

Veille NAE 20 avril 2018

Navigation System of the Stacking Vehicle Based on Fuzzy Control and Laser Scanner

30/03/2018 - ieeexplore.ieee.org

This paper presents a navigation system customized for the automatic path tracking movement of the tracked stacking vehicle working in a shipping container. The vehicle is equipped with a 2D laser scanner for localization and navigation. Returned data is continuously sent back to the navigation system to be processed in order to identify the location of the vehicle relative to the container. For localization, a feature extraction algorithm based on the IEPF algorithm and the priori geometric features of the container is proposed. For navigation, a fuzzy logic controller is designed by implementing the path tracking error as input and track speed difference ratio as output. A fuzzy-logic set of rules is proposed based on human driving experience for path following control. The efficiency of the proposed navigation system is demonstrated through experiment

[Lire la suite](#)

An Exponential Field Path Planning Method for Mobile Robots Integrated with Visual Perception

28/12/2017 - waset.org

An Exponential Field Path Planning Method for Mobile Robots Integrated with Visual Perception
Magdy Roman, Mostafa Shoeib, Mostafa Rostom
Abstract—Global vision, whether provided by overhead fixed cameras, on-board aerial vehicle cameras, or satellite images can always provide detailed information on the environment around mobile robots. In this paper, an intelligent vision-based method of path planning and obstacle avoidance for mobile robots is presented. The method integrates visual perception

[Lire la suite](#)

Evolving behaviour trees for swarm robotics

13/12/2017 - researchgate.net

Evolving behaviour trees for swarm robotics
Simon Jones, Matthew Studley, Sabine Hauert, Alan Winfield
Abstract Controllers for swarms of robots are hard to design as swarm behaviour emerges from their interaction, and so controllers are often evolved. However, these evolved controllers are often difficult to understand, limiting our ability to predict swarm behaviour. We suggest behaviour trees are a good control architecture for swarm robotics, as they are comprehensible and promote modular reuse.

[Lire la suite](#)

EPFL's Collapsible Delivery Drone Protects Your Package With an Origami Cage

14/09/2017 - spectrum.ieee.org

A protective origami shell that gets 92 percent smaller makes for a safe and portable delivery drone

[Lire la suite](#)