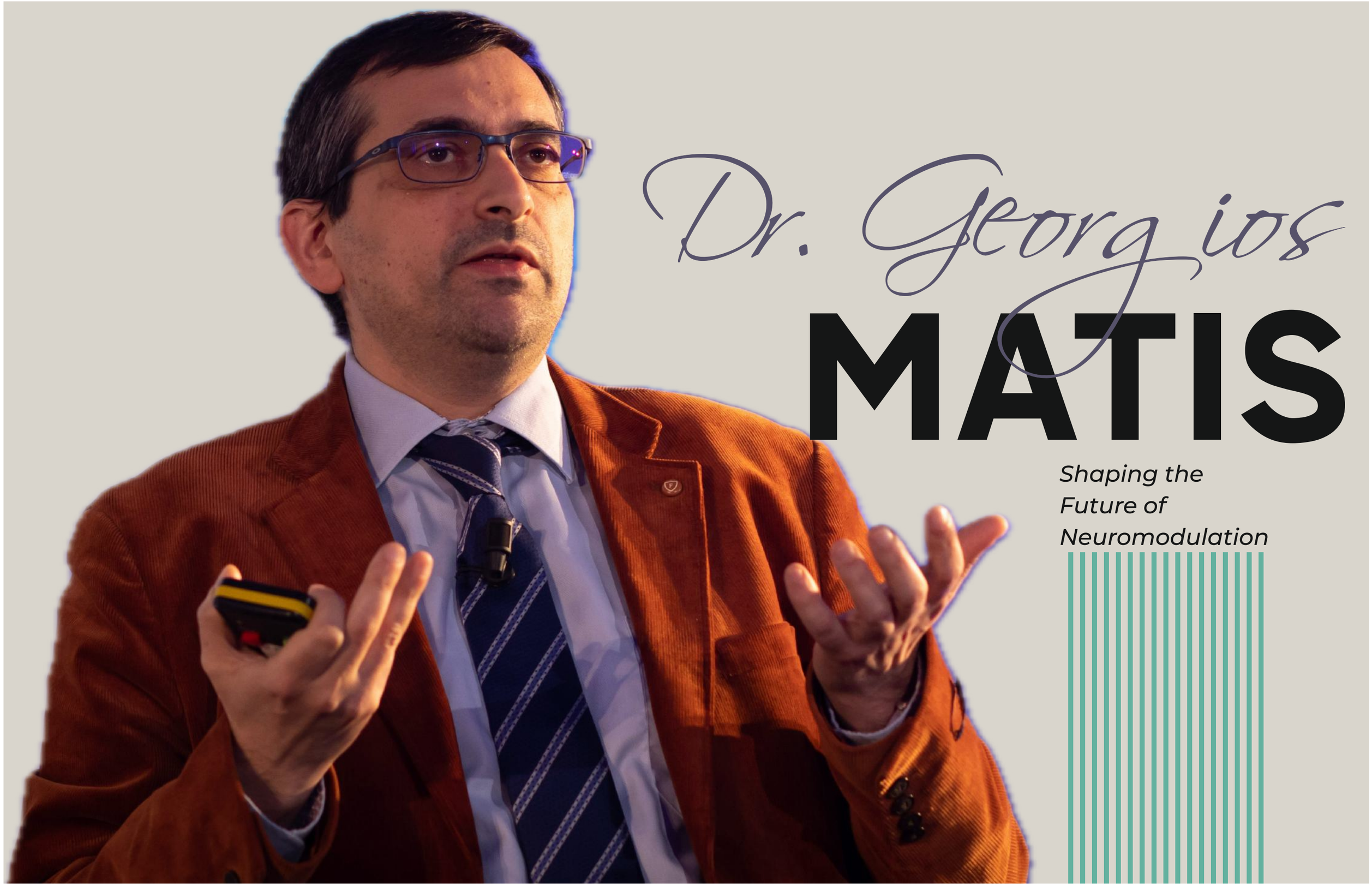
