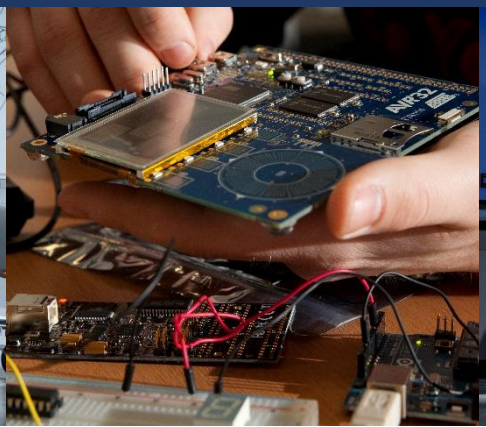
L-CAS

UNIVERSITY OF LINCOLN

Lincoln Conference on Intelligent Robots and Systems

LIROS 2020

Friday 9th October 2020



LIROS 2020 Programme

Please note, the LIROS 2020 Conference will be recorded

09:15 **Tom Duckett**
Introduction

Session 1 09:30-10:30 Core Technologies

09:30 **Amir Ghalamzan**
Estimating An Object's Inertial Parameters By Robotic Pushing: A Data-Driven Approach
Authors:
Nikos Mavrakis, Amir Ghalamzan, Rustam Stolkin

09:45 **Riccardo Polvara**
Next-Best-Sense: A Multi-Criteria Robotic Exploration Strategy for RFID Tags Discovery
Authors:
Riccardo Polvara, Manuel Fernandez-Carmona, Gerhard Neumann, Marc Hanheide

10:00 **Sariah Mghames**
Interactive Movement Primitives: Planning to Push Occluding Pieces for Fruit Picking
Authors:
Shariah Mghames, Marc Hanhiede, Amir Ghalamzan Esfahani

10:15 **Gautham Das**
Incorporating Spatial Constraints into a Bayesian Tracking Framework for Improved Localisation in Agricultural Environments
Authors:
Muhammad W. Khan, Gautham P. Das, Marc Hanheide, Grzegorz Cielniak

10:30 Break

Session 2 11:00-12:00 Humans amd Crops

11:00 **Laurence Roberts-Elliot**
Towards Safer Robot Motion: Using a Qualitative Motion Model to Classify Human-Robot Spatial Interaction
Authors:
Laurence Roberts-Elliott, Manuel Fernandez-Carmona, Marc Hanheide

11:15 **Sergio Molina Mellado**
Natural Criteria for Comparison of Pedestrian Flow Forecasting Models
Authors:
Tomas Vintr, Zhi Yan, Filip Kubis, Jan Blaha, Jiri Ulrich, Furkan Kerem Eysioy, Chittaranjan Srinivas Swaminathan, Sergi Molina, Tomasz Piotr Kucner, Martin Magnusson, Grzegorz Cielniak, Jan Faigl, Tom Duckett, Achim J. Lilienthal, Thomáš Krajnik

11:30 **Adrian Salazar Gomez**
Learning density map regression for counting in agricultural environments
Authors:
Adrian Salazar Gomez, Petra Bosilj, Simon Parsons

11:45 **Hector Montes**
Real-Time Detection of Broccoli Crops in 3D Point Clouds for Autonomous Robotic Harvesting
Authors:
Hector Montes, Justin Le Louedec, Grzegorz Cielniak, Tom Duckett

12:00 Break

Session 3 12:30-13:30 AgriFoRwArdS CDT Master's Projects 2020

12:30 **Karoline Heiwolt**
Semantic Segmentation of Plant Leaves from 3D Point Clouds using Deep Learning

12:45 **Willow Mandil**
Investigation into Harvesting Soft Fruit Clusters

13:00 **Roopika Ravikanna**
Task Allocation in Multi Robot Systems using Dynamic Manipulative Bidding Strategy

13:15 **Grzegorz Sochacki**
Residual Physics for Grasp Failure Prediction

13:30 End