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First Student from Taiwan in Three Years Awarded Optica Women Scholars! Mariia, a Ukrainian Student at the DEE, was Recognized for Outstanding Performance in Electrical Engineering and Photonics



From left to right are Chien-Nan Liu, Director of the Department of Electronics and Electrical Engineering; Li-Chun Wang, Dean of the College of Electrical and Computer Engineering; Ukrainian student Mariia Leontieva; Fang-Chung Chen, Director of the Department of Photonics; and Professor Yi-Hsin Lin from the Department of Photonics.

Translated by Chance Lai

Are all students in the Department of Electronics and Electrical Engineering male? Mariia Leontieva, a Ukrainian student studying at the National Yang Ming Chiao Tung University's (NYCU) Department of Electronics and Electrical Engineering (DEE), stands out in fierce competition, awarded the [Optica Women Scholars](#) from the Optical Society of America, with a prize of \$10,000.

This marks the first time in nearly three years that a student from Taiwan has been honored. Mariia will receive the award with 19 other female scholars from globally renowned universities, including Columbia University and Cornell University.

Optica Women Scholars: Inspiring Women to Enter the Fields of Science and Technology

The Optical Society of America (OSA), a professional society dedicated to optics and photonics, boasts a history of over 100 years. The society provides various conferences, journals, and educational and career development opportunities and recognizes talents who have made outstanding contributions to optics through multiple prizes and honors. The Optica Women Scholars is a prize established by the OSA to recognize and support female scholars who demonstrate exceptional talent in the global field of optics.

In addition to the monetary award, the society also arranges mentorship opportunities with international optical masters and top experts from globally renowned optical companies such as Google, Meta, Intel, Corning, and laser giant Coherent. This provides students with valuable networking opportunities and career assistance, effectively nurturing them to become future leaders in the global photonics industry.

Mariia's outstanding performance in the dual major fields of electrical engineering and photonics has earned her recognition from the judges. She expressed surprise, saying, "I didn't expect to be selected!" She hopes even more to encourage her female peers, especially in the predominantly male-dominated fields of electrical engineering and photonics, not to give up on such opportunities for competition. "I believe female students need to have confidence in their abilities. Our abilities are often stronger than we think!" she remarked.

Ukrainian Girl Pursuing Dreams in Taiwan: Exploring Interdisciplinary Studies from Physics to Dual Major in Photonics and Electrical Engineering

Mariia revealed that she had a keen interest in physics during high school. Additionally, with her older brother having studied at National Chiao Tung University ten years prior, she was determined to follow in his footsteps. Upon arriving in Taiwan, she initially focused on learning Mandarin.

During this process, she discovered that the curriculum in the Department of Photonics (DoP) not only provided more exposure to physics but introduced her to many fields and topics that were entirely new to her, such as liquid crystal photonics, virtual reality (VR), augmented reality (AR), optics, and displays. As a result, she chose to pursue a dual major in electrical engineering and photonics, hoping to integrate her interests in optics and electrical engineering during her graduate studies.



Mariia (front row, second from the right) has been in Taiwan for over four years and has spent Lunar New Year here.

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Mariia has been studying in Taiwan for over four years and is set to graduate with dual majors this June. She plans to pursue further studies in photonics and continue interdisciplinary research involving photonics, electrical engineering, and information technology.

Additionally, she hopes to join international corporations in engaging and exciting "software-hardware integration" research and development projects. Companies such as Facebook, Google, and Apple are among those she aspires to work for, where she can contribute to the research and development of artificial intelligence (AI) liquid crystal photonics components. She envisions assisting AI systems in incorporating visual perception, thereby applying AR to AI.

Mariia's supervising professor in the DoP, Dr. Yi-Hsin Lin, praised Mariia as a "leader-type" student. When the conflict in Ukraine broke out, Mariia helped recruit students to participate in the ML training program ExploreCSR, sponsored by the NYCU DEE.

This initiative aimed to assist Ukrainian students whose education was disrupted due to the conflict by providing support for their transportation, tuition fees, housing, living expenses, and financial aid. The project has accumulated over NT\$40 million in scholarship funds, benefiting many Ukrainian students.

Fostering Future Leaders in Optics and Photonics: NYCU DEE Emphasizes International Collaboration and Interdisciplinary Learning

Professor Yi-Hsin Lin has excellent confidence in Mariia's future development. In addition to arranging for her to conduct a two-year project in her laboratory, she will explore and challenge the future applications of liquid crystal photonics in AI and machine vision.



Mariia (second from the left) interned at AUO Corporation.

Professor Lin has also arranged for Mariia to intern at the panel manufacturer AUO Corporation. Mariia's performance has earned high praise from the industry. Professor Lin firmly stated, "Mariia is the next-generation female leader in photonics that Optica Women Scholars are looking for!"

Dean Li-Chun Wang of the College of Electrical and Computer Engineering (ECE) at NYCU stated that Taiwan's semiconductor industry is trending towards global leadership, providing increasing opportunities for international cooperation and exchanges in Taiwan. Currently, the ECE is committed to SDG4: Quality Education, cultivating students with international competitiveness, including master's and doctoral students, with approximately 262 international students.

Dean of ECE, Li-Chun Wang, said we also promote SDG5: Gender Equality, with nearly 20% female students in the DEE and close to 30% in the DoP, including research institutes. Furthermore, approximately one-third of the professors in the optoelectronics department are women. The ECE emphasizes interdisciplinary learning, believing that future international leaders need to solve problems across disciplines and integrate and create new trends for the future.