wssfn
World Society for Stereotactic and Functional Neurosurgery

NEWSLETTER
2025

Letter from ***the President***

Dear Members and Colleagues,

It is both an honor and a privilege to introduce myself as the new President of the **World Society for Stereotactic and Functional Neurosurgery (WSSFN).** I am deeply grateful for the trust and confidence you have placed in me, and I look forward to working closely with all of you to continue advancing our shared mission.

One of my primary objectives during my tenure is to continue fostering a vibrant, inclusive, and globally connected community within WSSFN. Our field encompasses many important sub-disciplines, including **movement disorder surgery, psychiatric surgery, epilepsy surgery, pain surgery, spasticity surgery, and restorative neurosurgery.** Each of these areas is vital to the progress of our profession and the well-being of our patients. As your president, I am committed to ensuring that all these components of our field are well represented and continue to advance through research, clinical practice, and education.

Additionally, I want to emphasize the crucial role that **young neurosurgeons** play in shaping the future of our specialty. It is vital that we provide them with the support and opportunities to grow, learn, and innovate. As part of this commitment, we must also focus on improving access to **training and education**, especially in countries where these opportunities may be limited or difficult to access. WSSFN has always been a strong advocate for missions of training and education, and I will work to strengthen our efforts in supporting young neurosurgeons through fellowships, mentorship programs, and educational initiatives, particularly in underserved regions. By supporting the next generation of leaders in our field, we ensure that the progress we've made continues for years to come.

I am also pleased to announce that our **next WSSFN Congress** will be held in **Marseille, France, in September 2026**. This congress will provide an invaluable opportunity for all of us to meet, exchange ideas, and collaborate on the future of stereotactic and functional neurosurgery. It will also serve as a platform to showcase the diversity of our field and the exciting developments in each subspecialty. I encourage you to participate and engage fully in what will be a dynamic and enriching event for all.

Thank you once again for the privilege of serving as your President. I look forward to the challenges and opportunities ahead, and I am confident that together, we can continue to make significant contributions to the field of neurosurgery. Let us work together to ensure that our discipline remains inclusive, innovative, and supportive of all members, particularly the next generation.

I look forward to seeing you in Marseille in 2026 and to the exciting future that lies ahead for WSSFN.

Warmest regards,

Jean Régis
WSSFN President
Marseille, France

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World Society for Stereotactic and Functional Neurosurgery

NEWSLETTER
2025

Letter from ***the Editor***

Dear Members of the World Society for Stereotactic and Functional Neurosurgery,

It is with great pleasure that I welcome you to the latest edition of the WSSFN newsletter. I would like to begin by expressing my sincere gratitude to all our members and officers for your continued support, tireless contributions, and commitment to the mission of the Society. Your enthusiasm and dedication are what keep the WSSFN community vibrant, collaborative, and forward-looking.

We are honoured to welcome our new President, **Professor Jean Régis**, as he begins his tenure. Professor Régis is a distinguished leader in our field, and we are excited to support him as he guides the Society into its next chapter. We wish him all the very best in this important role.

At the same time, we extend our heartfelt thanks to **Professor Konstantin Slavin**, our outgoing President, for his exceptional leadership and dedication. Under his guidance, the Society has flourished, and his efforts culminated in the outstanding **XX Congress of the WSSFN,** held in Chicago in September 2024. This unforgettable meeting brought together colleagues from around the world to share research, insights, and camaraderie. Thank you, Professor Slavin, for your remarkable service.

In this issue, we are pleased to bring you a wide range of engaging and informative content. **Professor Patric Blomstedt** provides an update from the **Stereotactic Academy**, highlighting ongoing educational initiatives and future directions, and **Professor Marwan Hariz** offers a compelling review of the year's literature in his article, Hot Topics, capturing key developments and controversies in our field.

We are also grateful to **Dr. Vanessa Milanese** for preparing a letter from the XX Congress, complete with updates and photos that capture the spirit and energy of the event.

We welcome **Professor Volker Coenen** and **Dr. Matilda Naesström** as the new Chair and Co-Chair of the Psychiatric Surgery Task Force. We also extend our deep appreciation to **Professor Bart Nuttin**, the outgoing Chair, for his many years of dedicated service and impactful leadership.

This issue also includes details of **upcoming meetings**, ensuring you stay informed and connected with future opportunities for collaboration and learning.

Finally, we pay tribute to a giant in our community, **Professor Tipu Aziz**, who sadly passed away in October 2024. His visionary work and enduring legacy in Functional Neurosurgery will continue to inspire generations of neurosurgeons and researchers. He will be deeply missed.

Thank you once again for your continued engagement with the WSSFN. We hope you find this issue insightful and inspiring.

With warm regards,

Harith Akram MBChB, PhD, FRCS
Editor, WSSFN Newsletter
Consultant neurosurgeon
Unit of Functional Neurosurgery
UCL Queen Square Institute of Neurology &
The National Hospital for Neurology and Neurosurgery London, UK

Letter from ***XX World Congress of Stereotactic and Functional Neurosurgery WSSFN 2024***

From **September 3rd to 6th, 2024**, the **XX World Congress of Stereotactic and Functional Neurosurgery** unfolded in the vibrant city of **Chicago, USA**, marking the **75th anniversary of modern stereotaxis.** This landmark event brought together over **744 distinguished experts**, including world-renowned neurosurgeons, aspiring professionals, leading researchers, healthcare specialists, and peers from **52 countries**, all united by their commitment to advancing the field of **Functional Neurosurgery**.

Over the course of four days, participants explored the latest scientific breakthroughs, addressed pressing challenges, and examined transformative trends reshaping the discipline.

Since its inception in **1963**, the **WSSFN Congress** has been held regularly and remains a cornerstone event in the neurosurgery community. The **2024 Congress** featured a meticulously curated program that promoted interdisciplinary collaboration and offered a comprehensive overview of current developments in **stereotactic and functional neurosurgery.** Attendees engaged in **state-of-the-art symposia, interactive breakfast sessions, and hands-on workshops** led by internationally recognized authorities—enhancing both skills and knowledge.

