

Academic Visit to Shanghai Institute of Technology and Shanghai Normal University

Winning the IET Travel Award provided me with the invaluable opportunity to conduct an academic visit to Shanghai Institute of Technology (SIT) and Shanghai Normal University (SHNU) from 28th March to 3rd April 2025. This visit enabled me to engage with researchers, students, and faculty members, fostering knowledge exchange and potential collaborations in the field of photonics engineering. The experience significantly contributed to my research and professional development, while also allowing me to represent the Institution of Engineering and Technology (IET) and highlight its role in advancing engineering research.

My research focuses on the application of two-dimensional (2D) materials in light control and ultrafast laser generation. The academic visit aimed to deepen collaboration between my institution and SIT/SHNU while disseminating insights into photonics engineering. The visit was initiated through discussions with faculty members at these institutions, who expressed keen interest in emerging material applications in fiber laser systems. The IET Travel Award provided crucial support to facilitate this knowledge exchange and collaborative engagement, reinforcing IET's commitment to fostering international collaboration and knowledge-sharing in the engineering field.

The visit revolved around the technical aspects of photonics engineering, particularly the integration of emerging 2D materials into fiber laser systems for photon-to-photon modulation. The discussions and presentations covered various aspects such as processing and fabrication of 2D materials, integration techniques for fiber laser applications, modulation effects including polarization, phase, and temporal domain manipulation, and dark pulse generation in fiber laser systems.

During my visit, I engaged in various activities, including guest lectures, hands-on workshops, and networking sessions. I actively collaborated with students and faculty members, exchanging research findings and discussing new technological advancements. Furthermore, I visited research laboratories to explore state-of-the-art experimental setups, strengthening my understanding of ongoing projects at SIT and SHNU. These visits reinforced my belief in the power of international collaboration and the importance of organizations such as IET in connecting researchers across borders.

I delivered multiple presentations and workshops during my visit. On 28th March 2025, I gave a guest lecture at SIT on "Application of Emerging Materials in Photonics Engineering" focusing on how 2D materials can be processed and integrated into fiber laser systems for advanced optical modulation. From 31st March to 1st April 2025, I conducted a workshop on "Dark Pulse Generation in Fiber Laser Systems" where I theoretically elaborated on dark pulse formation in fiber lasers. Students actively participated in building a fiber laser cavity to induce dark pulses. On 2nd April 2025, I visited SHNU and delivered a talk titled "How's Your Manuscript Under The Microscope

of an Editor & Reviewer" where I shared key recommendations for improving research manuscripts and navigating the publication process. On 3rd April 2025, I provided a sharing session at SIT on "Pathway to Becoming a Chartered Engineer through IET," introducing IET membership benefits, Chartered Engineer application criteria, and the long-term advantages of professional engineering accreditation.

The visit provided excellent networking opportunities, allowing me to interact with faculty members, researchers, and students. Discussions were held on potential student exchange programs, joint research projects, and collaborative grant applications. These interactions laid the groundwork for future interdisciplinary research partnerships in photonics engineering. As part of my visit, I toured several research laboratories at SIT and SHNU, where I explored cutting-edge experimental setups related to fiber optics, laser modulation, and materials processing. These visits provided insights into the institutions' research capabilities and opened doors for future collaborations.

The IET Travel Award significantly contributed to my research by enabling direct engagement with international experts, fostering collaborative research discussions, and expanding my professional network. The knowledge exchanged during this visit will directly influence my ongoing work on 2D material-based optical modulators and ultrafast laser systems. Additionally, the visit strengthened institutional ties, paving the way for future joint research projects and publications. Through this visit, I was also able to promote the benefits of IET membership to students and faculty members, encouraging them to engage with IET's global network for professional development.

Overall, the academic visit to SIT and SHNU was highly beneficial, both in terms of knowledge dissemination and research collaboration. The IET Travel Award played a crucial role in facilitating this opportunity, allowing me to share my expertise, learn from fellow researchers, and build long-term academic relationships. This experience will undoubtedly have a lasting impact on my research and professional development in photonics engineering. Moreover, through my interactions and presentations, I was able to highlight IET's pivotal role in fostering research excellence, professional recognition, and collaboration across the global engineering community. I am deeply grateful to IET for this opportunity, and I look forward to further contributing to its mission in the future.



Guest Lecture at Shanghai Institute of Technology: "Application of Emerging Materials in Photonics Engineering"



Workshop at Shanghai Institute of Technology: "Dark Pulse Generation in Fiber Laser Systems"



Guest Lecture at Shanghai Normal University: "How's Your Manuscript Under The Microscope of an Editor & Reviewer"



Sharing session at Shanghai Institute of Technology: " Pathway to Become Chartered Engineering through IET"



Cultural Exploration at The Bund in Shanghai