L. R., Henderson, J. M., Shenoy, K. V., Abbott, et al
2018; 15 (10): 805+
- **A Comparison of Intention Estimation Methods for Decoder Calibration in Intracortical Brain-Computer Interfaces** *IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING*
Willett, F. R., Murphy, B. A., Young, D., Memberg, W. D., Blabe, C. H., Pandarinath, C., Franco, B., Saab, J., Walter, B. L., Sweet, J. A., Miller, J. P., Henderson, J. M., Shenoy, et al
2018; 65 (9): 2066–78
- **Awake versus asleep deep brain stimulation for Parkinson's disease: a critical comparison and meta-analysis** *JOURNAL OF NEUROLOGY NEUROSURGERY AND PSYCHIATRY*
Ho, A. L., Ali, R., Connolly, I. D., Henderson, J. M., Dhall, R., Stein, S. C., Halpern, C. H.
2018; 89 (7): 687–91
- **Novel application of virtual reality in patient engagement for deep brain stimulation: A pilot study** *BRAIN STIMULATION*
Collins, M. K., Ding, V. Y., Ball, R. L., Dolce, D. L., Henderson, J. M., Halpern, C. H.
2018; 11 (4): 935–37
- **Rapid calibration of an intracortical brain-computer interface for people with tetraplegia.** *Journal of neural engineering*
Brandman, D. M., Hosman, T., Saab, J., Burkhart, M. C., Shanahan, B. E., Ciancibello, J. G., Sarma, A. A., Milstein, D. J., Vargas-Irwin, C. E., Franco, B., Kelemen, J., Blabe, C., Murphy, et al
2018; 15 (2): 026007
- **Diffusion MRI tractography for improved transcranial MRI-guided focused ultrasound thalamotomy targeting for essential tremor** *NEUROIMAGE-CLINICAL*
Tian, Q., Wintermark, M., Elias, W., Ghanouni, P., Halpern, C. H., Henderson, J. M., Huss, D. S., Goubran, M., Thaler, C., Airan, R., Zeineh, M., Pauly, K., McNab, et al
2018; 19: 572–80
- **Stable long-term BCI-enabled communication in ALS and locked-in syndrome using LFP signals.** *Journal of neurophysiology*
Milekovic, T., Sarma, A. A., Bacher, D., Simeral, J. D., Saab, J., Pandarinath, C., Sorice, B. L., Blabe, C., Oakley, E. M., Tringale, K. R., Eskandar, E., Cash, S. S., Henderson, et al
2018
- **Diffusion MRI tractography for improved transcranial MRI-guided focused ultrasound thalamotomy targeting for essential tremor.** *NeuroImage. Clinical*
Tian, Q., Wintermark, M., Jeffrey Elias, W., Ghanouni, P., Halpern, C. H., Henderson, J. M., Huss, D. S., Goubran, M., Thaler, C., Airan, R., Zeineh, M., Pauly, K. B., McNab, et al
2018; 19: 572–80
- **Feasibility of Automatic Error Detect-and-Undo System in Human Intracortical Brain-Computer Interfaces.** *IEEE transactions on bio-medical engineering*
Even-Chen, N., Stavisky, S. D., Pandarinath, C., Nuyujukian, P., Blabe, C. H., Hochberg, L. R., Henderson, J. M., Shenoy, K. V.
2018; 65 (8): 1771–84
- **A prospective trial of magnetic resonance-guided focused ultrasound thalamotomy for essential tremor: Results at the 2-year follow-up.** *Annals of neurology*
Chang, J. W., Park, C. K., Lipsman, N., Schwartz, M. L., Ghanouni, P., Henderson, J. M., Gwinn, R., Witt, J., Tierney, T. S., Cosgrove, G. R., Shah, B. B., Abe, K., Taira, et al
2018; 83 (1): 107–14
- **gene therapy trial for Parkinson's disease.** *JCI insight*
Niethammer, M., Tang, C. C., LeWitt, P. A., Rezai, A. R., Leehey, M. A., Ojemann, S. G., Flaherty, A. W., Eskandar, E. N., Kostyk, S. K., Sarkar, A., Siddiqui, M. S., Tatter, S. B., Schwalb, et al
2017; 2 (7)
- **Awake versus asleep deep brain stimulation for Parkinson's disease: a critical comparison and meta-analysis.** *Journal of neurology, neurosurgery, and psychiatry*
Ho, A. L., Ali, R., Connolly, I. D., Henderson, J. M., Dhall, R., Stein, S. C., Halpern, C. H.
2017