For early-career professionals, **pre-conference workshops** provided invaluable practical training in cutting-edge techniques, guided by some of the world's most respected experts.

Participants were invited to **present their research**, gain **international recognition**, and foster **collaborations that extended beyond the congress** (Figure 1). This platform highlighted groundbreaking contributions to the field, sparking insightful discussions and innovative ideas to further the advancement of **functional neurosurgical care.**

Figure 1.

The global **WSSFN community** came together to exchange experiences across cultures, share diverse perspectives, collaborate, and expand professional networks—while forming meaningful, lasting relationships (Figure 2). Together, we celebrated a milestone in the history of **stereotaxis** and helped shape a shared vision for the future of **Functional Neurosurgery**.

Figure 2.

The **Congress** also celebrated the importance of **community and connection**. Through vibrant social events, participants engaged with colleagues from diverse cultural backgrounds and enjoyed a memorable time of learning, all while building meaningful connections and strengthening the global **WSSFN network**.

One of the key outcomes of the **XX World Congress of Stereotactic and Functional Neurosurgery** was the establishment of a Globalization Task Force, dedicated to advancing functional neurosurgery in regions of the world where such treatments are currently underdeveloped or unavailable.

After all, **WSSFN 2024** was not only about science. With its unique blend of iconic architecture, rich history, and dynamic culture, **Chicago** offered the perfect backdrop for both professional and personal growth. Whether exploring the city's modern innovations or enjoying its traditional charm, attendees experienced an unforgettable combination of professional enrichment and leisure.

One of the event's highlights was the **reception at Navy Pier** (Figure 3), which provided a picturesque and festive setting for networking and celebration.

Letter from ***XX World Congress of Stereotactic and Functional Neurosurgery WSSFN 2024***

Figure 3.

As we celebrate this milestone in the history of **stereotaxis, WSSFN 2024** stands as a testament to the relentless pursuit of progress and the fostering of a shared vision for the future of **Functional Neurosurgery.**

A highlight of the event was the **unforgettable award ceremony,** where named awards were presented to some of the society's most deserving members. The **Spiegel-Wycis Awards** were awarded to **Bart Nuttin** from the Netherlands and **Joachim Krauss** from Germany; the **Tasker Award** was presented to **Jin Woo Chang** from South Korea; and the **Gildenberg** and **Kandel Awards** were given to U.S. neurosurgeons **Michael Schulder** and **Kim Burchiel**, respectively.

At the **closing ceremony**, **Dr. Mojgan Hodaie** presented the awards and introduced the newly elected **2024–2028 board members** (Figure 4). **Dr. Konstantin Slavin** gave his closing remarks and introduced **Dr. Jean Régis**, the incoming **WSSFN President for 2025–2026** (Figure 5).

Letter prepared by Dr Vanessa Milanese

Join us as we continue to shape the future of Functional Neurosurgery alongside this inspiring leadership team.

Figures 4 & 5.

The Scientific Program Committee, under the leadership of Professor Sameer Sheth, deserves commendation for curating an outstanding and thoughtfully designed program.

Vanessa Milanese, MD, PhD
Brazilian Society of Neurosurgery Communication Director

Secretary Director of the Brazilian Society of Stereotactic and Functional Neurosurgery

Functional Neurosurgeon at Beneficência Portugues of São Paulo Hospital, Brazil

Adjunct Assistant Professor of Neurosurgery at Mayo Clinic Florida, USA

New chair of ***the Psychiatric Surgery Task Force***

Dear Friends,

In 2011, the question of the future of Neurosurgery for Psychiatric Disorders was raised by the WSSFN. A task force was created as a platform for key individuals in Psychiatric Surgery from different continents worldwide, with the aim of exchanging ideas and initiating actions.

Bart Nuttin was selected to lead this task force, and he ensured that the correct direction for Neurosurgery in psychiatric disorders was maintained, always keeping the interests of the patient and society in mind.

Over the past 14 years, he and the group have achieved a colossal amount of high-quality work, overcoming the numerous obstacles associated with this very special field of Functional Neurosurgery. We are all deeply grateful to Bart for this remarkable accomplishment.

It is now time for Bart to hand over the leadership to a new team.

After democratic discussions, the WSSFN board has elected Volker Coenen and Matilda Naesström as the new chairs of the Psychiatric Neurosurgery Task Force.

Both have been deeply involved in the work of the task force and are recognized worldwide as experts in this domain.

One of our major challenges is to increase the global interest of the psychiatric community in surgery, and we love the idea of having a psychiatrist as co-chair alongside Volker.

I am confident that they are the right people at the right time.

Congratulations to both of you! There is still much work to be done!

Jean Regis, WSSFN President

On 10 February 2025, the Board of Officers of the WSSFN appointed a new chair for the *Psychiatric Surgery Task Force* of the WSSFN. **Volker Coenen** from Freiburg (Germany) was chosen to succeed **Bart Nuttin** from Leuven (Belgium) in this position. After concluding his professional career, Dr. Nuttin had requested to step down from his role as chair.

As a new development, a psychiatric co-chair has been appointed to foster closer collaboration between specialties and to promote the acceptance of neurosurgical treatment options within the psychiatric community. This newly created co-chair position was unanimously assigned to **Matilda Naesström**, a psychiatrist from Umeå (Sweden).

The task force was originally founded under the name *WSSFN Committee for Neurosurgery for Psychiatric Disorders* following the WSSFN Shanghai Interim Meeting in 2011 and was officially announced during the Lisbon Meeting in 2012 under the leadership of Dr. Nuttin. The group had previously convened under **Osvaldo Vilela Filho** (Goiás, Brazil) since 2009. It was later renamed the Task Force for Neurosurgery for Psychiatric Disorders (now more succinctly referred to as the Psychiatric Surgery Task Force). Dr. Nuttin was appointed as its first chair, and from the outset, consistent psychiatric input has been a key feature.

The task force has been actively engaged in advancing neurosurgical treatments for psychiatric conditions such as **obsessive-compulsive disorder (OCD), major depression,** and others. Under Dr. Nuttin's leadership, the task force has played a crucial role in the publication of influential guidelines and scientific papers[2–4].