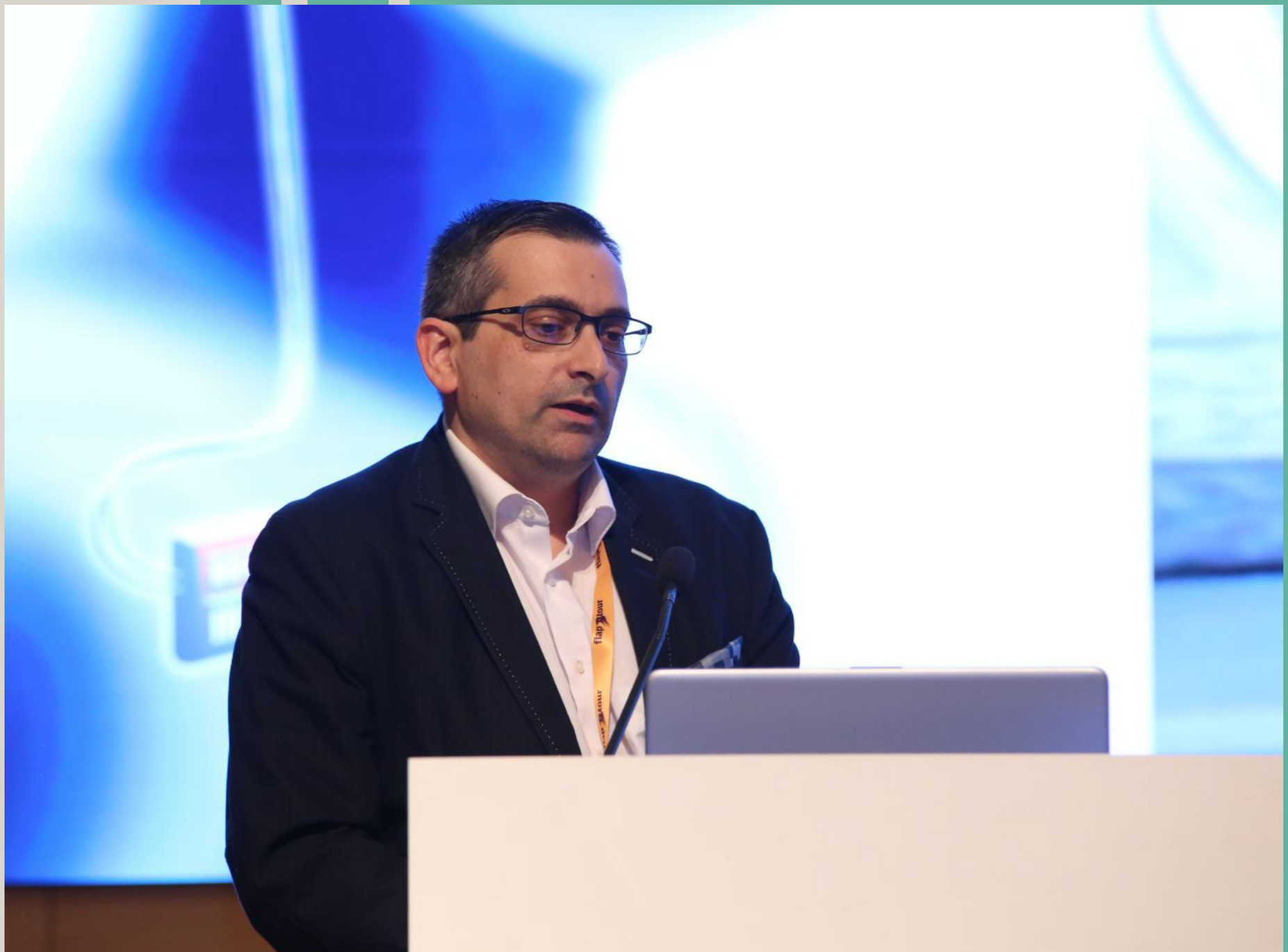