- **Feedback control policies employed by people using intracortical brain-computer interfaces** *JOURNAL OF NEURAL ENGINEERING*
Willett, F. R., Pandarinath, C., Jarosiewicz, B., Murphy, B. A., Memberg, W. D., Blabe, C. H., Saab, J., Walter, B. L., Sweet, J. A., Miller, J. P., Henderson, J. M., Shenoy, K. V., Simeral, et al
2017; 14 (1)
- **Subthalamic oscillations and phase amplitude coupling are greater in the more affected hemisphere in Parkinson's disease.** *Clinical neurophysiology*
Shreve, L. A., Velisar, A., Malekmohammadi, M., Koop, M. M., Trager, M., Quinn, E. J., Hill, B. C., Blumenfeld, Z., Kilbane, C., Mantovani, A., Henderson, J. M., Brontë-Stewart, H.
2017; 128 (1): 128-137
- **Signal-independent noise in intracortical brain-computer interfaces causes movement time properties inconsistent with Fitts' law.** *Journal of neural engineering*
Willett, F. R., Murphy, B. A., Memberg, W. D., Blabe, C. H., Pandarinath, C., Walter, B. L., Sweet, J. A., Miller, J. P., Henderson, J. M., Shenoy, K. V., Hochberg, L. R., Kirsch, R. F., Ajiboye, et al
2017; 14 (2): 026010
- **Transcranial MRI-guided high-intensity focused ultrasound for treatment of essential tremor: A pilot study on the correlation between lesion size, lesion location, thermal dose, and clinical outcome.** *Journal of magnetic resonance imaging : JMIR*
Federau, C., Goubran, M., Rosenberg, J., Henderson, J., Halpern, C. H., Santini, V., Wintermark, M., Butts Pauly, K., Ghanouni, P.
2017
- **Subcallosal cingulate deep brain stimulation for treatment-resistant depression: a multisite, randomised, sham-controlled trial.** *The lancet. Psychiatry*
Holtzheimer, P. E., Husain, M. M., Lisanby, S. H., Taylor, S. F., Whitworth, L. A., McClintock, S., Slavin, K. V., Berman, J., McKhann, G. M., Patil, P. G., Rittberg, B. R., Abosch, A., Pandurangi, et al
2017; 4 (11): 839-49
- **The neurosurgical origins of image-guided surgery** *CURRENT PROBLEMS IN SURGERY*
Barrese, J. C., Henderson, J. M.
2015; 52 (12): 476-520
- **Virtual typing by people with tetraplegia using a self-calibrating intracortical brain-computer interface.** *Science translational medicine*
Jarosiewicz, B., Sarma, A. A., Bacher, D., Masse, N. Y., Simeral, J. D., Sorice, B., Oakley, E. M., Blabe, C., Pandarinath, C., Gilja, V., Cash, S. S., Eskandar, E. N., Friehs, et al
2015; 7 (313): 313ra179-?
- **Beta Oscillations in Freely Moving Parkinson's Subjects Are Attenuated During Deep Brain Stimulation** *MOVEMENT DISORDERS*
Quinn, E. J., Blumenfeld, Z., Velisar, A., Koop, M. M., Shreve, L. A., Trager, M. H., Hill, B. C., Kilbane, C., Henderson, J. M., Bronte-Stewart, H.
2015; 30 (13): 1750-1758
- **Gene delivery of neurturin to putamen and substantia nigra in Parkinson disease: A double-blind, randomized, controlled trial** *ANNALS OF NEUROLOGY*
Olanow, C. W., Bartus, R. T., Baumann, T. L., Factor, S., Boulis, N., Stacy, M., Turner, D. A., Marks, W., Larson, P., Starr, P. A., Jankovic, J., Simpson, R., Watts, et al
2015; 78 (2): 248-257
- **Transcranial MRI-Guided Focused Ultrasound: A Review of the Technologic and Neurologic Applications** *AMERICAN JOURNAL OF ROENTGENOLOGY*
Ghanouni, P., Pauly, K. B., Elias, W. J., Henderson, J., Sheehan, J., Monteith, S., Wintermark, M.
2015; 205 (1): 150-159
- **Sixty Hertz Neurostimulation Amplifies Subthalamic Neural Synchrony in Parkinson's Disease** *PLOS ONE*
Blumenfeld, Z., Velisar, A., Koop, M. M., Hill, B. C., Shreve, L. A., Quinn, E. J., Kilbane, C., Yu, H., Henderson, J. M., Bronte-Stewart, H.
2015; 10 (3)
- **Long-term efficacy and safety of thalamic stimulation for drug-resistant partial epilepsy.** *Neurology*
Salanova, V., Witt, T., Worth, R., Henry, T. R., Gross, R. E., Nazzaro, J. M., Labar, D., Sperling, M. R., Sharan, A., Sandok, E., Handforth, A., Stern, J. M., Chung, et al
2015; 84 (10): 1017-1025
- **Beta oscillations in freely moving Parkinson's subjects are attenuated during deep brain stimulation.** *Movement disorders : official journal of the Movement Disorder Society*
Quinn, E. J., Blumenfeld, Z., Velisar, A., Koop, M. M., Shreve, L. A., Trager, M. H., Hill, B. C., Kilbane, C., Henderson, J. M., Brontë-Stewart, H.
2015; 30 (13): 1750-58