The *Psychiatric Surgery Task Force* is committed to the development of neurosurgical techniques—including **Deep Brain Stimulation (DBS)** and lesion-based methods such as **Focused Ultrasound** and **stereotactic radiosurgery**—for psychiatric disorders that are resistant to conservative and best-practice medical treatments. Operating within a rigorous scientific and ethical framework, the task force meets quarterly (via web meetings or in person during ESSFN and WSSFN events). All WSSFN members interested in contributing to the development of neurosurgical approaches for psychiatric indications are encouraged to join.

Dr. Nuttin's landmark paper[1] on DBS of the anterior limb of the internal capsule for the treatment of OCD marked the beginning of the modern era of psychiatric surgery. His clinical focus has consistently remained on the advancement of Deep Brain Stimulation for OCD. The WSSFN extends its sincere gratitude to Dr. Nuttin for his long-standing, thoughtful, and dedicated service as chair of the task force.

Volker A. Coenen, MD *(Freiburg, Germany), Incoming chair.*

Matilda Naesström, MD, PhD *(Umea, Sweden), Incoming Psychiatric co-chair.*

Bart Nuttin, MD *(Leuven, Belgium), Outgoing chair of the task force 2011-2025*

References

1. Nuttin, B., Cosyns, P., Demeulemeester, H., Gybels, J. & Meyerson, B. Electrical stimulation in anterior limbs of internal capsules in patients with obsessive-compulsive disorder. The Lancet 354, 1526–1 (1999).
2. Nuttin, B. et al. Consensus on guidelines for stereotactic neurosurgery for psychiatric disorders. J. Neurol., Neurosurg. Psychiatry 85, 1003 (2014).
3. Wu, H. et al. Deep brain stimulation for refractory obsessive-compulsive disorder (OCD): emerging or established therapy? Mol Psychiatr 26, 60–65 (2021).
4. Visser-Vandewalle, V. et al. Deep brain stimulation for obsessive–compulsive disorder: a crisis of access. Nat Med 28, 1529–1532 (2022).

Stereotactic Academy Digest

NEWSLETTER
2025

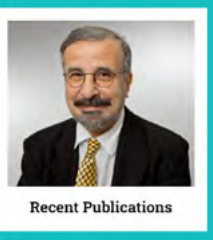
Dear Colleagues,

Welcome to the Quarterly Digest from the Stereotactic Academy, an e-learning resource under the auspices of the WSSFN and in collaboration with the ESSFN, AASSFN, JSSFN, MSSFN, and SSSFN.

The aim of the Digest is to summarize and analyse the latest literature, stimulate online discussion and peer learning, and share important updates from the field.


Lectures


Online Courses


Recent Publications

What's new at the Stereotactic Academy?

The website continues to grow and now has over **3,000 registered users**, with **129 unique visitors logging in daily** to access more than **250 lectures and courses**.

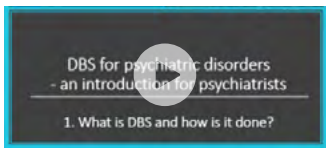
WSSFN Course Cycle

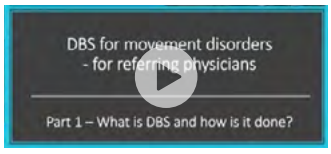
The ESSFN hands-on course cycle, featuring eight courses in stereotactic and functional neurosurgery, has been a great success, providing many colleagues over the years with an introduction to our field. However, some participants might have benefited more had they been better prepared and retaining all the information presented is undoubtedly a challenge for everyone. Additionally, attending these in-person courses in Europe can be difficult for some. That's why, in collaboration with the ESSFN and other partners, we are now developing an internet-based version, making it accessible to everyone.

This course series is a unique initiative, featuring an outstanding faculty of leading experts in the field. The focus is on clinical knowledge and practical application, with more than 200 lectures covering the essentials of all areas of functional neurosurgery. It presents a valuable opportunity for neurosurgery residents and anyone looking to expand their expertise.

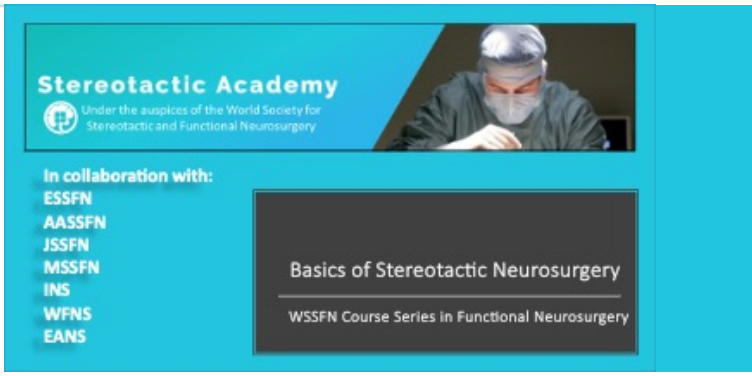
The course series is free and designed for self-study. It consists of eight units, the first two of which:

Basics of Stereotactic Neurosurgery and *Movement Disorders*





They are now available online. Additional units on Psychiatry, Basic Science, Pain, Spasticity, Epilepsy, and Lesional Procedures will follow.
To help spread the word, we rely on your support. Please encourage your residents and anyone who might be interested to *explore the course* and *register*.



New Courses & Lectures

(To access content, please register, log in, and go to the "Lectures" section.)

- **Basics of Stereotactic Neurosurgery**, *WSSFN Course Cycle*
- **Movement Disorders**, *WSSFN Course Cycle*
- **Focused Ultrasound – What Is It?**
- **Focused Ultrasound – How Effective Is It?**
- **Focused Ultrasound – Should You Get One?**
- **The History of Surgery for Movement Disorders**
- **The Anatomy of the Thalamus and Basal Ganglia**, *Vanessa Milanese*
- **Posterior Fossa Trajectories with Leksell Vantage**, *Marie Krueger*
- **Renishaw Robotic Surgery**, *Rushna Ali*
- **Increase Your DBS Practice**
- **Vagal Rhizopathies**, *Chris Honey*
- **The Science Behind DRG Stimulation**, *Pedram Tabatabaie*
- **DRG Stimulation: Patient Selection and Clinical Evidence**, *Pedram Tabatabaie*
- **Radiosurgery for Facial Pain**, *Anne Balossier*
- **Neuropsychology in DBS**, *Johanna Philipson*

I hope you will enjoy, share, and contribute.

