

Port and Airport Research Institute (PARI)

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Doctoral Course, NUGELP & Forefront Program, NAKAMURA Laboratory

Host Institution:

Port and Airport Research Institute (PARI): 3-1-1 Nagase , Yokosuka City, Kanagawa Prefecture, 239-0826 Japan. Phone: 046-844-5040

Objectives:

- To understand the fundamental concepts of spectral wave modelling.
- To analyze operational hindcast products during a selected swell event.
- To perform higher-resolution hindcast simulations using a nested modelling approach.
- To assess the influence of higher model resolution on spectral wave characteristics

Period: 2026/07/26 to 2026/08/07, 10 days in total

Achievement:

- ◆ SWAN was used to investigate the effect of spatial resolution on offshore wave hindcasting near Kashima Port.
- ◆ A nested modelling approach was applied and compared with NOWPHAS observations.
- ◆ Higher spatial resolution improved significant wave height and wave spectral characteristics, while the effect on wave period was relatively small.

Conclusion:

- I had a great chance to learn directly from experts at PARI and gain hands-on experience in spectral wave modeling.
- GRI internship was an enjoyable and valuable experience, and I would love to join similar opportunities again in the future.

