Bengt Lennartson

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Bengt Lennartson is heading the Division of Systems and Control, and he is a Professor of Automation since 1999. He is IEEE Fellow for his contributions to hybrid and discrete event systems for automation and sustainable production. He is (co)author of 280+ peer reviewed international papers. Currently, much intention is focused on sustainability, including energy minimization of robot cells. Collaboration with industry involves Volvo, Daimler, Kuka, and TetraPak.

Teaching

Publications

Collaboration and projects

Google Scholar

Latest publications

2018

Multi-criteria Optimization of PD Controllers for Plants including Integral Action

Author: Bengt Lennartson
Published: 2018
Published in: IFAC-PapersOnLine
Publication type: Journal article

Productivity/energy optimisation of trajectories and coordination for cyclic multi-robot systems

Author: E. Glorieux; Sarmad Riazi; Bengt Lennartson
Published: 2018
Published in: Robotics and Computer-Integrated Manufacturing
Publication type: Journal article

2017

Conflict between Energy, Stability and Robustness in Production Schedules

Author: Nina Sundström; Oskar Wigström; Bengt Lennartson
Published: 2017
Published in:
Publication type: Paper in proceedings

Energy and Peak-power Optimization of Time-bounded Robot Trajectories

Author: Sarmad Riazi; Oskar Wigström; Kristofer Bengtsson; Bengt Lennartson
Published: 2017
Published in:
Publication type: Paper in proceedings

Decomposition and distributed algorithms for home healthcare routing and scheduling problem

Author: Sarmad Riazi; Oskar Wigström; Kristofer Bengtsson; Bengt Lennartson
Published: 2017
Published in:
Publication type: Paper in proceedings

Computationally efficient energy optimization of multiple robots

Author: Oskar Wigström; Nikolce Murgovski; Sarmad Riazi; Bengt Lennartson
Published: 2017
Published in:
Publication type: Paper in proceedings

From trapezoid to polynomial: Next-generation energy-efficient robot trajectories

Author: Sarmad Riazi; Kristofer Bengtsson; Bengt Lennartson
Published: 2017
Published in:
Publication type: Paper in proceedings

A supervisory control algorithm based on property-directed reachability

Author: Koen Lindström Claessen; Jonatan Kilhamn; Laura Kovacs; Bengt Lennartson
Published: 2017
Published in: Lecture Notes in Computer Science
Publication type: Paper in proceedings

Constructive cooperative coevolution for large-scale global optimisation

Author: E. Glorieux; B. Svensson; F. Danielsson; Bengt Lennartson
Published: 2017
Published in: Journal of Heuristics
Publication type: Journal article

Multi-objective constructive cooperative coevolutionary optimization of robotic press-line tending

Author: E. Glorieux; B. Svensson; F. Danielsson; Bengt Lennartson
Published: 2017
Published in: Engineering Optimization
Publication type: Journal article

An event-driven manufacturing information system architecture for Industry 4.0

Author: A. Theorin; Kristofer Bengtsson; Julien Provost; M. Lieder; C. Johnsson; Lundholm Thomas; Bengt Lennartson
Published: 2017
Published in: International Journal of Production Research
Publication type: Journal article

Control protocol synthesis for multi-agent systems with similar actions instantiated from agent and requirement templates

Author: R. Su; Bengt Lennartson
Published: 2017
Published in: Automatica
Publication type: Journal article

Conflict Between Energy, Stability, and Robustness in Production Schedules

Author: Nina Sundström; Oskar Wigström; Bengt Lennartson
Published: 2017
Published in: IEEE Transactions on Automation Science and Engineering
Publication type: Journal article

Energy and Peak Power Optimization of Time-Bounded Robot Trajectories

Author: Sarmad Riazi; Oskar Wigström; Kristofer Bengtsson; Bengt Lennartson
Published: 2017
Published in: IEEE Transactions on Automation Science and Engineering
Publication type: Journal article

Guest Editorial Special Section on the 2015 International Conference on Automation Science and Engineering

Author: Martin Fabian; Bengt Lennartson; Knut Åkesson
Published: 2017
Published in: IEEE Transactions on Automation Science and Engineering
Publication type: Magazine article

2016

Energy and peak-power optimization of existing time-optimal robot trajectories

Author: Sarmad Riazi; Kristofer Bengtsson; R. Bischoff; A. Aurnhammer; Oskar Wigström; Bengt Lennartson
Published: 2016
Published in:
Publication type: Paper in proceedings

Rescheduling Affected Operations - a Purely Predictive Approach

Author: Nina Sundström; Bengt Lennartson
Published: 2016
Published in:
Publication type: Paper in proceedings

Diagnosability Verification Using Compositional Branching Bisimulation

Author: Mona Noori-Hosseini; Bengt Lennartson
Published: 2016
Published in:
Publication type: Paper in proceedings

Towards Energy Optimization using Trajectory Smoothing and Automatic Code Generation for Robotic Assembly

Author: Daniel Gleeson; Staffan C Björkenstam; R. Bohlin; Johan Carlson; Bengt Lennartson
Published: 2016
Published in: Procedia CIRP
Publication type: Paper in proceedings

Enhancing digital human motion planning of assembly tasks through dynamics and optimal control

Author: Staffan C Björkenstam; N. Delfs; Johan Carlson; R. Bohlin; Bengt Lennartson
Published: 2016
Published in: Procedia CIRP
Publication type: Paper in proceedings

Symbolic On-the-Fly Synthesis in Supervisory Control Theory

Author: Sajed Miremadi; Bengt Lennartson
Published: 2016
Published in: IEEE Transactions on Control Systems Technology
Publication type: Journal article

Modeling and Optimization of Hybrid Systems for the Tweeting Factory

Author: Bengt Lennartson; Kristofer Bengtsson; Oskar Wigström; Sarmad Riazi
Published: 2016
Published in: IEEE Transactions on Automation Science and Engineering
Publication type: Journal article

Comparing MILP, CP, and A* for Multiple Stacker Crane Scheduling

Author: Fredrik Hagebring; Oskar Wigström; Bengt Lennartson; S. I. Ware; R. Su
Published: 2016
Published in:
Publication type: Paper in proceedings

Energy reduction in paint shops through energy-sensitive on-off control

Author: Constantin Christian Justin Cronrath; Bengt Lennartson; M. Lemessi
Published: 2016
Published in:
Publication type: Paper in proceedings

Diagnosability Verification Using Compositional Branching Bisimulation

Author: Mona Noori-Hosseini; Bengt Lennartson
Published: 2016
Published in:
Publication type: Report

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