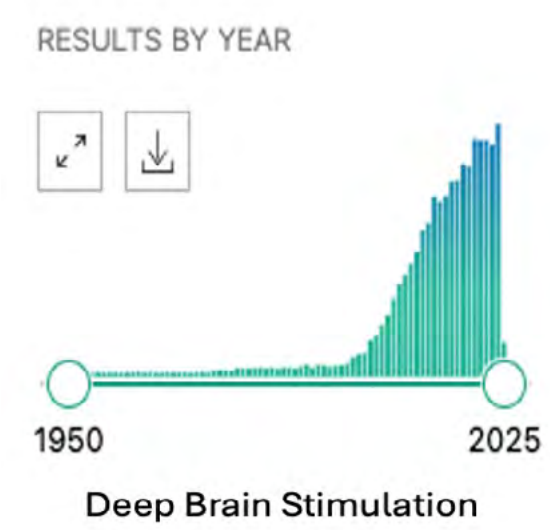
Patric Blomstedt, MD, PhD
Professor of Stereotactic Functional Neurosurgery
President of the Swedish Society for Stereotactic Functional Neurosurgery (SSSFN)
Second secretary of the European Society for Stereotactic and Functional Neurosurgery (ESSFN)
Treasurer of the World Society for Stereotactic & Functional Neurosurgery (WSSFN)
Editor of the Stereotactic Academy

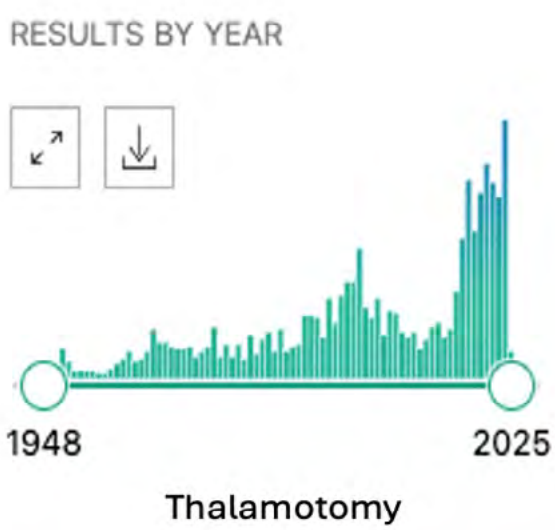
Never find the time to search PubMed and read all the new papers? Here below you will find a selection of recent publications. Use the link to the Stereotactic Academy to access a summary with critical analysis presented by Professor Marwan Hariz.

https://stereotactic.org/category/publications/

Introduction by Professor Marwan Hariz

Reviewing papers in our field of stereotactic functional neurosurgery is getting more and more complicated; It is nearly impossible to keep track of the steadily increasing number of publications. I rely only on PubMed: please see the figures below showing the annual trend of publications concerning "deep brain stimulation" and "thalamotomy".





One can appreciate that the year 2024 shows the largest number of publications ever on these topics. So my choice of Hot Topic papers has been difficult but, as usual, I tried to highlight and comment on papers of interest, papers more or less down to earth, or innovative or otherwise thought-provoking papers. In the section labeled "varia/miscellaneous", I try, as usual, to highlight papers of general interest that may or may not always be relevant to our field.

I apologize in advance to any reader if his or her paper is not included in this review. Also, I insist that whatever opinion or praise or critic I express in my comments on the papers, these are my sole responsibility and do not involve any endorsement by the Editors of The Stereotactic Academy. And I welcome any feedback from any reader, including critic, praise, protest, etc., either on this platform or by email to me on :

marwan.hariz@umu.se or on m.hariz@ucl.ac.uk

To accompany this issue of Hot Topics, I borrow a quote from a speech that Harvey Cushing delivered at his retirement: Citing Leonardo da Vinci, Cushing stated:

«It is a mediocre pupil the pupil who does not surpass his teacher".

May I be bold to state here that I am happy and proud to have been surpassed...

MOVEMENT DISORDERS *(24 papers)*

Coupled Activation of the Hyperdirect and Cerebellothalamic Pathways with Zona Incerta Deep Brain Stimulation. Bingham CS, McIntyre CC. Mov Disord. 2024 Mar;39(3):539-545. doi: 10.1002/mds.29717. Epub 2024 Feb 6.
› **View**

Comprehensive characterization of intracranial hemorrhage in deep brain stimulation: a systematic review of literature from 1987 to 2023. Cheyuo C, Vetkas A, Sarica C, Kalia SK, Hodaie M, Lozano AM. J Neurosurg. 2024 Mar 22;141(2):381-393. doi: 10.3171/2024.1.
› **View**

Preventing Shift from Pneumocephalus During Deep Brain Stimulation Surgery: Don't Give Up the 'Fork in the Brain'. Martinez-Nunez AE, Wong JK, Hilliard JD, Foote KD, Okun MS. Tremor Other Hyperkinet Mov (N Y). 2024 Apr 10;14:18. doi: 10.5334/tohm.873. eCollection 2024. PMID: 38617832
› **View**

Surgical Complications in Subthalamic Nucleus Deep Brain Stimulation for Parkinson's Disease: Experience in 800 Patients. Holewijn RA, Wiggerts Y, Bot M, Verbaan D, de Bie RMA, Schuurman R, van den Munckhof P. Stereotact Funct Neurosurg. 2024;102(5):275-283. doi: 10.1159/000539483. Epub 2024 Jun 26. PMID: 38934196.
› **View**

Akinetic crisis and withdrawal syndromes: guideline «Parkinson's disease» of the German Society of Neurology. Pötter-Nerger M, Löhle M, Höglinger G; German Parkinson's Guideline Group. J Neurol. 2024 Oct;271(10):6485-6493. doi: 10.1007/s00415-024-12649-x. Epub 2024 Aug 27. PMID: 39192030
› **View**

