Poster Program

01 **Estimating Spiking Irregularities under Changing Environments**

Keiji Miura[(1)(2)], Masato Okada[(2)(3)], and Shun-ichi Amari[(3)]

(1) JSPS

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02 **Inferring Protein Interaction Network by Considering Multiple-Domain Interactions from Diverse Organisms**

Yong Wang, Xiang-Sun Zhang, and Luonan Chen

Osaka Sangyo University

03 **New dynamic patterns and transitions in the thickness oscillation by the true slime mold**

Seiji Takagi and Tetsuo Ueda

Hokkaido University

04 **Detecting Cell Cycle Regulated Genes of S. pombe without Sinusoidal Fitting**

Y-h. Taguchi

Chuo University

05 **Synchronization in Chaotic Neural Networks**

Guoguang HE and Kazuyuki AIHARA

Aihara Complexity Modelling Project, ERATO, JST

06 **On the intermittent nature of solar wind turbulence near the Earth's bow shock: phase coherence and non-Gaussianity**

D. Koga[(1)], A. C. -L. Chian[(1)], R. A. Miranda[(1)], and E. L. Rempel[(2)]

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(2) Institute of Aeronautical Technology and World Institute for Space Environment Research

07 **Estimating network structures from multi-dimensional time-series**

Tohru Ashizawa[(1)], Daisuke Haraki[(1)], Tomoya Suzuki[(2)], and Tohru Ikeguchi[(1)]

(1) Saitama University

(2) Doshisya University

08 **Multiple basins of consistency in a Mackey-Glass electronic circuit driven**

by chaos and noise signals

Hoipang Yip, Satoshi Sano, Atsushi Uchida, and Shigeru Yoshimori

Takushoku University

09 **Chaos synchronization in mutually-coupled vertical-cavity surface-emitting lasers with time delay**

Mitsutoshi Ozaki, Hiroyuki Someya, Takaya Mihara, Atsushi Uchida, and Shigeru Yoshimori

Takushoku University

10 **Dual Synchronization of Chaos in coupled Mackey-Glass Electronic Circuits**

Satoshi Sano, Atsushi Uchida, and Shigeru Yoshimori

Takushoku University

11 **On a definition of random sequence with respect to conditional probability**

Hayato Takahashi

Aihara Complexity Modelling Project, ERATO, JST

12 **Dynamics and synchronization in mutually-coupled microchip solid-state lasers with opto-electronic feedback**

Atsushi Uchida, Keisuke Mizumura, and Shigeru Yoshimori

Takushoku University

13 **Conditions for consistency in time-delay systems**

Kazuyuki Yoshimura, Jun Muramatsu, and Peter Davis

NTT Corporation

14 **Why Chaotic Dynamics is Effective for Solving Combinatorial Optimization Problems ? – A Motif Extraction Problem Case –**

Takafumi MATSUURA and Tohru IKEGUCHI

Saitama University

15 **Modeling of the Adaptive Network of True Slime Mold**

Atsushi Tero(1), Ryo Kobayashi(2), Toshiyuki Nakagaki(2), and Tetsu Saigusa(2)

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(2) Hiroshima University

16 **Differential geometric approach to pursuing bifurcation curves**

Hidetoshi Shimokawa(1)(2)

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17 **The synchronization and memory of the periodic environmental changes in an amoeba**.

T. Saigusa and T. Nakagaki

Hokkaido University

18 **Tools for analysing a set of spike trains**

Yoshito Hirata

The University of Tokyo

19 **Solving Vehicle Routing Problems with Time Windows using Two Types of Chaotic Neurons**

Takashi Hoshino, Takayuki Kimura, and Tohru Ikeguchi

Saitama University

20 **Self-organizing Rhythmic Patterns with Spatio-temporal Spikes in Class I and Class II Neural Networks**

Ryosuke HOSAKA(1)(2)(3), Tohru IKEGUCHI(2), and Kazuyuki AIHARA(1)(3)

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(2) Saitama University, (3)The University of Tokyo

21 **Solving a dynamical combinatorial optimization problems by chaotic neurodynamics –A Packet Routing Problem Case–**

Takayuki KIMURA and Tohru IKEGUCHI

Saitama University

22 **Spontaneous transitions between different synchrony patterns observed in the resting state EEG activity**

