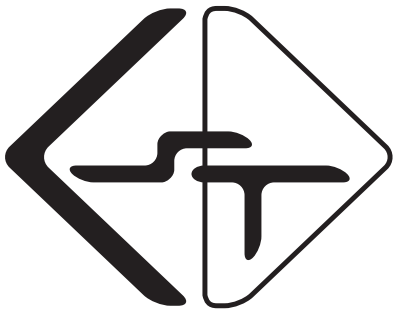

1st International Workshop on
Computing with Spatio-Temporal Dynamics
Tokyo, Japan, June 23-24, 2010
A SATELLITE WORKSHOP RUNNING WITH UC10

Workshop C

(updated: June 22nd, 2010)

Day 3: Wednesday, June 23rd

9:15–10:30		Invited Talk (UC Main Program)
	▷	FRANÇOISE CHATELIN (UNIV. OF TOULOUSE 1): *A Computational Journey into Nonlinearity*
10:30–10:50		Coffee Break
10:50–11:20	▷	YUZURU SATO (HOKKAIDO UNIV.): *Robust Computation in Two-Dimensional Activation-Inhibition Field*
11:20–11:50	▷	HIROYASU ANDO, FERDINAND PEPER, KAZUYUKI AIHARA (RIKEN BSI, NICT, UNIV. OF TOKYO): *Chaos-driven Computing Structure on a Token-based Architecture*
11:50–12:20	▷	TAKUYA UMEDACHI, KOICHI TAKEDA, TOSHIYUKI NAKAGAKI, RYO KOBAYASHI, AKIO ISHIGURO (TOHOKU UNIV., FUTURE UNIV.-HAKODATE, HIROSHIMA UNIV., JST CREST): *Orchestrating Large Degrees of Freedom - A Case Study with a Soft-bodied Amoeboid Robot -*
12:20–13:40		Lunch
13:40–14:10	▷	ATSUKO TAKAMATSU (WASEDA UNIV.): *Adaptation by morphology in Physarum plasmodium*
14:10–14:40	▷	ATSUSHI TERO (JST PRESTO): *Physarum polycephalum makes optimal network - Modeling of the Adaptive Network of True Slime Mold -*
14:40–15:10	▷	JEFF JONES (UNIV. WEST OF ENGLAND): *Approximating the Behaviour of Physarum polycephalum by a Particle Swarm Collective*
15:10–15:30		Coffee Break
15:30–16:00	◁	MASASHI AONO, SONG-JU KIM, YOSHITO HIRATA, MASAHIKO HARA, KAZUYUKI AIHARA (RIKEN ASI, UNIV. OF TOKYO): *Scalability of Amoeba-based Neurocomputer for Traveling Salesman Problem*
16:00–16:30	◁	KAZUNARI OZASA, JEESOO LEE, SIMON SONG, MIZUO MAEDA, MASAHIKO HARA (RIKEN ASI, HANYANG UNIV.): *Implementation of Microbe-based Neurocomputing with Living Euglena*
16:30–17:00	◁	GARETH JONES, CHRIS J. LOVELL, HYWEL MORGAN, KLAUS-PETER ZAUNER (UNIV. OF SOUTHAMPTON): *Organising Chemical Reaction Networks in Space and Time with Microfluidics*
17:00–17:10		Invitation to UC11@Turku and Closing Remarks (UC Main Program)

▷ Invited
◁ Contributed

Day 4: Thursday, June 24th

9:15- 9:45	◁	Kazutoshi Sasahara, Martin L. Cody, Charles E. Taylor (Univ. of Tokyo, UCLA): *Structure and Dynamics of Song Network*
9:45-10:15	▷	Yukio-Pegio Gunji, Takayuki Niizato, Hisashi Murakami (Kobe Univ.): *Ambiguity of Body and Space in Neighborhood Reveals Co-existence of Complete Coherence and Autonomous Perturbation in Flocks and Schools*
10:15-10:45	▷	Tetsuya J. Kobayashi (Univ. of Tokyo): *Computing Optimal Decision by Intracellular Kinetics*
10:45-11:00		Coffee Break
11:00-11:30	▷	Rachel Armstrong (Univ. College London): *Protocells as Tools for Architectural Design Practice*
11:30-12:00	▷	Takashi Ikegami (Univ. of Tokyo): *Consciousness, Unconsciousness and Mind Time*
12:00-12:30	▷	Lee Cronin (Univ. of Glasgow): *Computing with Inorganic Cellular Systems*
12:30-13:40		Lunch
13:40-14:10	▷	James K. Gimzewski, Masakazu Aono (UCLA, NIMS): *Nano-Neuromorphic Physical Intelligence: Atom-Switch Synapses Embedded in Neuroplastic-like Dendritic Wiring*
14:10-14:40	▷	Subrata Ghosh, Anirban Bandyopadhyay (NIMS): *Massively Parallel Computing on a 3D Nano Brain: A Correlation between Design and Emergent Intelligence*
14:40-15:10	▷	Mark J. Olah, Oleg Semenov, Darko Stefanovic, Milan N. Stojanovic (Univ. of New Mexico): *Motion, Computation and Behaviors of Molecular Spiders*
15:10-15:30		Coffee Break
15:30-16:10	▷	Martin M. Hanczyc (Univ. of Southern Denmark): *Protocells and Computing?*
16:00-16:30	◁	Youichi Okabayashi, Takashi Isoshima, Etsushi Nameda, Song-Ju Kim, Masahiko Hara (RIKEN ASI): *Maze Exploration by Two-dimensional Nonlinear Fabry-Perot Interferometer*
16:30-17:00	◁	Joanna N. Górecka, Jerzy Górecki (Polish Academy of Sciences): *Universal Computing Automata based on Excitable Chemical Medium*
17:00-17:30	▷	Tetsuya Asai (Hokkaido Univ.): *Reaction-Diffusion Computers on Semiconductors — A Legacy from Past Adventures*
		Closing Remarks

▷ Invited
◁ Contributed

Poster Session: Monday, June 21st (15:30-17:30)

- ◁ Antonio Gargano (Bocconi Univ.): *New Evidences on Variable Selection with Stochastic Optimization Algorithms*
- ◁ Naotaka Sageyama, Takahiro Harada, Hisa-Aki Tanaka, Michael J. Hankins, and István Z. Kiss (Univ. of Electro-Communications, Univ. of Tokyo, Saint Louis Univ.): *Design of Optimal Entrainment for Limit-Cycle Oscillators*
- ◁ Jianwei Shen, Zengrong Liu, Yong Xu (Xuchang Univ., Shanghai Univ., Northwestern Polytechnical Univ.): *A Spatio-Temporal Modelling of Quorum Sensing Involving Small RNAs in Vibrio Harveyi*