【2023 SyDE 産官学協働研修　実施報告】2023.10.2,3, 2024.1.18,29

As an economics student at Tohoku University, I had the unique opportunity to step beyond the boundaries of my major and delve into the realm of engineering through the Reiwa 5th Year Nuclear Power Industry Infrastructure Strengthening Project. This experience was not only my first foray into engineering experiments but also a rare chance to witness the application of cross-disciplinary knowledge in the field of nuclear power safety.

Activity Overview:

The program was structured around a series of lectures and practical sessions, aimed at enhancing the independent safety of nuclear power plants by utilizing risk information for decision-making. It emphasized the development of probabilistic health assessment methods for equipment material degradation, a concept often reserved for the specialized.

Learning Outcomes:

The theoretical sessions provided foundational knowledge of risk assessment and probabilistic fracture mechanics, while the practical experiments allowed me to engage with environmental stress corrosion cracking evaluations firsthand. It was a revelation to see economics' quantitative risk assessment techniques applied in such a technical and specialized context.

Future Challenges:

The primary challenge ahead is to synthesize these newly gained insights with my background in economics. I am excited to explore how these probabilistic approaches can inform risk management and decision-making strategies within economic models and potentially across other industrial sectors.

Personal Impressions:

This interdisciplinary learning experience has been profoundly impactful. Venturing into the technical world of engineering experiments, I've gained a greater appreciation for the nuances of risk management and the meticulous nature of material science. It has underscored the value of bridging different academic disciplines to tackle complex global challenges, a lesson I will carry forward in my future academic and professional endeavors.

LIU YIHAO（情報科学研究科・人間社会情報科学専攻・D1）

Fig: Experiments in understanding the practical application and implementation issues of SCC development testing techniques in high temperature water