- **Gene delivery of neurturin to putamen and substantia nigra in Parkinson disease: A double-blind, randomized, controlled trial.** *Annals of neurology*
Warren Olanow, C., Bartus, R. T., Baumann, T. L., Factor, S., Boulis, N., Stacy, M., Turner, D. A., Marks, W., Larson, P., Starr, P. A., Jankovic, J., Simpson, R., Watts, et al
2015; 78 (2): 248–57
- **Lack of efficacy of motor cortex stimulation for the treatment of neuropathic pain in 14 patients.** *Neuromodulation*
Sachs, A. J., Babu, H., Su, Y., Miller, K. J., Henderson, J. M.
2014; 17 (4): 303-311
- **194 High Performance Computer Cursor Control Using Neuronal Ensemble Recordings From the Motor Cortex of a Person With ALS.** *Neurosurgery*
Henderson, J. M., Gilja, V., Pandarinath, C., Blabe, C., Hochberg, L. R., Shenoy, K. V.
2013; 60: 184-?
- **Hand posture classification using electrocorticography signals in the gamma band over human sensorimotor brain areas** *JOURNAL OF NEURAL ENGINEERING*
Chestek, C. A., Gilja, V., Blabe, C. H., Foster, B. L., Shenoy, K. V., Parvizi, J., Henderson, J. M.
2013; 10 (2)
- **Deep brain stimulation surgical techniques.** *Handbook of clinical neurology*
Khan, F. R., Henderson, J. M.
2013; 116: 27-37
- **High frequency deep brain stimulation attenuates subthalamic and cortical rhythms in Parkinson's disease** *FRONTIERS IN HUMAN NEUROSCIENCE*
Whitmer, D., de Solages, C., Hill, B., Yu, H., Henderson, J. M., Bronte-Stewart, H.
2012; 6
- **Does Ganglionectomy Still Have a Role in the Era of Neuromodulation?** *WORLD NEUROSURGERY*
Khan, F. R., Henderson, J. M.
2012; 77 (2): 280-282
- **Optogenetic Neuromodulation** *EMERGING HORIZONS IN NEUROMODULATION: NEW FRONTIERS IN BRAIN AND SPINE STIMULATION*
Kalanithi, P. S., Henderson, J. M.
2012; 107: 185-205
- **"Connectomic surgery": diffusion tensor imaging (DTI) tractography as a targeting modality for surgical modulation of neural networks.** *Frontiers in integrative neuroscience*
Henderson, J. M.
2012; 6: 15-?
- **Maximal subthalamic beta hypersynchrony of the local field potential in Parkinson's disease is located in the central region of the nucleus** *JOURNAL OF NEUROLOGY NEUROSURGERY AND PSYCHIATRY*
de Solages, C., Hill, B. C., Yu, H., Henderson, J. M., Bronte-Stewart, H.
2011; 82 (12): 1387-1389
- **Incidence and Avoidance of Neurologic Complications with Paddle Type Spinal Cord Stimulation Leads** *NEUROMODULATION*
Levy, R., Henderson, J., Slavin, K., Simpson, B. A., Barolat, G., Shipley, J., North, R.
2011; 14 (5): 412-422
- **Human Subthalamic Neuron Spiking Exhibits Subtle Responses to Sedatives** *ANESTHESIOLOGY*
MacIver, M. B., Bronte-Stewart, H. M., Henderson, J. M., Jaffe, R. A., Brock-Utne, J. G.
2011; 115 (2): 254-264
- **Long-Term Outcomes of Spinal Cord Stimulation With Paddle Leads in the Treatment of Complex Regional Pain Syndrome and Failed Back Surgery Syndrome** *NEUROMODULATION*
Sears, N. C., Machado, A. G., Nagel, S. J., Deogaonkar, M., Stanton-Hicks, M., Rezai, A. R., Henderson, J. M.
2011; 14 (4): 312-318
- **Challenges and Opportunities for Next-Generation Intracortically Based Neural Prostheses** *IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING*
Gilja, V., Chestek, C. A., Diester, I., Henderson, J. M., Deisseroth, K., Shenoy, K. V.
2011; 58 (7): 1891-1899