Dr. Georgios

MATIS

Shaping the Future of Neuromodulation



In the ever-evolving field of neuromodulation, few figures embody both scientific rigor and human compassion as profoundly as Dr. Georgios Matis. Having led the Pain and Spasticity Section at Uniklinik Köln for over seven years, Dr. Matis has now embarked on a new chapter in his career: beginning this September, he will assume leadership of the Chronic Pain / Spasticity Neuromodulation Unit at Hygeia Hospital in Athens, Greece. His journey represents a blend of technical mastery, deep empathy, and a relentless pursuit of innovation in the service of those suffering from chronic pain and spasticity.

A Calling, Not Just a Career

Dr. Matis describes his journey into neuromodulation as more than a professional choice it was a calling. Early in his neurosurgical path, he witnessed patients trapped in the invisible prison of chronic pain and spasticity. Conventional therapies often failed them, leaving despair as their constant companion. For him, neuromodulation represented an ethical imperative: a means to restore dignity, autonomy, and participation in life.

“Neuromodulation was where science and humanism meet,” he explains, “where innovation is measured not in laboratory results but in smiles, steps, and regained independence.” For Dr. Matis, each electrical pulse from a stimulator has the potential to ignite hope. This perspective has shaped his work across Greece, Germany, Cyprus, Switzerland, and now Greece once again.

Drawing from philosopher Charles Taylor's idea of “horizons of significance,” Dr. Matis frames his work as a pursuit of meaning that transcends the clinical act. Each intervention is not just about managing pain but about restoring the narrative of life that illness once disrupted.

Understanding Neuromodulation

For the uninitiated, neuromodulation may seem complex and abstract. Dr. Matis simplifies it with a metaphor: the nervous system is like an orchestra. In chronic pain, one section plays out of tune loud, chaotic, and repetitive. Neuromodulation acts as the conductor, restoring harmony.

Spinal cord stimulation (SCS) delivers gentle, precisely programmed electrical pulses to the spinal cord, while peripheral nerve field stimulation targets small branches of nerves near the pain site. These interventions do not erase pain but transform it into something tolerable something the brain can coexist with.

What excites him most today is the diversity of therapeutic “scores.” Whether it's FAST, DTM, BurstDR, high-frequency stimulation, closed-loop systems, or even remote programming, clinicians now have the flexibility to tailor treatment to the individual. The art lies in orchestrating the right combination for each patient.

Individualized Transformations

Asked to name the most transformative therapy, Dr. Matis resists offering a single answer. Instead, he insists that the true transformation lies in matching the right therapy to the right patient at the right time. Whether it's closed-loop spinal cord stimulation, intrathecal therapies with agents like ziconotide, or targeted pulsed radiofrequency, the essence of his philosophy is personalization.

Quoting philosopher Martha Nussbaum, he explains that human flourishing is about enabling individuals to live according to their own capabilities. Neuromodulation, in his view, restores not just function but the possibility of flourishing: the grandparent walking a child to school, the artist painting again, the once-bedridden patient reclaiming independence.

Challenges Beyond Technology

Despite the technical complexities of neuromodulation, Dr. Matis sees the greatest challenge not in programming waveforms but in restoring hope. Many patients arrive after years of failed treatments, skepticism etched into their lives. “Restoring belief in the possibility of relief is sometimes the first and most delicate procedure,” he says.

The complexity of modern technology presents another challenge. With a multitude of waveforms, devices, and systems, the field can overwhelm even seasoned practitioners. Dr. Matis meets this with collaboration and education. As a surgeon, educator, and Co-Chair of the International Neuromodulation Society's Medical and Public Education Committee, he prioritizes clarity and transparency. “Trust is the most important implant we place,” he emphasizes.

Leadership and the Role of DGNM

As Secretary and Board Member of the German Society for Neuromodulation (DGNM), Dr. Matis views the society as more than an academic entity. It is a bridge connecting science, innovation, and patient care. Through fostering interdisciplinary collaboration and engaging policymakers, the DGNM advances access to neuromodulation therapies.

Education is central to its mission. Workshops, webinars, and mentorship initiatives, often in partnership with the International Neuromodulation Society, prepare the next generation of neuromodulators. With the rapid rise of AI-driven closed-loop systems, multifidus stimulation, and remote programming, the need for continuous learning has never been greater.

Research Contributions

Among his many academic contributions, Dr. Matis is particularly proud of his work exploring combinations of spinal cord stimulation waveforms such as FAST and Contour. His publications encouraged colleagues to consider multimodal strategies, broadening the therapeutic toolbox.

Another highlight was his collaborative review on intrathecal ziconotide therapy, which synthesized evidence and practical guidance. Widely cited, it has become a reference for clinicians entering this highly specialized field. For Dr. Matis, the satisfaction lies not in academic accolades but in giving clinicians the resources they need to help patients.