Effect of deep brain stimulation on sexual dysfunction among patients who had Parkinson's disease: a systematic review and meta-analysis. Bahadori AR, Zafari R, Fathollahi MA, Davari A, Sheikhvatan M, Ranji S, Tafakhori A. Neurol Res. 2024 Dec;46(12):1181-1190. doi: 10.1080/01616412.2024.2407645. Epub 2024 Oct 1. PMID: 39351855 Review.
› **View**

Patient-reported treatment satisfaction in essential tremor: levels of satisfaction and predictors of satisfaction. Varghese A, Berry DS, Ghanem A, Hernandez NC, Louis ED. Ther Adv Neurol Disord. 2024 Oct 7;17:17562864241271994. doi: 10.1177/17562864241271994. eCollection 2024. PMID: 39380787.
› **View**

Precision targeting in the globus pallidus interna: insights from the multicenter, prospective, blinded VA/NINDS CSP 468 study. D'Souza S, Seshadri V, Toms J, D'Haese P, Dawant BM, Li R, Shah HP, Koch P, Larson P, Holloway KL. J Neurosurg. 2024 Jul 5;141(6):1567-1577. doi: 10.3171/2024.4.JNS24139. Print 2024 Dec 1. PMID: 38968618 Clinical Trial.
› **View**

Deep brain stimulation of symptom-specific networks in Parkinson's disease. Rajamani N, Friedrich H, Butenko K, Dembek T, Lange F, Navrátil P, Zvarova P, Hollunder B, de Bie RMA, Odekerken VJJ, Volkmann J, Xu X, Ling Z, Yao C, Ritter P, Neumann WJ, Skandalakis GP, Komaitis S, Kalyvas A, Koutsarnakis C, Stranjalis G, Barbe M, Milanese V, Fox MD, Kühn AA, Middlebrooks E, Li N, Reich M, Neudorfer C, Horn A.
Nat Commun. 2024 May 31;15(1):4662. doi: 10.1038/s41467-024-48731-1. PMID: 38821913.
› **View**

A Transatlantic Viewpoint on the Role of Pallidal Stimulation for Parkinson's Disease. Boogers A, Fasano A. Mov Disord. 2024 Jan;39(1):36-39. doi: 10.1002/mds.29656. Epub 2023 Nov 15.
› **View**

Comment on: «A Transatlantic Viewpoint on the Role of Pallidal Stimulation for Parkinson's Disease». Xie T, Warnke PC. Mov Disord. 2024 Apr;39(4):760-761. doi: 10.1002/mds.29782.
› **View**

Hypothalamic deep brain stimulation augments walking after spinal cord injury. Cho N, Squair JW, Aureli V, James ND, Bole-Feysot L, Dewany I, Hankov N, Baud L, Leonhartsberger A, Sveistyte K, Skinnider MA, Gautier M, Laskaratos A, Galan K, Goubran M, Ravier J, Merlos F, Batti L, Pages S, Berard N, Intering N, Varescon C, Watrin A, Duguet L, Carda S, Bartholdi KA, Hutson TH, Kathe C, Hodara M, Anderson MA, Draganski B, Demesmaeker R, Asboth L, Barraud Q, Bloch J, Courtine G. Nat Med. 2024 Dec;30(12):3676-3686. doi: 10.1038/s41591-024-03306-x. Epub 2024 Dec 2. PMID: 39623087
› **View**

Deep brain stimulation for Parkinson's disease: bibliometric analysis of the top 100 cited literature.
Weijie Zhao 1, Xinxin Shao 1, Ziyue Wang 1,2,3, Chuanhao Mi 1,Yu Wang 3, Xianghua Qi 4 and Xiao Ding 4*
Front. Aging Neurosci. 16:1413074. doi: 10.3389/fnagi.2024.1413074
› **View**

Directional deep brain stimulation electrodes in Parkinson's disease: meta-analysis and systematic review of the literature. Hvingelby V, Khalil F, Massey F, Hoyningen A, Xu SS, Candelario-McKeown J, Akram H, Foltynie T, Limousin P, Zrinzo L, Krüger MT. J Neurol Neurosurg Psychiatry. doi: 10.1136/jnnp-2024-333947. PMID: 39304337
› **View**

Risk of fall with device-based advanced treatments in Parkinson's disease: a systematic review and network meta-analysis. Rajalingam R, Sorrento G, Fasano A. J Neurol Neurosurg Psychiatry. 2024 Nov 21:jnnp-2024-334521. doi: 10.1136/jnnp-2024-334521. Online ahead of print.
› **View**

Challenges and opportunities of acquiring cortical recordings for chronic adaptive deep brain stimulation. Herron J, Kullmann A, Denison T, Goodman WK, Gunduz A, Neumann WJ, Provenza NR, Shanechi MM, Sheth SA, Starr PA, Widge AS. Nat Biomed Eng. 2024 Dec 27. doi: 10.1038/s41551-024-01314-3. Online ahead of print. PMID: 39730913 Review.
› **View**

Chronic adaptive deep brain stimulation versus conventional stimulation in Parkinson's disease: a blinded randomized feasibility trial. Oehrn CR, Cernera S, Hammer LH, Shcherbakova M, Yao J, Hahn A, Wang S, Ostrem JL, Little S, Starr PA. Nat Med. 2024 Nov;30(11):3345-3356. doi: 10.1038/s41591-024-03196-z. Epub 2024 Aug 19. PMID: 39160351 Clinical Trial.
› **View**

Clinically Implemented Sensing-based Initial Programming of Deep Brain Stimulation for Parkinson's Disease: A Retrospective Study. Swinnen BEKS, Fuentes A, Volz MM, Heath S, Starr PA, Little SJ, Ostrem JL. Neuromodulation. 2024 Dec 2:S1094-7159(24)01221-2. doi: 10.1016/j.neurom.2024.11.002. Online ahead of print. PMID: 39625426
› **View**

Awake versus asleep deep brain stimulation targeting the caudal zona incerta for essential tremor. Stenmark Persson R, Blomstedt Y, Fytagoridis A, Hariz M, Blomstedt P. NPJ Parkinsons Dis. 2024 Nov 22;10(1):226. doi: 10.1038/s41531-024-00833-9. PMID: 39578443
› **View**

