Publications

An Accurate Programmable Pulse Generator for Stepper Actuated Real-Time Control Systems

On-line parameter estimation of reduced-order models for buildings energy dynamics using the modulating function method

Distributed coordination of energy-storage capacities in virtual microgrids

Step-height detection for the Umbrella Wheel stair-climber using model prediction

On-line parameter estimation of an Air Handling Unit model: experimental results using the modulating function method

Towards Printing Mechatronics: Considerations for 3D-printed conductive coupling

Trajectory tracking for autonomous turf-care vehicle using Liouvillian approach

Covering path generation for autonomous turf-care vehicle

Induction motor model with imbalance and leakage saturation

Infinite-Dimensional Boundary Observer for Lithium-Ion Battery State Estimation

Umbrella Wheel - a stair-climbing and obstacle-handling wheel design concept
Modeling Induction Motor Imbalances: A Non-DQ Approach

On Convergence of the Unscented Kalman-Bucy Filter using Contraction Theory

On the premature convergence of particle swarm optimization

Finite-time simultaneous parameter and state estimation using modulating functions

Online optimization of different objectives in robotic sailing: simulations and experiments

Internally actuated autonomous sailing buoy

Modeling and nonlinear heading control for sailing yachts

Transfer of Assembly Operations to New Workpiece Poses by Adaptation to the Desired Force Profile

Development of flexible tactile sensors for hexapod robots

A convergence result for the unscented Kalman-Bucy filter using contraction theory: 2013 European Control Conference, ECC 2013

On active current selection for Lagrangian profilers

Control and guidance of a hovering AUV pitching up or down

Further results on tidal stream transport for Lagrangian profilers
Han, D. & Jouffroy, J., 2012.

Nonlinear Robust Heading Control for Sailing Yachts

Online speed optimization for sailing yachts using extremum seeking
Towards Heading Control of an Autonomous Sailing Platform through Weight Balancing

A control-theoretic outlook at the no-go zone in sailing vessels

Modeling and nonlinear heading control for sailing yachts

On Motion Planning for Point-to-Point Maneuvers for a Class of Sailing Vessels

Towards Selective Tidal-Stream Transport for Lagrangian profilers

A tutorial on incremental stability analysis using contraction theory

On path generation and feedforward control for a class of surface sailing vessels

Real-time sail and heading optimization for a surface sailing vessel by extremum seeking control

Reflexions on feedforward control strategies for a class of sailing vehicles

A control strategy for steering an autonomous surface sailing vehicle in a tacking maneuver

On algebraic time-derivative estimation and deadbeat state reconstruction

On steering a sailing ship in a wearing maneuver

Algebrische Ableitungsschätzung im Kontext der Rekonstruierbarkeit

An extended set-value observer for position estimation using single range measurements

Proving Identities with Computer Algebra – Example: algebraic time-derivative example

Underwater navigation using diffusion-based trajectory observers

Diffusion-Based Trajectory Observers with Variance Constraints
Formation control of marine surface craft: a Lagrangian approach

A simple mechanical system for studying adaptive oscillatory neural networks

An algebraic perspective to single-transponder underwater navigation

Robust combined position and formation control for marine surface craft

Robust formation control of marine surface craft using Lagrange multipliers

Towards station-keeping using GPI controllers

Diffusion-based outlier rejection for underwater navigation

Formation control of marine craft using constraint functions

Formation control of surface marine craft using Lagrange multipliers

Remarks on the observability of single beacon underwater navigation

Some ancestors of contraction analysis

A trajectory observer for camera-based underwater motion measurements

Methodological remarks on contraction theory

Nonlinear dynamic positioning of ships with gain-scheduled wave filtering

Nonlinear observer design for a nonlinear string/cable FEM model using contraction theory

On the combination of nonlinear contracting observers and UGES controllers for output feedback
Towards on-line underwater vehicle trajectory estimation using diffusion-based observers

Underwater vehicle trajectory estimation using contracting PDE-based observers

A relaxed criterion for contraction theory: application to an underwater vehicle observer

A simple extension of contraction theory to study incremental stability properties

Real-time geo-referenced video mosaicking with the MATISSE system

A remark on “Nonlinear output feedback control of underwater vehicle propellers using feedback form estimated axial flow velocity”

A few remarks on some forms of incremental stability (in French)

Emphasizing interdisciplinarity of control in laboratory courses: illustration with the inverted pendulum

Integrator backstepping using contraction theory: a brief technological note

Isolation filter using contraction theory (in French)

On the use of contraction theory for the design of nonlinear observers for ocean vehicles

Control design on the basis of approximate nonlinear models: the inverted pendulum example

Activities
Technical Committee (TC) on Marine Systems of the International Federation of Automatic Control (IFAC) (External organisation)
Jerome Jouffroy (Member)
18 Sep 2009 → …