- **OPTOGENETICS: BACKGROUND AND CONCEPTS FOR NEUROSURGERY** *NEUROSURGERY*
Lin, S., Deisseroth, K., Henderson, J. M.
2011; 69 (1): 1-3
- **Spinal Cord Stimulation Versus Re-operation in Patients With Failed Back Surgery Syndrome: An International Multicenter Randomized Controlled Trial (EVIDENCE Study)** *NEUROMODULATION*
North, R. B., Kumar, K., Wallace, M. S., Henderson, J. M., Shipley, J., Hernandez, J., Mekel-Bobrov, N., Jaax, K. N.
2011; 14 (4): 330-335
- **AAV2-GAD gene therapy for advanced Parkinson's disease: a double-blind, sham-surgery controlled, randomised trial** *LANCET NEUROLOGY*
LeWitt, P. A., Rezaei, A. R., Leehey, M. A., Ojemann, S. G., Flaherty, A. W., Eskandar, E. N., Kostyk, S. K., Thomas, K., Sarkar, A., Siddiqui, M. S., Tatter, S. B., Schwalb, J. M., Poston, et al
2011; 10 (4): 309-319
- **Deep Brain Stimulation for Tourette Syndrome: A Prospective Pilot Study in Japan** *COMMENTS NEUROMODULATION*
Henderson, J.
2011; 14 (2): 129
- **Deep Brain Stimulation in "On"-State Parkinson Hyperpyrexia** *NEUROLOGY*
Klepitskaya, O., Cole, W., Henderson, J., Bronte-Stewart, H.
2011; 76 (7): S69-S71
- **Deep Brain Stimulation for Parkinson Disease An Expert Consensus and Review of Key Issues** *ARCHIVES OF NEUROLOGY*
Bronstein, J. M., Tagliati, M., Alterman, R. L., Lozano, A. M., Volkmann, J., Stefani, A., Horak, F. B., Okun, M. S., Foote, K. D., Krack, P., Pahwa, R., Henderson, J. M., Hariz, et al
2011; 68 (2): 165-171
- **Probabilistic analysis of activation volumes generated during deep brain stimulation** *NEUROIMAGE*
Butson, C. R., Cooper, S. E., Henderson, J. M., Wolgamuth, B., McIntyre, C. C.
2011; 54 (3): 2096-2104
- **A Socioeconomic Survey of Spinal Cord Stimulation (SCS) Surgery** *NEUROMODULATION*
Lad, S. P., Kalanithi, P. S., Arrigo, R. T., Patil, C. G., Nathan, J. K., Boakye, M., Henderson, J. M.
2010; 13 (4): 265-269
- **Clinical Motor Outcome of Bilateral Subthalamic Nucleus Deep-Brain Stimulation for Parkinson's Disease Using Image-Guided Frameless Stereotaxy** *NEUROSURGERY*
Bronte-Stewart, H., Louie, S., Batya, S., Henderson, J. M.
2010; 67 (4): 1088-1093
- **Ethics of invasive techniques in neurobehavioral disease**
Kalanithi, P., Henderson, J.
WILEY-BLACKWELL.2010: 544
- **alpha-Synuclein Suppression by Targeted Small Interfering RNA in the Primate Substantia Nigra** *PLOS ONE*
McCormack, A. L., Mak, S. K., Henderson, J. M., Bumcrot, D., Farrer, M. J., Di Monte, D. A.
2010; 5 (8)
- **Socioeconomic Trends in Deep Brain Stimulation (DBS) Surgery** *NEUROMODULATION*
Lad, S. P., Kalanithi, P. S., Patil, C. G., Itthimathin, P., Batya, S., Bronte-Stewart, H., Boakye, M., Henderson, J. M.
2010; 13 (3): 182-186
- **Intra-Operative Deep Brain Stimulation of the Periaqueductal Grey Matter Modulates Blood Pressure and Heart Rate Variability in Humans** *COMMENTS NEUROMODULATION*
Foreman, R. D., Henderson, J. M.
2010; 13 (3): 181
- **Long-Term, Post-Deep Brain Stimulation Management of a Series of 36 Patients Affected With Refractory Gilles de la Tourette Syndrome** *COMMENTS NEUROMODULATION*
Henderson, J. M.

