

Department of Civil Engineering and Geological Sciences

Challenges and Innovation in Civil and Environmental Engineering

Offshore Windfarms

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4:30pm – 5:45pm

126 DeBartolo Hall



OFFSHORE WINDFARMS

Inspired by the need to both reduce the negative effects from using fossil fuels and the dependency on these, many countries are looking to possibilities for using renewable energy as an alternative source. Energy from windmills is far from being a novel concept but large scale placement of windmills offshore has only taken place within recent years.

An overview of the activities specific to the water environment for offshore windfarms will be presented, with focus on the determination of hydrographic data for use in design, the construction and maintenance phases. Measurements and numerical modeling techniques will be reviewed. Specific aspects for wave loads, scour due to waves and currents and mitigating measures will be covered. Finally, the possible impact from many foundation units on the environment will be discussed. Examples of the use of field measurement, model testing and numerical modeling techniques will be given.

A reception and an opportunity to meet the speaker will take place after the seminar outside of Room 126 DeBartolo