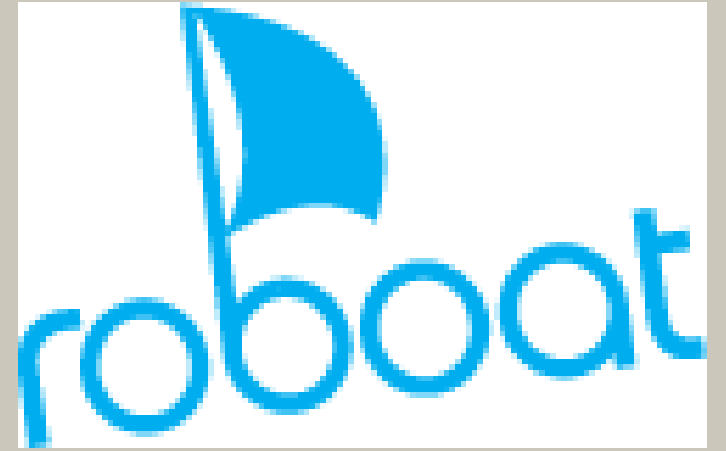




CHR Research Group Ulm



Practical / Projekt / Individualpraktikum

Long-Term Routing for Robotic Sailing Ships

in cooperation with InnoC.at / roboat.at

Project Details:

InnoC.at has successfully created autonomous sailing robot ships, which given any GPS coordinate can sail there without human interaction. A next step to improve these autonomous vessels is integrating long-term planning into their routing algorithms.

The CHR research group Ulm is cooperating with InnoC.at in order to provide a CHR-based solution that calculates waypoints for long-term routes. In this case long-term routing needs to consider current weather conditions in order to achieve optimal boat speed, as well as to avoid thunderstorms.

The task of this practical course is to develop a prototype application which includes a visualization of the computed route and waypoints.

Background Information on CHR:

Constraint Handling Rules (CHR) is a powerful rule-based declarative programming language, invented by Prof. Frühwirth in the early 90ies. Our research group in Ulm is actively working on improving and extending CHR in cooperation with researchers and industrial partners from all over the world.

Contact information:

- Prof. Dr. Thom Frühwirth - thom.fruehwirth@uni-ulm.de
- Dipl.-Inf. Frank Raiser - frank.raiser@uni-ulm.de

We offer:

- Excellent assistance
- Possibility for subsequent master or diploma theses
- Possibility of authoring scientific publications
- Connect to world-wide community of CHR researchers

We expect:

- Dedication
- Knowledge of CHR or interest to invest additional time to learn CHR