

# KlimaCampus Kolloquium

## Prof. Dong-Jiing Doong

at the invitation of the Hamburg University of Technology (TUHH)

### Typhoon Impacts on the Coast of Taiwan under Climate Change

Taiwan, located in the Western Pacific between mainland China, Japan and Philippines, faces the impacts of typhoons frequently. The 1139 km long coastline is one of the vulnerable areas of the island, where more than 90% of the Taiwanese population lives. Scientific numbers show the warming trend in Taiwan is significant. The increase of mean temperature, rainfall intensity and sea level rise are higher than the global average, due to the influence of global climate change and local effects. Typhoons, struck Taiwan at a decadal average rate of 2.2–3.5 times per year in the 1960s–1990s, and have increased to 4.3 times per year in the 2000s, bringing extreme precipitation, storm surge and destructive force from ocean waves which increase the probability of coastal erosion and flooding. Recently, researchers have reported a large increase in tropical cyclone energy, numbers, and wind-speeds in association with warmer sea surface temperatures. It has been found, that the trend of typhoon generated wave height and the duration of severe seas are both increasing. Taking into account the gentle sea level rise and the harsh typhoon generated disasters triggered by climate change, Taiwanese coast is facing rigorous challenges. This presentation shows the current conditions and the adaptation strategies for coastal disaster mitigation in Taiwan.

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