

The Joy of Understanding and the Insight of Sharing

Dr. Ionelia Panea, affectionately known as Lili, joined the Applied Geophysics Group at Delft University in 2002 to commence her doctoral research. Prior to her arrival, she served as a Teaching Assistant at the Department of Geophysics, University of Bucharest. Her PhD research was conducted under the auspices of the Netherlands Research Centre for Integrated Solid Earth Science (ISES), a program established in 1999 with significant government funding. ISES aimed to advance our understanding of the solid Earth as a dynamic system and improve geoprediction capabilities in both space and time.

Her work centered on the utilization of single sensors in seismic acquisition, processing, and interpretation, representing a novel approach to extracting seismic information from data obtained in rugged and hilly terrain. She advocated for the implementation of the Minimum-Variance Distortionless Response (MVDR) beamforming technique on single-sensor data, demonstrating its effectiveness through successful application to field data collected during a campaign in Romania.

Lili successfully balanced her PhD research with a teaching assistantship at the Faculty of Geology and Geophysics in Bucharest, which she commenced in 2001. In this role, she instructed students in seismic prospecting and applied geophysics within the bachelor's and master's programs. The courses placed significant emphasis on the importance of data acquisition for optimal data handling during subsequent processing stages. As time progressed, Lili progressively enhanced the course content to encompass the design of passive and active-source seismic survey.

In her lectures, Lili incorporated the latest advancements and groundbreaking findings presented at annual meetings such as SEG and EAGE. She also included published results from studies related to surface wave analysis, seismic interferometry, refraction interferometry, prestack and poststack stereo-tomography, trace interpolation, as well as seismic modeling using finite-difference and ray tracing techniques. By integrating these cutting-edge topics into her teaching, Lili ensured that her students were exposed to the latest developments in the field of geophysics.

From 2013 to 2017, Lili took the initiative to organize virtual courses for students. These courses featured renowned professors and researchers from esteemed universities and companies who delivered presentations on various geophysics topics related to hydrocarbon exploration.

Lili provided supervision to over one hundred graduate students, guiding them in diverse areas such as programming, seismic data processing, modeling, and interpretation for their graduation theses. She actively encouraged and supported numerous students in writing and submitting extended abstracts for presentation at prestigious events such as the annual meetings of SEG and EAGE, as well as national conferences. By nurturing their research and

presentation skills, Lili empowered these students to share their work with the wider geophysics community, fostering a culture of knowledge exchange and professional growth.

In summary, Lili is highly valued and appreciated by both students and industrial partners. She has established meaningful connections between students and industry, showcasing her dedication and drive. It is a remarkable feat to be able to effectively convey knowledge and educate students, and Lili has demonstrated exceptional proficiency in this regard. Her ability to maintain a well-balanced approach between research and education exemplifies the essence of academic development and contributes to a comprehensive learning experience for her students.

Without any hesitation, I firmly believe that Lili embodies the perfect fusion of research and education. Thankfully, individuals with her passion and dedication exist within our midst. They guarantee the constant advancement of our science and technology by nurturing the next generation. In conclusion, I proudly affirm that Dr. Ionelia Panea, Lili, is a deserving recipient of the SEG Outstanding Educator Award 2023. As her PhD advisor, I am honored that she has been bestowed with this well-deserved recognition.