2010; 13 (3): 194

- **Long-Term Measurement of Therapeutic Electrode Impedance in Deep Brain Stimulation** COMMENTS *NEUROMODULATION*
Gildenberg, P. L., Henderson, J. M.
2010; 13 (3): 200
- **Patient Perspectives on the Efficacy and Ergonomics of Rechargeable Spinal Cord Stimulators** COMMENT *NEUROMODULATION*
Henderson, J. M.
2010; 13 (3): 223
- **Electrical stimulation of the anterior nucleus of thalamus for treatment of refractory epilepsy** *EPILEPSIA*
Fisher, R., Salanova, V., Witt, T., Worth, R., Henry, T., Gross, R., Oommen, K., Osorio, I., Nazzaro, J., Labar, D., Kaplitt, M., Sperling, M., Sandok, et al
2010; 51 (5): 899-908
- **Intracranial Neurostimulation for Pain Control: A Review** *PAIN PHYSICIAN*
Levy, R., Deer, T. R., Henderson, J.
2010; 13 (2): 157-165
- **Recurrent Seizures Related to Motor Cortex Stimulator Programming** *NEUROMODULATION*
Henderson, J. M., Heit, G., Fisher, R. S.
2010; 13 (1): 37-42
- **Impact of Subthalamic Nucleus Stimulation on Young-Onset Parkinson's Disease** Comments *NEUROMODULATION*
Henderson, J. M.
2010; 13 (1): 16
- **Lead Wire Fracture Associated With Normal Therapeutic Impedance Measurements in a Patient With a Kinetra Neurostimulator** Comment *NEUROMODULATION*
Henderson, J. M.
2010; 13 (1): 67
- **Bilateral symmetry and coherence of subthalamic nuclei beta band activity in Parkinson's disease** *EXPERIMENTAL NEUROLOGY*
de Solages, C., Hill, B. C., Koop, M. M., Henderson, J. M., Bronte-Stewart, H.
2010; 221 (1): 260-266
- **NANS Training Requirements for Spinal Cord Stimulation Devices: Selection, Implantation, and Follow-up** *NEUROMODULATION*
Henderson, J. M., Levy, R. M., Bedder, M. D., Staats, P. S., Slavin, K. V., Poree, L. R., North, R. B.
2009; 12 (3): 171-174
- **OPTOGENETIC NEUROMODULATION** *NEUROSURGERY*
Henderson, J. M., Federici, T., Boullis, N.
2009; 64 (5): 796-804
- **Optical Deconstruction of Parkinsonian Neural Circuitry** *SCIENCE*
Gradinaru, V., Mogri, M., Thompson, K. R., Henderson, J. M., Deisseroth, K.
2009; 324 (5925): 354-359
- **The STN beta-band profile in Parkinson's disease is stationary and shows prolonged attenuation after deep brain stimulation** *EXPERIMENTAL NEUROLOGY*
Bronte-Stewart, H., Barberini, C., Koop, M. M., Hill, B. C., Henderson, J. M., Wingeier, B.
2009; 215 (1): 20-28
- **NANS Training Requirements for Spinal Cord Stimulation Devices: Selection, Implantation, and Follow-up.** *Neuromodulation : journal of the International Neuromodulation Society*
Henderson, J. M., Levy, R. M., Bedder, M. D., Staats, P. S., Slavin, K. V., Poree, L. R., North, R. B.
2009; 12 (3): 171-74
- **Advanced Neurotechnologies for Chronic Neural Interfaces: New Horizons and Clinical Opportunities** *JOURNAL OF NEUROSCIENCE*
Kipke, D. R., Shain, W., Buzsaki, G., FETZ, E., Henderson, J. M., Hetke, J. F., Schalk, G.
2008; 28 (46): 11830-11838