Directional Subthalamic Deep Brain Stimulation Better Improves Gait and Balance Disorders in Parkinson's Disease Patients: A Randomized Controlled Study. Cherif S, Tempier N, Yeche M, Temiz G, Perrière J, Romanato M, Ziri D, Fernandez-Vidal S, Hainque E, Maltête D, Derrey S, Bardinet E, Lau B, Karachi C, Welter ML. Ann Neurol. 2024 Oct 30;97(1):149-62. doi: 10.1002/ana.27099. Online ahead of print. PMID: 39475137
› **View**

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› **View**

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VARIA/ MISCELLANEOUS *(8 papers)*

Obituary. Tipu Zahed Aziz, 1956-2024. Pereira EA, Green AL, Nandi D. Stereotact Funct Neurosurg , DOI: 10.1159/000543038. Received: October 28, 2024, Accepted: December 2, 2024, Published online: December 9, 2024
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20th - 22nd November 2025

Joint Meeting of the Latin American Society of Functional Neurosurgery (Sociedad Latinoamericana de Neurocirugía Funcional) and ABCUR ABCUR 2025 | 18th - 19nd November 2025
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WSSFN 2025 Newsletter

SAVE THE DATE:

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November 20–22, 2025 | Pontifical Catholic University of Argentina (UCA)

Dear Colleagues,

The Interim Meeting of the World Society for Stereotactic and Functional Neurosurgery (WSSFN) is coming to Latin America for the first time! From November 20 to 22, 2025, Buenos Aires will become the regional epicenter of Functional and Stereotactic Neurosurgery, bringing together the most renowned experts, innovators, and world leaders in the field.

Pre-Congress Event

Before the main event, from November 18 to 19, 2025, the Joint Meeting of the Latin American Society for Functional and Stereotactic Neurosurgery (SLANFE) and ABCUR 2025 will take place at the same venue, the Pontifical Catholic University of Argentina (UCA). This is a unique opportunity to participate in an unprecedented exchange of knowledge in the region.

Why Attend?

The WSSFN 2025 Interim Meeting will serve as a premier forum for the exchange of clinical experience, scientific knowledge, and technical innovation in the rapidly evolving domain of stereotactic and functional neurosurgery in Latin America. The program will cover key topics such as:

- Advancements in stereotactic targeting and imaging-guided interventions
- Emerging indications and techniques for deep brain stimulation (DBS)
- Functional neurosurgery for pain, epilepsy, and psychiatric disease
- Non-invasive and minimally invasive neuromodulation therapies
- Translational neuroscience and clinical trial design
- Global perspectives on access, training, and health system integration

The scientific agenda will feature plenary lectures, symposia, technical workshops, and case-based panels. For the first time, we will host a NEURO-run, a 5K run around the university area to kick-start the day's discussions. Afternoons will feature "spicy sessions" to review critical clinical cases and controversies.

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WSSFN 2025 Newsletter

A Historic Event for Latin America

Hosting this event in Buenos Aires is not only an honor for the region but also a unique opportunity to strengthen functional neurosurgery in Latin America, fostering knowledge exchange and professional growth. South America has played a key role in the development of ablative procedures, neuroimaging, and neuromodulatory techniques, and this congress will highlight these contributions while paving the way for future advancements.

Building an Exceptional Program

The Scientific Committee gathered in Buenos Aires last November to design an exciting program featuring more than 60 invited faculty members.

Important Dates

- Opening of Abstract Submission: March 2025
- Opening of Registration: March 2025
- Congress Dates: November 20–22, 2025
- Abstract Submission Deadline and Early Registration Deadline: To be announced

Abstract Submission

Participants may submit abstracts to showcase their latest scientific research or to share information about local scientific activities in Latin America. The Congress Scientific Committee will review all the submissions. Accepted abstracts will be displayed as posters throughout the congress.

Experience Buenos Aires

This incredible city will captivate you with its history, architecture, gastronomy, culture, and warm hospitality. Don't miss the opportunity to explore one of the most vibrant destinations in the world while engaging in high-level scientific discussions.

Save the dates and be part of this milestone event for functional neurosurgery!
Follow our social media for updates, and for full details on registration, submission guidelines, accommodations, and travel, visit:

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We look forward to welcoming you to Buenos Aires for this landmark event in the history of the WSSFN and the field of functional neurosurgery!

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Tipu Zahed Aziz: 1956-2024

Erlick A.C. Pereira; Alexander L. Green; Dipankar Nandi, *Stereotact Funct Neurosurg 75–80.*
https://doi.org/10.1159/000543038

Tipu Zahed Aziz was born on 9th November 1956 in Dhaka in what was then East Pakistan. He spent his childhood aspiring to and sometimes drawing on a Sancho Panza moustache whilst moving between the USA and West Pakistan to follow his father's career as scientist. His father, Mohamed Aziz, was based at Merck and went on to lead the clinical trial of ivermectin to cure river blindness. His work was posthumously acknowledged by the winners of the 2015 Nobel Prize in Physiology or Medicine. Tipu returned to East Pakistan with his mother and siblings in the 1960s before the breakout of civil war in 1971, which led to the establishment of Bangladesh. There he developed eclectic hobbies from shooting stray dogs with his pellet gun and dissecting them in his garage to becoming an accomplished singer of Bengali classical music. The family finally moved to Oxford in 1973 during the post-war upheaval of the newly created nation.

Tipu finished his schooling in Oxford and he went on to study Physiology at University College London where highlights included seeing Andrew Huxley demonstrating axonal neurotransmission, and a chain-smoking Patrick Wall teaching gate-control theory in his laboratory. In the time when he was not studying, Tipu developed a passion for rare animal finds. He particularly enjoyed sharing a story, which involved capturing and cooking a swan with an Iranian friend in Regents Park. Tipu was allegedly busy barbecuing it for his housemates on the balcony of his nearby Great Portland Street student accommodation when the police visited.

