Erik Andreas Martens - DTU Orbit (18/05/2018)

Martens, Erik Andreas
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Department of Applied Mathematics and Computer Science - Associate Professor

Dynamical Systems

Publications:

Transitions from Trees to Cycles in Adaptive Flow Networks
Martens, E. A. & Klemm, K. 2017 In : Frontiers of Physics. 5, 10 p., 62
Publication: Research - peer-review › Journal article – Annual report year: 2017

Basins of attraction for chimera states: Fast track communication
Publication: Research - peer-review › Journal article – Annual report year: 2016

Characteristic sizes of life in the oceans - from bacteria to whales
Andersen, K. H., Berge, T., Goncalves, R., Hartvig, M., Heuschele, J., Hylander, S., Jacobsen, N. S., Lindemann, C.,
Publication: Research - peer-review › Journal article – Annual report year: 2016

Chimera states in two populations with heterogeneous phase-lag
Publication: Research - peer-review › Journal article – Annual report year: 2016

Modeling of Kidney Hemodynamics: Probability-Based Topology of an Arterial Network
2016 In : P L o S Computational Biology (Online). 12, 7, 28 p., e1004922
Publication: Research - peer-review › Journal article – Annual report year: 2016

Intermittent chaotic chimeras for coupled rotators
Matter Physics. 92, 3, 030901
Publication: Research - peer-review › Journal article – Annual report year: 2015

Controlling chimeras
Publication: Research - peer-review › Journal article – Annual report year: 2015

Size structures sensory hierarchy in ocean life
Royal Society B: Biological Sciences. 282, 1815, 9 p., 201513469
Publication: Research - peer-review › Journal article – Annual report year: 2015

Critical transitions in social network activity
Publication: Research - peer-review › Journal article – Annual report year: 2014

Characteristic sizes of life in the oceans - from bacteria to whales
Andersen, K. H., Berge, T., Goncalves, R., Hartvig, M., Hylander, S., Jacobsen, N. S., Lindemann, C., Martens, E. A.,
Publication: Research › Conference abstract for conference – Annual report year: 2013
Chimera states in mechanical oscillator networks
Publication: Research - peer-review › Journal article – Annual report year: 2013

Trait-based modeling of trophic chains and seasonal forcing
Martens, E. A. 2013
Publication: Research › Conference abstract for conference – Annual report year: 2013

Model for polygonal hydraulic jumps
Publication: Research - peer-review › Journal article – Annual report year: 2012

Interfering waves of adaptation promote spatial mixing
Martens, E. A. & Hallatschek, O. 2011 In : Genetics (Online). 189, 3, p. 1045-1060
Publication: Research - peer-review › Journal article – Annual report year: 2011

Spatial structure increases the waiting time for cancer: Paper
Publication: Research - peer-review › Journal article – Annual report year: 2011

Bistable chimera attractors on a triangular network of oscillator populations
Publication: Research - peer-review › Journal article – Annual report year: 2010

Chimeras in a network of three oscillator populations with varying network topology
Martens, E. A. 2010 In : Chaos. 20, 4, p. -
Publication: Research - peer-review › Journal article – Annual report year: 2010

Solvable model of spiral wave chimeras
Publication: Research - peer-review › Journal article – Annual report year: 2010

Cooperative Behavior in Networks of Coupled Oscillators
Publication: Research › Ph.D. thesis – Annual report year: 2009

Exact results for the Kuramoto model with a bimodal frequency distribution
Publication: Research - peer-review › Journal article – Annual report year: 2009

Projects:

Synchronization patterns in neural networks
Martens, E. A.
20/05/2018 → ...
Project

Vascular network dynamics
Martens, E. A.
20/05/2018 → ...
Project
Activities:

Chaotic Mean Field Dynamics in Two Populations of Phase Oscillators with Heterogeneous Phase-Lag
Martens, E. A. (Speaker)
2017
Activity: Talks and presentations › Conference presentations

Chimera states - mythological monsters from math arise in the real world
Martens, E. A. (Speaker)
2017
Activity: Talks and presentations › Guest lectures, external teaching and course activities at other universities

Controlling Chimeras
Martens, E. A. (Guest lecturer)
1 Dec 2017
Activity: Talks and presentations › Conference presentations

Speed of evolution in spatially extended habitats
Martens, E. A. (Guest lecturer)
Nov 2017
Activity: Talks and presentations › Conference presentations

Sync patterns in phase oscillator in community network structure
Martens, E. A. (Guest lecturer)
Aug 2017
Activity: Talks and presentations › Conference presentations

Konstantin Klemm
Martens, E. A. (Host)
Jun 2017 → Aug 2017
Activity: Hosting a guest lecturer

Dynamics Days Europe 2017
Martens, E. A. (Speaker)
5 Jun 2017
Activity: Talks and presentations › Conference presentations

DSWeb Magazine - The Dynamical Systems Web (Journal)
Martens, E. A. (Reviewer)
May 2017
Activity: Communication › Journal editor

Chimera states-mythological monsters from mathsarise in the real world
Martens, E. A. (Guest lecturer)
Apr 2017
Activity: Talks and presentations › Guest lectures, external teaching and course activities at other universities

Prizes:

FOKOS Award 2013: "Publication reporting most striking discovery in the field of complex systems"
Erik Andreas Martens (Recipient), 2013
Prize: Prizes, scholarships, distinctions