- **Spinal cord stimulation has comparable efficacy in common pain etiologies** *NEUROMODULATION*
Krames, E. S., Oakley, J. C., Foster, A. M., Henderson, J., Prager, J. P., Rashbaum, R. R., Stamos, J., Weiner, R. L.
2008; 11 (3): 171-181
- **Peripheral nerve stimulation for chronic pain** *CURRENT PAIN AND HEADACHE REPORTS*
Henderson, J. M.
2008; 12 (1): 28-31
- **Fluoroscopic Registration and Localization for Image-Guided Cranial Neurosurgical Procedures: A Feasibility Study** *STEREOTACTIC AND FUNCTIONAL NEUROSURGERY*
Henderson, J. M., Hill, B. C.
2008; 86 (5): 271-277
- **Spinal cord stimulation has comparable efficacy in common pain etiologies.** *Neuromodulation : journal of the International Neuromodulation Society*
Krames, E. S., Oakley, J. C., Foster, A. M., Henderson, J., Prager, J. P., Rashbaum, R. R., Stamos, J., Weiner, R. L.
2008; 11 (3): 171-81
- **Achieving Optimal Accuracy in Frameless Functional Neurosurgical Procedures** *STEREOTACTIC AND FUNCTIONAL NEUROSURGERY*
Henderson, J. M., Holloway, K. L.
2008; 86 (5): 332-333
- **Spinal cord stimulation has comparable efficacy in common pain etiologies** *Neuromodulation*
Krames ES, Oakley JC, Foster AM, Henderson JM, Prager JP, Rashbaum RR, Stamos J, Weiner R
2008; 11: 171-181
- **Intracranial hypotension from intrathecal baclofen pump insertion** *STEREOTACTIC AND FUNCTIONAL NEUROSURGERY*
Lad, S. P., Li, G., Lin, S., Henderson, J. M.
2008; 86 (2): 75-79
- **A new spinal cord stimulation system effectively relieves chronic, intractable pain: A multicenter prospective clinical study** *NEUROMODULATION*
Oakley, J. C., Krames, E. S., Prager, J. P., Stamos, J., Foster, A. M., Weiner, R., Rashbaum, R. R., Henderson, J.
2007; 10 (3): 262-278
- **CyberKnife targeting the pterygopalatine ganglion for the treatment of chronic cluster headaches** *NEUROSURGERY*
Lad, S. P., Lipani, J. D., Gibbs, I. C., Chang, S. D., Adler, J. R., Henderson, J. M.
2007; 60 (3): 580-581
- **Cyberknife targeting the pterygopalatine ganglion for the treatment of chronic cluster headaches.** *Neurosurgery*
Lad, S. P., Lipani, J. D., Gibbs, I. C., Chang, S. D., Adler, J. R., Henderson, J. M.
2007; 60 (3): E580-?
- **Patient-specific analysis of the volume of tissue activated during deep brain stimulation** *NEUROIMAGE*
Butson, C. R., Cooper, S. E., Henderson, J. M., McIntyre, C. C.
2007; 34 (2): 661-670
- **A new spinal cord stimulation system effectively relieves chronic, intractable pain: A multicenter prospective study** *Neuromodulation*
Oakley JC, Krames ES, Prager JP, Stamos J, Foster AM, Weiner R, Rashbaum RR, Henderson JM
2007; 10: 262-278
- **Cyberknife for the treatment of refractory cluster headaches**
Lad, S. P., Lipani, J. D., Chang, S. D., Adler, J. R., Henderson, J. M.
KARGER.2007: 40
- **Cyberknife for the treatment of refractory cluster headaches**
Lad, S. P., Lipani, J. D., Chang, S. D., Adler, J. R., Henderson, J. M.
KARGER.2007: 40
- **Methodology for objective motor speech assessment outcome after deep brain stimulation for Parkinson's disease**
Grenier, Y., Henderson, J. M., Spielman, J. J., Ramig, L. O.
KARGER.2007: 60-61