Tipu obtained a first-class degree from UCL in 1978 and went on to study medicine as a graduate at King's College London. House officer posts in general surgery in London, then Birmingham were followed by neurosurgery in Bristol where he first performed a radiofrequency thalamotomy for tremor [1]. His first registrar post was in Swansea where at interview when offered a question he asked, "why am I the only candidate?". After Swansea, he went to Cardiff. Like many functional neurosurgeons, Tipu had been inspired from undergraduate days by his wider reading including old movies of surgery for movement disorders from the likes of Irving Cooper, Ted Hitchcock, and John Gillingham. He knew exactly what he wanted to do. However, functional neurosurgery for movement disorders had gone into hibernation in the 1980s soon after the demise of psychosurgery and with the advent of increasingly sophisticated medications for Parkinson's disease. He explored doctoral research into resurrecting it with several British potential mentors. A morning visit to Sid Watkins at the Royal London was memorable for Sid offering him a whisky, then imparting some frank relationship advice while puffing a cigar with his feet on his desk, before finally standing to christen his office sink.

Tipu sought out Alan Crossman, a neuroanatomist in Manchester who offered him a basic scientist studentship from the UK Medical Research Council (MRC) to undertake an MD research degree lesioning the subthalamic nucleus in monkeys. Tipu moonlighted with registrar locums in Manchester Royal Infirmary and commuted from a small village near Glossop where he and his young family lived mostly off large bags of rice bought in Rusholme. The groundbreaking primate research of his doctoral thesis demonstrated the subthalamic nucleus as a new surgical target for Parkinson's disease [2], his most cited first-author paper.

Despite discovering what would become 2 decades later the main target for deep brain stimulation (DBS) for Parkinson's disease, Tipu's seminal work was rejected for presentation at a Society of British Neurological Surgeons (SBNS) meeting. It was however later also published in British Journal of Neurosurgery [3]. He also struggled for a senior registrar job. Numerous interviews up and down the country resulted in rejection, perhaps because everywhere he went, he expressed his career intention to resurrect functional neurosurgery. In Cambridge, his interviewer told him he thought that functional neurosurgery was dead. "Well, I think aneurysm surgery is dead," replied Tipu. Peter Kirkpatrick (neurovascular surgeon) got that job. Finally, at his Oxford interview Chris Adams paused, then replied, "Functional neurosurgery. No-one else here has done that for a while. You can start that again in Oxford."

Several years of intense on-calls followed with another MRC grant and temporary consultant privileges while most of his contemporaries and some of his juniors progressed to substantive consultant posts. During this time, he formed a close collaboration with physiologist John Stein and supervised their first PhD students. He started driving to Charing Cross Hospital in West London at 4 a.m. every Friday to plan and perform radiofrequency pallidotomies and thalamotomies with neurologist Peter Bain. When he was on call for Oxford on Thursday nights, the registrar just had to cope with any early Friday morning emergency surgeries. He became a substantive consultant on a 1 day a week contract at Charing Cross in 1996 while still temporary as an MRC grant holder in Oxford. By now, he was world famous in functional neurosurgery. One day he complained to an Oxford consultant who replied tersely, "I am sure we can make you an Associate Specialist job one day." He recounted the interaction to Chris Adams who again paused before remarking, "Very well. Tomorrow you will be a permanent consultant." So ended in the mid-1990s a heady period of senior registrar and locum consultant life, involving bedside transorbital ventriculostomies, aneurysms clipped overnight and sent to their district general hospitals the next day, naps on the operating table between overnight cases, and even an admission to the nearby John Radcliffe for acute renal

failure secondary to dehydration. Despite all this, he had passed the old general Fellowship for the Royal College of Surgeons (FRCS) at the English college and was one of the first to do the new FRCS (surgical neurology) with a huge experience, a lot of book knowledge, and a little luck. When asked by a radiologist in his oral examination to explain the physics of MRI, Tipu replied, "well I could tell you about spinning tops and electrons going up and down but I don't really know what it all means." He passed first time.

Remarkably in those years as senior registrar and locum academic consultant without protected academic time, his pioneering functional neurosurgery research was gaining traction. He made almost monthly visits to Boston to Eric Cosman to develop radionics image guidance and lesion generation and indulge a love of fresh lobster. A collaboration with Xiuguong Liu studying motor control, multiple papers on pallidotomy, and his first DBS cases and publications emerged. His focus shifted to discover a second target: the pedunculopontine nucleus in seminal primate experiments with DPhil students Lisa Munro-Davies and then Dipankar Nandi [4]. He even found time to unearth the Horsley-Clarke stereotactic frame from storage in the Science Museum (Fig. 1).

Figure 1: Tipu at the Science Museum with the Horsley-Clarke stereotactic apparatus, 1996.

Tipu was made professor of neurosciences at Imperial College London in 2001, 3 years before he was promoted to professor of neurosurgery at Oxford in 2004. Soon after at a Society of British Neurological Surgeons (SBNS) meeting, John Pickard asked all the neurosurgeons who held professorships to put their hands up. "Tipu why are you putting both your hands up?" asked Prof. Pickard. "Because I've got two," Tipu replied beaming, one of many moments when his mischievous sense of humour would have audiences chuckling. He was also once asked to admit a patient to the Radcliffe Infirmary for a difficult lumbar puncture by a neurology consultant in Reading and gave her short shrift. "I shall refer the patient to Charing Cross then," she told him to which he replied, "please try as I am the Professor of Neurosurgery there as well!".

As well as pioneering the seminal primate research behind the subthalamic and pedunculopontine nuclei as targets for Parkinson's disease, early case series of lesions and DBS for movement disorders, and local field potential recordings in human movement experiments to further our understanding of the basal ganglia, Tipu developed a strong interest in neuromodulation for chronic pain. After establishing that DBS worked better in his hands than motor cortex stimulation, he went on to publish one of the largest case series worldwide of DBS for pain [5]. He started travelling annually to Porto with DM student Erlick Pereira to advise thalamic DBS for pain surgeries and drew on his experience of anterior cingulotomy for cancer pain to target the anterior cingulate cortex with DBS for the affective component of pain [6]. Blood pressure changes with periaqueductal grey DBS for chronic pain led him to investigate DBS for hypertension and orthostatic hypotension supervising MD(Res) student Alex Green [7].

