



# COLLOQUIUM

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Vakgroep: Technische Stromingsleer

In het kader van zijn doctoraalopdracht zal

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een voordracht houden getiteld:

## **Propeller-Rudder Interaction**

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### **Summary:**

The knowledge of the effects of the interaction between flow over the propeller and the flow over the rudder of ships is an important aspect in the design of ships. This because of the continuously increasing quest for higher efficiency and comfort, as well as for reduction of erosion on propeller and rudder. This study evaluates a computational method for predicting the propeller-rudder interaction based on potential flow theory, a computationally efficient method suitable for use in the design of propellers and rudders. In the first part of this study the influence of the rudder on the propeller is analyzed and the prediction method is validated. In the second part the pressure distribution predicted on a standard rudder is compared with the pressure distribution predicted on a flow-adapted rudder in order to analyze aspects of cavitation inception. It can be concluded that less cavitation inception occurs on a flow-adapted rudder than on a standard rudder.

### **Examencommissie:**

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