- **Vagal nerve stimulation versus deep brain stimulation for treatment-resistant depression: show me the data.** *Clinical neurosurgery*
Henderson, J. M.
2007; 54: 88-90
- **A 12-month prospective study of gasserian ganglion stimulation for trigeminal neuropathic pain** *STEREOTACTIC AND FUNCTIONAL NEUROSURGERY*
Machado, A., Ogrin, M., Rosenow, J. M., Henderson, J. M.
2007; 85 (5): 216-224
- **The clinical and research ethics of neuromodulation** *NEUROMODULATION*
Ford, P. J., Henderson, J. M.
2006; 9 (4): 250-252
- **Failure modes of spinal cord stimulation hardware** *JOURNAL OF NEUROSURGERY-SPINE*
Rosenow, J. M., Stanton-Hicks, M., Rezai, A. R., Henderson, J. M.
2006; 5 (3): 183-190
- **Deep brain stimulation decreases the risk for Parkinsonism-Hyperpyrexia Syndrome and suppresses levodopa-induced dyskinesias: A case report**
Klepitskaya, O. S., Cole, W. L., Henderson, J. M., Bronte-Stewart, H. M.
WILEY-LISS.2006: 1552
- **Prevention of mechanical failures in implanted spinal cord stimulation systems** *NEUROMODULATION*
Henderson, J. M., Schade, C. M., Sasaki, J., Caraway, D. L., Oakley, J. C.
2006; 9 (3): 183-191
- **Predicting the effects of deep brain stimulation with diffusion tensor based electric field models.** *Medical image computing and computer-assisted intervention : MICCAI ... International Conference on Medical Image Computing and Computer-Assisted Intervention*
Butson, C. R., Cooper, S. E., Henderson, J. M., McIntyre, C. C.
2006; 9: 429-437
- **Predicting the effects of deep brain stimulation with diffusion tensor based electric field models** *9th International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI 2006)*
Butson, C. R., Cooper, S. E., Henderson, J. M., McIntyre, C. C.
SPRINGER-VERLAG BERLIN.2006: 429-37
- **Motor cortex stimulation and neuropathic facial pain.** *Neurosurgical focus*
Henderson, J. M., Lad, S. P.
2006; 21 (6): E6-?
- **Permanent neurological deficit related to magnetic resonance imaging in a patient with implanted deep brain stimulation electrodes for Parkinson's disease: case report.** *Neurosurgery*
Henderson, J. M., Tkach, J., Phillips, M., Baker, K., Shellock, F. G., Rezai, A. R.
2005; 57 (5): E1063-?
- **Is magnetic resonance imaging safe for patients with neurostimulation systems used for deep brain stimulation?** *NEUROSURGERY*
Rezai, A. R., Baker, K. B., Tkach, J. A., Phillips, M., Hrdlicka, G., Sharan, A. D., Nyenhuis, J., Ruggieri, P., Henderson, J., Shellock, F. G.
2005; 57 (5): 1056-1060
- **Frameless stereotaxy using bone fiducial markers for deep brain stimulation** *JOURNAL OF NEUROSURGERY*
Holloway, K. L., Gaede, S. E., Starr, P. A., Rosenow, J. M., Ramakrishnan, V., Henderson, J. M.
2005; 103 (3): 404-413
- **A preliminary study of transient confusional states following bilateral subthalamic stimulation for Parkinson's disease** *ASSFN 2004 Conference*
Pilitsis, J. G., Rezai, A. R., Boulis, N. M., Henderson, J. M., Busch, R. M., Kubu, C. S.
KARGER.2005: 67-70
- **Venous air embolism during deep brain stimulation surgery in an awake supine patient** *STEREOTACTIC AND FUNCTIONAL NEUROSURGERY*
Deogaonkar, A., Avitsian, R., Henderson, J. M., Schubert, A.
2005; 83 (1): 32-35
- **Neurostimulation system used for deep brain stimulation (DBS): MR safety issues and implications of failing to follow safety recommendations** *INVESTIGATIVE RADIOLOGY*