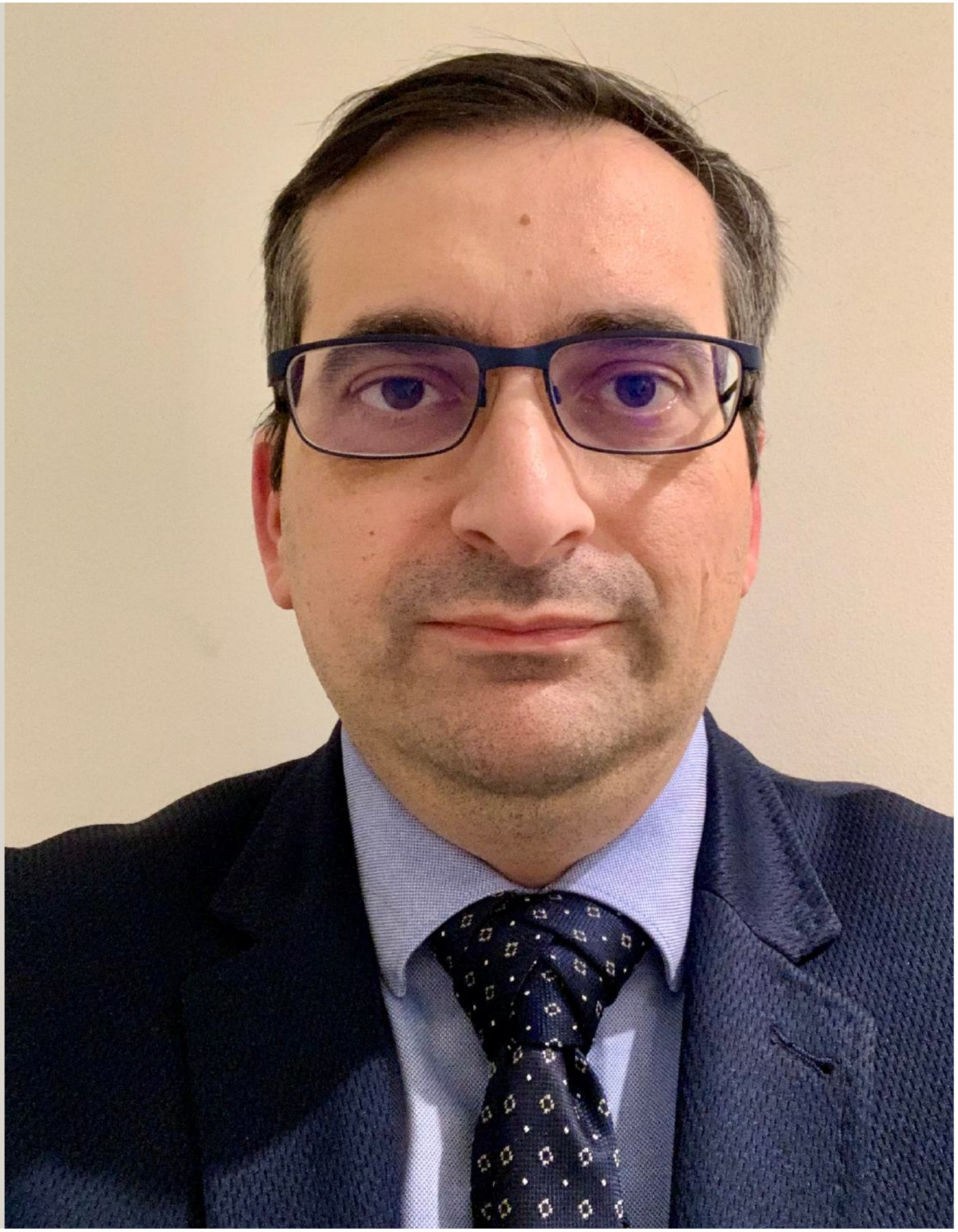
The AI Revolution in Neuromodulation

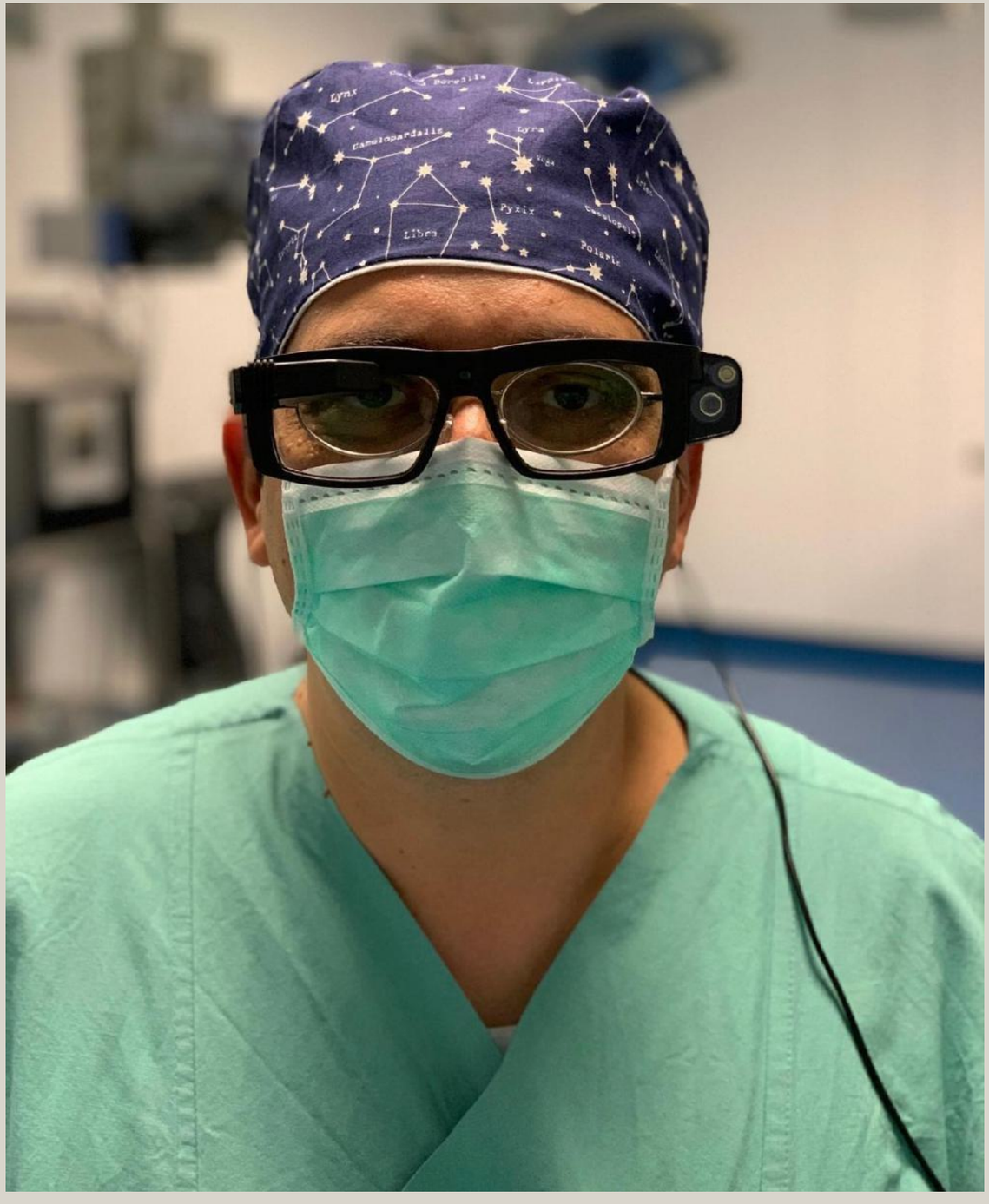
Looking to the future, Dr. Matis sees explainable artificial intelligence as transformative. He envisions closed-loop stimulators that adjust in real time and also explain their adjustments—bridging data science with clinical trust. This would empower clinicians to fine-tune therapy with unprecedented precision.

AI will also enhance remote care, allowing patients in remote regions—or even on Greek islands—to access expert adjustments without travel. Combined with biomarker-driven therapy and miniaturized implants, AI promises to move neuromodulation from reactive symptom control toward proactive, predictive, and personalized care.

Balancing Roles and Expanding Knowledge

Balancing his responsibilities as a surgeon, researcher, and leader, Dr. Matis sees his work as aligned rather than divided. Surgery informs research; research strengthens teaching; leadership amplifies both. This virtuous cycle is sustained by clear purpose and careful time management.