Junji Ito, Andrey R. Nikolaev, and Cees van Leeuwen

Laboratory for Perceptual Dynamics, Brain Science Institute

23 **The Recurrence Plot Analysis of 2-Link Nozzle in a Dishwasher**

Hiroaki Morioka(1), Tohru Ikeguchi(1), and Kazuyuki Aihara(2)

(1) Saitama University

(2) The University of Tokyo and ERATO, JST

24 **A New Method to Stabilize Periodic Orbits through Corrective Action Using Period Time Locking in Chaotic Dynamics**

Hiroyasu Ando(1)(2) and Kazuyuki Aihara(1)(2)

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(2) Aihara Complexity Modelling Project, ERATO, JST

25 **Bifurcations in a Synaptic Coupled Oscillator Network for Image Segmentation**

Ken'ichi Fujimoto and Tetsuya Yoshinaga

The University of Tokushima

26 On the coexisting duck solutions and duck saddles

Munehisa Sekikawa[(1)(2)] and Kazuyuki Aihara[(2)(1)]

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27 Design of a CMOS Circuit for STDP with a Symmetric TimeWindow

Hideki Tanaka[(1)], Takashi Morie[(1)], and Kazuyuki Aihara[(2)]

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(2) The University of Tokyo and ERATO, JST

28 A Pulse-Modulation Circuit for Nonlinear Systems with Self Regulatory Threshold Dynamics

Daisuke Atuti[(1)], Takashi Morie[(1)], and Kazuyuki Aihara[(2)]

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(2) The University of Tokyo and ERATO, JST

29 Nonlinear Prediction Interval Estimation by the Bootstrap Method

Daisuke Haraki[(1)], Tomoya Suzuki[(2)], Hiroki Hashiguchi[(1)], and Tohru Ikeguchi[(1)]

(1) Saitama University

(2) Doshisya University

30 A Nonlinear Modeling for Event Time Series

Naoki Yabuta, Daisuke Haraki, and Tohru Ikeguchi

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31 Emergence of Multiple Time Scales in a Coupled-Oscillator System

M. Tachikawa[(1)] and K. Fujimoto[(1)(2)]

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32 Phase synchronization of limit cycle oscillators by common noise on system parameters

Koh HASHIMOTO[(1)] and Kazuyuki AIHARA[(2)(1)]

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33 Economic intermittency in a two-country model of business cycles coupled by investment

Yoshitaka SAIKI[(1)] and Abraham C.-L. CHIAN[(2)]

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(2) National Institute for Space Research, and World Institute for Space

Environment Research

34 Annotating Genes using only positive samples

Xing-Ming Zhao[(1)(2)], Luonan Chen[(1)(2)(3)], and Kazuyuki Aihara[(1)(2)]

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(3) Osaka Sangyo University

35 Swarm-Oscillators

Dan Tanaka

Fukui University

36 A simplified model for flows with eddies and locking of asymmetric flow patterns in a periodic channel with symmetric walls

Shinya Watanabe[(1)] and Vakhtang Putkaradze[(2)]

(1) Ibaraki University

(2) Colorado State University

37 Predicting Synchronization of an Electronic Genetic Network

Isao T. Tokuda[(1)], Alexandre Wagemakers[(2)], and Miguel A. F. Sanjuan[(2)]

(1) Japan Advanced Institute of Science and Technology

(2) Universidad Rey Juan Carlos

38 A Bayesian model of audio-visual interaction and adaptation : a model with the judgment of a common source

Yoshiyuki Sato[(1)(2)] and Kazuyuki Aihara[(2)(1)]

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39 Recurrence plot analysis of wind velocity time series

Shunsuke Horai[(1)(2)], Yoshito Hirata[(2)], and Kazuyuki Aihara[(2)(1)]

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40 Higher-order ergodicity of neuronal spike trains

Kantaro Fujiwara[(1)] and Kazuyuki Aihara[(1)(2)]

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41 Features of potential fluctuation produced in spike initiation of cortical neurons with multiple internal state

Miki Matsuo[(1)] and Kazuyuki Aihara[(1)(2)]

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42 Reconstructing the single-cell-level behavior of a toggle switch from population-level measurements

Hirokazu Tozaki[(1)(2)], Tetsuya J. Kobayashi[(3)(2)], Hiroyuki Okano[(2)], Ryo Yamamoto[(4)], Kazuyuki Aihara[(1)(4)], and Hidenori Kimura[(2)]

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43 Benders Decomposition Approach to Robust Mixed Integer Programming

Hiroo Saito and Kazuo Murota

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