

Think tank

The annual Deep Brain Stimulation (DBS) Think Tank provides a focal opportunity for a [multidisciplinary](#) ensemble of [experts](#) in the field of [neuromodulation](#) to discuss [advancements](#) and forthcoming opportunities and challenges in the field. The proceedings of the fifth Think Tank summarize progress in neuromodulation neurotechnology and techniques for the treatment of a range of neuropsychiatric conditions including Parkinson's disease, dystonia, essential tremor, Tourette syndrome, obsessive compulsive disorder, epilepsy and cognitive, and motor disorders. Each section of this overview of the meeting provides insight to the critical elements of discussion, current challenges, and identified future directions of scientific and technological development and application. The report addresses key issues in developing, and emphasizes major innovations that have occurred during the past year. Specifically, this year's meeting focused on technical developments in DBS, design considerations for DBS electrodes, improved sensors, neuronal signal processing, advancements in development and uses of responsive DBS (closed-loop systems), updates on National Institutes of Health and DARPA DBS programs of the BRAIN initiative, and neuroethical and policy issues arising in and from DBS research and applications in practice ¹⁾

2: Deeb W, Giordano JJ, Rossi PJ, Mogilner AY, Gunduz A, Judy JW, Klassen BT, Butson CR, Van Horne C, Deny D, Dougherty DD, Rowell D, Gerhardt GA, Smith GS, Ponce FA, Walker HC, Bronte-Stewart HM, Mayberg HS, Chizeck HJ, Langevin JP, Volkmann J, Ostrem JL, Shute JB, Jimenez-Shahed J, Foote KD, Wagle Shukla A, Rossi MA, Oh M, Pourfar M, Rosenberg PB, Silburn PA, de Hemptine C, Starr PA, Denison T, Akbar U, Grill WM, Okun MS. Proceedings of the Fourth Annual Deep Brain Stimulation Think Tank: A Review of Emerging Issues and Technologies. Front Integr Neurosci. 2016 Nov 22;10:38. eCollection 2016. PubMed PMID: 27920671; PubMed Central PMCID: PMC5119052.

3: Rossi PJ, Gunduz A, Judy J, Wilson L, Machado A, Giordano JJ, Elias WJ, Rossi MA, Butson CL, Fox MD, McIntyre CC, Pouratian N, Swann NC, de Hemptinne C, Gross RE, Chizeck HJ, Tagliati M, Lozano AM, Goodman W, Langevin JP, Alterman RL, Akbar U, Gerhardt GA, Grill WM, Hallett M, Herrington T, Herron J, van Horne C, Kopell BH, Lang AE, Lungu C, Martinez-Ramirez D, Mogilner AY, Molina R, Opri E, Otto KJ, Oweiss KG, Pathak Y, Shukla A, Shute J, Sheth SA, Shih LC, Steinke GK, Tröster AI, Vanegas N, Zaghloul KA, Cendejas-Zaragoza L, Verhagen L, Foote KD, Okun MS. Proceedings of the Third Annual Deep Brain Stimulation Think Tank: A Review of Emerging Issues and Technologies. Front Neurosci. 2016 Apr 6;10:119. doi: 10.3389/fnins.2016.00119. eCollection 2016. Review. PubMed PMID: 27092042; PubMed Central PMCID: PMC4821860.

4: White WB, Galis ZS, Henegar J, Kandzari DE, Victor R, Sica D, Townsend RR, Turner JR, Virmani R, Mauri L. Renal denervation therapy for hypertension: pathways for moving development forward. J Am Soc Hypertens. 2015 May;9(5):341-50. doi: 10.1016/j.jash.2015.02.012. Review. PubMed PMID: 25979410.

5: Vemulapalli S, Ard J, Bakris GL, Bhatt DL, Brown AS, Cushman WC, Ferdinand KC, Flack JM, Fleg JL, Katzen BT, Kostis JB, Oparil S, Patel CB, Pepine CJ, Piña IL, Rocha-Singh KJ, Townsend RR, Peterson ED, Califf RM, Patel MR. Proceedings from Duke resistant hypertension think tank. Am Heart J. 2014 Jun;167(6):775-88.e1. doi: 10.1016/j.ahj.2014.02.008. Epub 2014 Feb 28. PubMed PMID: 24890525.

6: Tomaz C, Okada CT, De Faria MC, Castreghini JL. Swimming escape learning in rats with telencephalic lesions. Braz J Med Biol Res. 1989;22(1):61-4. PubMed PMID: 2758173.

¹⁾

Ramirez-Zamora A, Giordano JJ, Gunduz A, Brown P, Sanchez JC, Foote KD, Almeida L, Starr PA,

Bronte-Stewart HM, Hu W, McIntyre C, Goodman W, Kumsa D, Grill WM, Walker HC, Johnson MD, Vitek JL, Greene D, Rizzuto DS, Song D, Berger TW, Hampson RE, Deadwyler SA, Hochberg LR, Schiff ND, Stypulkowski P, Worrell G, Tiruvadi V, Mayberg HS, Jimenez-Shahed J, Nanda P, Sheth SA, Gross RE, Lempka SF, Li L, Deeb W, Okun MS. Evolving Applications, Technological Challenges and Future Opportunities in Neuromodulation: Proceedings of the Fifth Annual Deep Brain Stimulation Think Tank. Front Neurosci. 2018 Jan 24;11:734. doi: 10.3389/fnins.2017.00734. eCollection 2017. PubMed PMID: 29416498; PubMed Central PMCID: PMC5787550.

From:

<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link:

https://neurosurgerywiki.com/wiki/doku.php?id=think_tank

Last update: **2024/06/07 02:56**

