

Session – Trials (Lunch Paper)

Title: DP Advances in the USN Seabase: STLVAST Sea Trial and Completion

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Abstract

In this paper the STLVAST team presents an overview of our work and describe the full scale offshore trials conducted by the USN that showcased some of the potential of the Close-in Precision DP work carried out by STLVAST. Having experimented with cycloidal thrusters and wave feed forward technology, the STLVAST team prepared and executed a full scale demonstration of precision seakeeping by bringing the Mighty Servant 3 alongside a large cargo vessel. Using only DP and no lines between the ships, the MS3 maintained a position close alongside the cargo vessel. This position was safely maintained at zero knots and 3 knots ahead, in Sea State 3, for 2 hours.

STLVAST is a 3 year Science and Technology program supported by the Office of Naval Research (ONR) focused on improving Close-In Precision DP for applications in the USN's future seabase. In terms of technology development STLVAST can be divided into four 'phases':

- Cycloidal Thrusters
- Wave Feed Forward
- VAST Sea Trial
- Heading Control

Each of these phases is described in the paper

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