

GIST AI-ACE InnoCore Research Group hosts research exchange forum with world-renowned bio and nano scholars

- Invited Nathan C. Gianneschi, Chair Professor at Northwestern University (Visiting Professor, Department of Materials Science and Engineering, GIST)... 'Global Scholar Colloquium and Research Mentoring' held

- Sharing the latest research trends in next-generation biomaterials and nanomedicine for the treatment of cancer and brain diseases

- Advising on research direction and publication strategies through one-on-one research mentoring for students and postdoctoral researchers



▲ Participants of the 'World Scholar Invitation Colloquium and Research Mentoring,' held from June 9 (Tue) to June 11 (Thu), are posing for a commemorative photo.

The Gwangju Institute of Science and Technology (GIST, President Kichul Lim) announced that the GIST AI-ACE InnoCORE Research Group (Director Eunji Lee) and the Department of Materials Science and Engineering (Dean Joo-Hyoung Lee) invited Professor Nathan C. Gianneschi of Northwestern University, a renowned scholar in the field of bio and nanomaterials, to host the 'World Scholar Invitation Colloquium and Research Mentoring' from June 9 (Tue) to June 11 (Thu).

This event was organized to discuss academic exchange and potential for joint research with Professor Gianneschi, and to strengthen the global research capabilities of next-generation researchers.

A total of approximately 200 people participated during the event. It began with a colloquium held at the GIST Institute of Advanced Photonics, followed by ▲ lectures, ▲ research presentations, and ▲ mentoring sessions at the Central Institute of Machinery. Professor Gianneschi shared the latest trends and research methodologies in advanced bio and nano technologies, and conducted one-on-one mentoring with students and postdoctoral researchers who participated in the research presentations.

Professor Gianneschi is a visiting professor at the Department of Materials Science and Engineering at GIST and a distinguished professor at Northwestern University in the United States, conducting convergence research that encompasses diverse fields such as chemistry, materials science and engineering, biomedical engineering, and pharmacology. He is recognized as a world-renowned authority in the fields of bio and nanomaterials, having received awards such as the White House Presidential Award for Advanced Research (PECASE) and the National Institutes of Health (NIH) Director's Innovation Award.

At the colloquium held on the first day of the event, he presented "Next-Generation Biomaterial Research for the Treatment of Cancer and Neurodegenerative Diseases." In particular, he demonstrated the potential of next-generation therapeutic technologies by explaining research cases that utilize biomaterials mimicking the structures of proteins found in nature to regulate intracellular interactions that are difficult to control with existing drugs.



▲ *Professor Nathan Gianneski delivering a lecture at the colloquium.*

The subsequent lectures introduced techniques for utilizing the transmission electron microscope (TEM) for the analysis of nanoscale materials and the future direction of nanomedicine using drug delivery technology. By explaining actual clinical applications of advanced analytical techniques and nanotechnology, the potential and challenges of bio-nanotechnology were presented.

In the research presentation and mentoring session, postdoctoral researchers and graduate students participated to present their research and receive direct feedback from Professor Gianneski. Participants received advice on setting research directions, experimental design, and publication strategies, and also discussed the possibility of international collaborative research.



▲ *Professor Nathan Gianneski is conducting a one-on-one research mentoring session.*

Tae-kyung Won, a master's student in the Department of Materials Science and Engineering who participated in the event, said, "Through the TEM lectures and lectures on nanomaterials, I was able to learn about the importance of nanostructure analysis and the potential for expanding material design." He added, "It served as an opportunity to reflect more deeply on the relationship between nanostructure and material function during the research process."

Hwan-dong Jang, a Fellow at the AI-ACE InnoCORE Research Group, shared his thoughts, stating, "Through mentoring with Professor Gianneski, I was able to re-examine the core principles of the research and how it differs from existing studies." He added, "It was a meaningful time during which I was able to find directions to further develop the strengths and value of my research."

Eunji Lee, Head of the AI-ACE InnoCORE Research Group (Professor of Materials Science and Engineering), stated, "This event was a meaningful occasion where world-renowned scholar mentors, students, and postdoctoral researchers directly interacted to discuss research visions and future directions." She added, "We will continue to actively support researchers in producing competitive research results on the global stage by expanding global research networks and revitalizing international collaborative research."