His research tools were many and varied from horseradish peroxidase staining of animal brains to single photon emission tomography, magnetoencephalography, MRI diffusion-weighted tractography, and, of course, local field potentials combined with electroencephalography and electromyography of externalized DBS patients. A stream of post-doctoral scientists cut their teeth in his laboratory including Shouyan Wang, Ned Jenkinson, Niki Ray, John-Stuart Brittain, and Sandra Boccard. Numerous visiting research collaborations, clinical fellows, and professorships were accrued from functional neurosurgery units he set up as far afield as Aarhus, Kolkata, Melbourne, and Kuala Lumpur. Apart from the many fellows who became consultant functional neurosurgeons in the UK, Malaysia, Australia, and elsewhere, he was an early supporter of nurse career progression. His first movement disorders nurse specialist Carole Joint obtained a PhD in her spare time, his pain nurse specialist Liz Moir gained a Master's degree, and several others became key opinion leaders in neuromodulation. Key to all this was Tipu's kindness, generosity,

and passion for scientific advancement. He was even quick to help Bristol beat him to the first human pedunculopontine nucleus DBS, visiting Steven Gill to program the patient together.

Tipu held numerous MRC grants and published close to 400 papers, having an H-index of 100. He was elected a Fellow of the Academy of Medical Sciences in 2012. In 2019, he was awarded the SBNS Medal (Fig. 2). In 2024, the British Society of Stereotactic and Functional Neurosurgery named its lifetime achievement medal after him and awarded the first one to him (Fig. 3). His sheer breadth of research in functional neurosurgery attracted giants of experimental neurology Peter Brown from Queen Square and biomedical engineering Tim Denison from Medtronic to Oxford to cement his legacy. Alongside this, he campaigned for and engaged in public debate about animal research, particularly the bipedal non-human primate model for movement disorders, at some risk to his personal safety [8]. One convicted animal rights activist was arrested with bomb making equipment and a map to Tipu's house. When asked whether he was worried about this, Tipu mused that "you haven't made it unless you have received death threats."

Figure 2: Tipu Zahed Aziz receiving the Society of British Neurological Surgeons Medal, with (from left) Peter Hutchinson, John Pickard, and Alex Green in 2019.

Figure 3: British Society of Stereotactic and Functional Neurosurgery Tipu Z. Aziz Medal, awarded to Tipu in 2024.

Most neurosurgeons will remember a friendly, eccentrically dressed man outside the conference hall or hospital with either an espresso or a glass of white wine in one hand and a cigarette in the other. If the opportunity arose, he would smoke with patients before surgery. Accompanying the lifelong moustache, he wore a bowtie from his medical school years. The blue blazer covered with badges from the registrar years was upgraded to a black leather jacket in the consultant years with the bowtie worn again in the early professor years, for television interviews, for documentaries about him, and for meeting the Queen (Fig. 4).

Figure 4: Tipu presenting to Queen Elizabeth II in 2007, with Richard Kerr in attendance.

Those of us who had the privilege to join Tipu's inner circle of academic neurosurgery trainees will not only cherish the numerous international prizes his group won and the trips we had but forever remember the good food, wine, whisky, company, and the stories generating sheer belly laughter and reflux from a life steeped in both neurosurgery and functional neurosurgery. There was the time Hirotaro Narabayashi invited him to sit outside in the pouring rain to eat steak together in silence; the time he used a series of eggs to calibrate a completely unknown radiofrequency lesion generator just before surgery in Karachi; the time he carted a patient with their head in a stereotactic frame across Kolkata using various modes of public transport from a broken CT to a working one in a rival hospital. Then there was the time he ran over a muntjac that he dragged into the back of his Land Rover, then butchered, and curried for various registrars; the time he brought two roast baby pigs from Portugal back to his fridge after removing all its shelves, hacking chunks off them for a fortnight until they no longer smelt edible. He loved cooking for his research registrars and talking about the science and the surgeries over

a good meal. He was once stopped at airport security because he forgot that he had bought a large meat cleaver at a Shanghai market and left it in his hand luggage.

Tipu Aziz was a giant of functional neurosurgery (Fig. 5), a first-generation immigrant who, despite various career cul-de-sacs, climbed the ziggurat to reach the pinnacles of British neurosurgery and British neuroscience by sheer brilliance, hard work, and persistence. His "Aziz" technique of twist drill bilateral DBS or unilateral lesioning sometimes completed in 20 min from scalp incision to closure was legendary and astonished numerous international visitors (Fig. 6). He was the doyen of keeping things simple and down to earth, commensurate with his humble character. As he once said, "I am not a glory hound." Unusually for an Oxford professor and consultant surgeon, he often also said, "just call me Tipu."

Figure 5: Giants of functional neurosurgery together in 1994: Ronald Tasker, Tipu Zahed Aziz, and Philip Gildenberg (from left).

Figure 6: Tipu performing an awake stereotactic procedure in 2010.

He was one of very few pioneers worldwide who not only resurrected the subspecialty but whose research profoundly influenced the most common DBS and lesion operations we do today for movement disorders and pain. He was a pinball wizard of functional neurosurgery mentored by a bygone Mad Men era of gentlemen: chain-smoking, heavy-drinking workaholics whose nonchalant bravado, "can-do" attitude, love of mischief, merriment, and well-placed profanity he exemplified.

Beyond neurosurgery, Tipu enjoyed exotic cuisine (especially barnacles, Portuguese pig heads, and Iranian sheep heads), microlight flying, spotting military planes, and rock music. Who can forget his loud Meat Loaf and Chemical Brothers sets in the operating theatre? He was a voracious reader and collector of rare books with an encyclopaedic knowledge and passion for history [9, 10]. He combined all this with a wit as sharp as his tenotome. "There goes shifting dullness," he would joke over his espresso and cigarette just outside the hospital, upon seeing one particular colleague he had nicknamed.

Tipu's final 3 years were blighted by a head injury from which he made a remarkable recovery. He then had a short battle with oesophageal cancer, to which he succumbed on 25 October 2024. His wife Jocelyn and daughter Laila were the lucky recipients of his great humour and generosity.

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