Beyond clinical and academic work, Dr. Matis has authored three books: Intrathecal Therapy and Ziconotide: A Comprehensive Guide for Pain Management, a practical manual for clinicians; From Surgeons to Storytellers: Building Bridges with Patients in Neuromodulation, exploring the essential human connection; and Pain and Pulses: A Philosophical Dive into Spinal Cord Stimulation, blending medicine with philosophy. These works reflect both the technical and humanistic dimensions of his vocation.

Advice for Professionals and Patients

To healthcare professionals, Dr. Matis emphasizes that chronic pain should not be treated as a last-resort issue. Early referral to neuromodulation specialists can save years of unnecessary suffering. To patients, he offers hope: “If your pain persists despite multiple treatments, don't accept hopelessness as your new normal. Seek a specialist. Sometimes the right door is hidden in plain sight.”

Priorities for the Next Five Years

Looking ahead, his top priority is establishing the Chronic Pain / Spasticity – Neuromodulation Unit at Hygeia Hospital in Athens as a regional Center of Excellence for Southeastern Europe. Beyond clinical innovation, the center will also serve as a hub for education, welcoming colleagues from across the region.

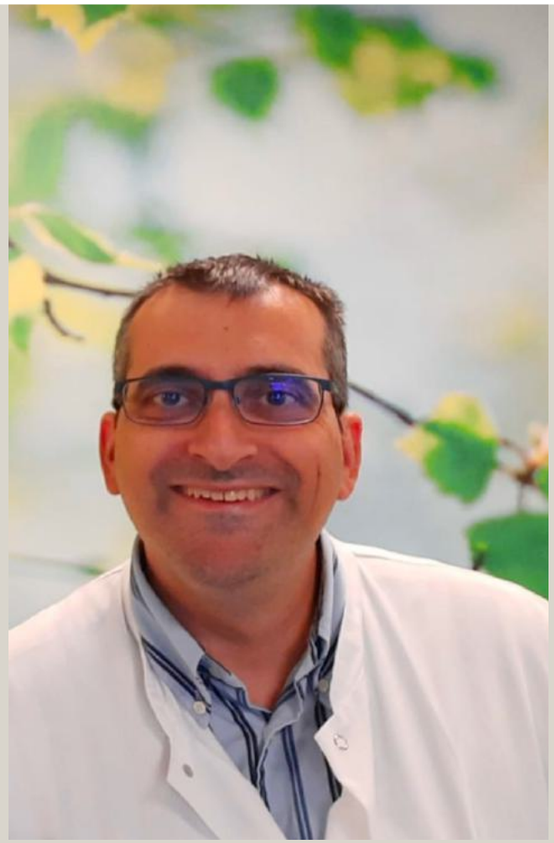
Equally, he is committed to expanding access through telemedicine and remote programming, ensuring geography is no longer a barrier to care. His vision is not just to advance technology but to embed neuromodulation in public consciousness as a proven, life-restoring therapy.

Personal Inspirations

When asked about personal influences, Dr. Matis cites Nikos Kazantzakis's Report to Greco, a meditation on the tension between duty and freedom. The author's exhortation to “Reach what you cannot” resonates deeply with him, inspiring the courage to attempt what once seemed impossible.

After intense days in surgery or research, he finds balance in simple walks with his dog, Bini. These walks are both grounding and meditative, offering clarity amid the noise of professional life.

His dream journey would be sailing to every Greek island, discovering their unique landscapes and stories—a



metaphor for his medical philosophy that each patient, like each island, holds a unique narrative worth uncovering.

Mentorship and Human Connection

Among his mentors, Dr. Athanasios Koulousakis stands out as the most influential. From him, Dr. Matis learned that true excellence is not just technical mastery but empathy and listening. This ethos continues to guide his work.

Outside of medicine, he dreams of mastering stand-up comedy. For him, comedy, like neuromodulation, is about timing, empathy, and connection. A well-placed moment of humor can heal in ways no scalpel can.

Conclusion

As Dr. Georgios Matis prepares to lead the new Chronic Pain / Spasticity – Neuromodulation Unit at Hygeia Hospital in Athens, his vision for the future of neuromodulation is clear: one where science and humanity merge to restore lives. His career is a testament to the power of innovation guided by compassion, and his next chapter promises to bring hope to countless patients in Greece, Southeastern Europe, and beyond.