

NeuroWave Systems Inc.

- List of Publications -

White Paper

- [1] S. Bibian and T. Zikov, "NeuroSENSE® Monitor with WAVCNS Cortical Quantifier: A Deterministic Approach to EEG Analysis," NeuroWave Systems Inc., Cleveland Heights, OH, USA.

Journal and Conference Papers

- [2] N. West, K. van Heusden, M. Gorges, S. Brodie, A. Rollinson, C. Petersen, G. Dumont, J. Ansermo, R. Merchant, "Design and Evaluation of a Closed-Loop Anesthesia System with Robust Control and Safety System.", *Anesthesia Analgesia*, November 2017. [Epub ahead of print].
- [3] K. van Heusden, J. Ansermino, G. Dumont. "Robust MISO Control of Propofol-Remifentanyl Anesthesia Guided by the NeuroSENSE Monitor. *IEE Transacoinc on Control Systems Technology*, Vol 26, No. 5, pp. 1758-70, August 2017.
- [4] J. Bresson, E. Gayat, G. Agrawal, T. Chazot, N. Liu, C. Hausser-Haw, M. Fischler, "A Randomized Controlled Trial Comparison of NeuroSENSE and Bispectral Brain Monitors During Propofol-Based Versus Sevoflurane-Based General Anesthesia." *Anesthesia-Analgesia*, 121:1194-1201, November 2015.
- [5] M. Momeni, P. Bael, L. Jacquet, A. Peeters, P. Noirhomme, J. Rubay, M. Docquier, "Detection by NeuroSENSE® Cerebral Monitor of Two Major Neurologic Events During Cardiac Surgery," *Journal of Cardiothoracic and Vascular Anesthesia*, Vol 29, No 4, pp 1013-15, August 2015.
- [6] S. Bibian, G.A. Dumont, I. Black, "Closed-Loop Target Controlled Infusion Systems: Stability and Performance Aspects" *Journal of Military Medicine*, 180:96-103, March 2015.
- [7] N. West, G.A. Dumont, K. van Heusden, C.L. Petersen, S. Khosravi, K. Soltesz, A. Umedaly, E. Reimer and J.M. Ansermino, "Robust Closed-Loop Control of Induction and Maintenance of Propofol Anesthesia in Children," *Paediatric Anaesthesia*, vol 23, no. 8, pp. 712-9, May 2013.
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- [10] G. Agrawal, M. Modarres, T. Zikov and S. Bibian, "NREM sleep staging using WAV_{CNS} index," *Journal of Clinical Monitoring & Computing*, vol. 25, no. 2, pp. 137-142, April 2011.
- [11] S. Bibian, G.A. Dumont and T. Zikov, "Dynamic Behavior of BIS, M-Entropy and NeuroSENSE Brain Function Monitors," *Journal of Clinical Monitoring & Computing*, vol. 25, no. 1, pp. 81-87, February 2011.
- [12] S. Bibian, G.A. Dumont, M. Huzmezan and C.R. Ries, "Patient Variability and Uncertainty Quantification in Anesthesia: Part I - PKPD Modeling and Identification," *Proceedings of the 6th IFAC Symposium on Modeling and Control in Biomedical Systems*, Reims, France, pp. 549-554, September 2006.
- [13] S. Bibian, G.A. Dumont, M. Huzmezan and C.R. Ries, "Patient Variability and Uncertainty Quantification in Anesthesia: Part II - PKPD Uncertainty," *Proceedings of the 6th IFAC Symposium on Modeling and Control in Biomedical Systems*, Reims, France, pp. 555-560, September 2006.
- [14] T. Zikov, S. Bibian, G.A. Dumont, M. Huzmezan and C.R. Ries, "Quantifying Cortical Activity during General Anesthesia using Wavelet Analysis," *IEEE Transactions on Biomedical Engineering*, vol. 53, no. 4, pp. 617-632, April 2006.
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- [18] T. Zikov, S. Bibian, G.A. Dumont, M. Huzmezan and C.R. Ries, "A Wavelet Based De-noising Technique for Ocular Artifact Correction of the Electroencephalogram," *Proceedings of the Second Joint 24th Annual Conference of the Engineering in Medicine and Biology Society and Annual Fall Meeting of the Biomedical Engineering Society*, pp. 98-105, October 2002.
- [19] S. Bibian, T. Zikov, G.A. Dumont, C.R. Ries, E. Puil, H. Ahmadi, M. Huzmezan and B.A. MacLeod, "Estimation of the Anesthetic Depth using Wavelet Analysis of Electroencephalogram," *Proceedings of the 23rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, pp. 951-955, October 2001.

Clinical Abstracts

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- [25] G. Agrawal, T. Zikov and S. Bibian, "Can NeuroSENSE Depth-of-Anesthesia Monitor be used for Sleep Monitoring in Hospitalized Patients?," Proceedings of the 2011 Annual Meeting of the American Society of Anesthesiologists, Chicago, IL, A504, October 2011.
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- [31] S. Bibian and T. Zikov, "Predictability of BIS, Entropy and NeuroSENSE," Abstracts of the 20th Meeting of the European Society for Computing and Technology in Anesthesia and Intensive Care, Berlin, Germany, September 2009.
- [32] S. Bibian, T. Zikov, G.A. Dumont, C.R. Ries and M. Huzmezan, "Suitability of Consciousness Monitors for PD Modeling of Intravenous Anesthetic Drugs," Abstracts of the 1st World Congress of Total Intravenous Anaesthesia - TCI, Venice, Italy, September 2007.
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