- Rezai, A. R., Phillips, M., Baker, K. B., Sharan, A. D., Nyenhuis, J., Tkach, J., Henderson, J., Shellock, F. G.
2004; 39 (5): 300-303
- **Frameless localization for functional neurosurgical procedures: A preliminary accuracy study** *STEREOTACTIC AND FUNCTIONAL NEUROSURGERY*
Henderson, J. M.
2004; 82 (4): 135-141
 - **Recovery of pain control by intensive reprogramming after loss of benefit from motor cortex stimulation for neuropathic pain** *STEREOTACTIC AND FUNCTIONAL NEUROSURGERY*
Henderson, J. M., Boongird, A., Rosenow, J. M., LaPresto, E., Rezai, A. R.
2004; 82 (5-6): 207-213
 - **The application accuracy of a skull-mounted trajectory guide system for image-guided functional neurosurgery.** *Computer aided surgery*
Henderson, J. M., Holloway, K. L., Gaede, S. E., Rosenow, J. M.
2004; 9 (4): 155-160
 - **Anatomy and physiology of chronic pain** *NEUROSURGERY CLINICS OF NORTH AMERICA*
Rosenow, J. M., Henderson, J. M.
2003; 14 (3): 445-?
 - **Neuroaugmentation for chronic pain - Preface** *NEUROSURGERY CLINICS OF NORTH AMERICA*
Henderson, J. M.
2003; 14 (3): IX-X
 - **The role of computer-assisted image-guided techniques** *Seminars in Neurosurgery*
Henderson JM
2001; 12: 175-181
 - **An Internet-connected, patient-specific, deformable brain atlas integrated into a surgical navigation system** *14th Symposium for Computer Applications in Radiology*
Levy, A. L., SCHAEWE, T. J., Miller, M. I., Smith, K. R., HAMMOUD, A. M., Henderson, J. M., Joshi, S., Mark, K. E., Sturm, C. D., McDurmont, L. L., Bucholz, R. D.
SPRINGER.1997: 231-37
 - **The correction of stereotactic inaccuracy caused by brain shift using an intraoperative ultrasound device** *1st Joint Conference on Computer Vision, Virtual Reality and Robotics in Medicine / Medical Robotics and Computer-Assisted Surgery (CVRMed-MRCAS 97)*
Bucholz, R. D., Yeh, D. D., Trobaugh, J., McDurmont, L. L., Sturm, C. D., Baumann, C., Henderson, J. M., Levy, A., Kessman, P.
SPRINGER-VERLAG BERLIN.1997: 459-466
 - **Anatomical surface contour matching for efficient registration in image guided neurosurgery** *11th International Symposium and Exhibition on Computer Assisted Radiology and Surgery (CAR 97) / 1st Annual Conference of ISCAS*
Bucholz, R., Macneil, W. R., Henderson, J.
ELSEVIER SCIENCE BV.1997: 772-777
 - **Epidural hematoma producing brown-sequard syndrome: A case due to ruptured hemangioma with magnetic resonance imaging findings** *JOURNAL OF NEUROIMAGING*
Ehsan, T., Henderson, J. M., Manepalli, A. N.
1996; 6 (1): 62-63
 - **Combined stereotactic thalamotomy and posteroventral pallidotomy for Parkinson's disease.** *Journal of image guided surgery*
Iacono, R. P., Henderson, J. M., Lonser, R. R.
1995; 1 (3): 133-140
 - **AN ACCURATE AND ERGONOMIC METHOD OF REGISTRATION FOR IMAGE-GUIDED NEUROSURGERY** *COMPUTERIZED MEDICAL IMAGING AND GRAPHICS*
Henderson, J. M., Smith, K. R., Bucholz, R. D.
1994; 18 (4): 273-277
 - **ACCURATE AND ERGONOMIC METHOD OF REGISTRATION FOR IMAGE-GUIDED NEUROSURGERY** *Conference on Clinical Applications of Modern Imaging Technology II*
Henderson, J. M., Bucholz, R. D.

SPIE - INT SOC OPTICAL ENGINEERING.1994: 67-77

- **INTRAOPERATIVE LOCALIZATION USING A 3-DIMENSIONAL OPTICAL DIGITIZER** *Conference on Clinical Applications of Modern Imaging Technology*

Bucholz, R. D., Smith, K. R., Henderson, J., MCDURMONT, L., Schulz, D.

SPIE - INT SOC OPTICAL ENGINEERING.1993: 312-322

- **CHRONIC ACCESS TO ENDONEURIAL SPACE USING AN ARTERIAL AUTOGRAFT** *JOURNAL OF NEUROSCIENCE METHODS*

Kroin, J. S., Henderson, J. M., Weinrib, H., Penn, R. D., Kerns, J. M.

1989; 27 (2): 133-142