Programme and Time Schedule

March 3rd, 2014

Chairs: Hao Liu (Chiba University, SJTU-CU ICRC), Ryutaro Himeno (RIKEN)

8:45 - 9:00 Messages from vice-president of Chiba University (Prof. Takeshi Tokuhisa)

PART I: BIO-INSPIRED ENGINEERING

Chair: Hao Liu (Chiba University, SJTU-CU ICRC)

9:00-09:40 Plenary Lecture 1:
NanoSuit, biomimetic ultra-thin polymer membrane, protects organism in high vacuum
Takahiko Hariyama (Hamamatsu University School of Medicine, Japan)

Chair: Wenwei Yu (Chiba University, SJTU-CU ICRC)

9:40-10:00
Dexterous robotic juggling based on visual and tactile information
Akio Namiki (Chiba University, SJTU-CU ICRC)

10:00-10:20
Fabrication of wing membranes with self-organized micro wrinkles for bioinspired flapping-wing aerial robots
Hiroto Tanaka (Chiba University, SJTU-CU ICRC)

10:20-10:30 Break

10:30-10:50
Passive flow control by the bio-inspired leading edge tubercles
Wenrong Hu (Shanghai Jiao Tong University, SJTU-CU ICRC)

10:50-11:10
Visualization of high frequency ultrasound using Sagnac interferometry
Ken-ya Hashimoto (Chiba University, SJTU-CU ICRC)

11:10-11:30
Design of wireless SAW temperature sensors using a thermo-electromechanical FEM/BEM model
Han Tao (Shanghai Jiao Tong University, SJTU-CU ICRC)

11:30-13:30 Lunch break
Midori (Sushi), Nishi-Chiba
PART II: BIO-MEDICAL ENGINEERING AND BIO-SUPERCOMPUTING

Chair: Ryutaro Himeno (RIKEN)

13:30-14:10 Plenary Lecture 2:
MDGRAPE-4: a special-purpose computer system for molecular dynamics simulations
Makoto Taiji (Riken, Japan)

Chair: Ken-ya Hashimoto (Chiba University, SJTU-CU ICRC)

14:10-14:30
Development of a musculoskeletal model of laboratory mouse
Satoshi Oota (RIKEN)

14:30-14:50
Effects of Acute and Chronic Hypoxia on Human Physiological Functions
Lu Shi (Shanghai Jiao Tong University, SJTU-CU)

14:50-15:10
Development and validation of a bioelectric simulation model for electrical stimulation
Wenwei Yu (Chiba University, SJTU-CU)

SJTU-CU ICRC Student Poster Session

15:10-15:50
Multi-scale fluid dynamic modeling of owl’s silent flight
Rao Chen (Chiba University, SJTU-CU)

Modeling coronary artery hemodynamics with consideration of vessel's dynamics and compliance
Takashi Fujiwara (Chiba University, SJTU-CU)

Effect of the tissues conductivity on muscle activation
Yuto Fukuhara (Chiba University, SJTU-CU)

Self-wake capture influences escape performance of the larval fish
Li Gen (Chiba University, SJTU-CU)

PCNN segmentation and bottom-up saliency-on feature extraction for thigh MRI based 3D model construction
Nevrez Imamoglu (Chiba University, SJTU-CU)

Effect of wing flexibility on flight ability in flapping flight
Ryusuke Noda (Chiba University, SJTU-CU)

Intention detection of upper limb motions based on statistical causal inference for around-shoulder bio-signals
Hiroyuki Suzuki (Chiba University, SJTU-CU)
Chair: Akio Namiki (Chiba University, SJTU-CU ICRC)

15:50-16:10
A robust and real-time vascular intervention simulation system based on Kirchhoff elastic rod
Lixu Gu (Shanghai Jiao Tong University, SJTU-CU)

16:10-16:30
Tubular structure detection for MR angiographic image analysis
Albert Chung (The Hong Kong University of Science and Technology)

16:30-16:50
Personalized modeling of cardiovascular hemodynamics and its applications
Fuyou Liang (Shanghai Jiao Tong University, SJTU-CU)

16:50-17:10
Measuring ultrafast molecular self-assembly kinetics in a three dimensional hydrodynamic focusing microfluidic mixer
Shuhuai Yao (The Hong Kong University of Science and Technology)

18:30 ~ 20:30 Workshop Banquet
Hana (Japanese Restaurant), Chiba
March 4th, 2014

PART III: CELL AND TISSUE LEVEL SIMULATION AND SENSING

Chair: Hao Liu (Chiba University, SJTU-CU ICRC)

9:00-9:40 Plenary Lecture 3:
  Biosensing and bioelectronics: Microfabrication- and electrochemistry- based platforms
  I-Ming Hsing (The Hong Kong University of Science and Technology, China)

Chair: Hiroto Tanaka (Chiba University, SJTU-CU ICRC)

9:40-10:00
  Numerical simulations of the primary stage of thrombus formation
  Kazuyasu Sugiyama (RIKEN)

10:00-10:20
  Computer simulation of thrombus formation in single ventricle
  Ken-ichi Tsubota (Chiba University, SJTU-CU)

10:20-10:30 Break

10:30-10:50
  Application of CFD and genetic algorism investigation of fluid dynamic determinant for artery bifurcation geometry
  Masako Himeno (RIKEN)

10:50-11:10
  RICS: Cellular simulations connecting the tissue level from the cell level
  Yasuhiro Sunaga (RIKEN)

11:10-11:30
  Structural dynamics of protein and DNA system by coarse-grained simulations
  Hiroo Kenzaki (RIKEN)

11:30-11:45 Closing remarks from vice-president of Chiba University (Prof. Kenzo Nonami)

11:45-12:45 Lunch Break

13:00 Departure of a shuttle bus for RIKEN

15:00-17:00 RIKEN Tour
  Brain Science Institute (BSI), Brain Box
  Advanced Center for Computing and Communication (ACCC) 4D theater and RICC (Riken Integrated Cluster of Clusters)
  Image Processing Research Team (Yokota Lab), 3D internal structure microscopes (3D-ISM)

17:30-19:30 Workshop Dinner
  Hirosawa Club, Wako, RIKEN

19:45 Departure of a shuttle bus for Chiba Station
Venue

Workshop Site
Main Conference Room (Ground Floor), Science and Technology Bldg. 1,
Nishi-Chiba Campus, Chiba University
Address: 1-33 Inage-ku, Chiba-shi, Chiba 263-8522, Japan
Phone: +81-43-290-2944 (SJTU-CU ICRC office)

Lunch on March 3rd
Midori (Sushi)
Address: 2-21-5 Kasuga, Chuo-ku, Chiba-shi, Chiba 260-0033, Japan
Phone: +81-43-241-1530

Banquet
Hana (Japanese Restaurant)
Address: 1-34-1 Benten, Chuo-ku, Chiba-shi, Chiba 260-0045, Japan
Phone: +81-43-206-1587

RIKEN Tour
Advanced Center for Computing and Communication (ACCC), RIKEN Wako Campus
Address: 2-1 Hirosawa, Wako-shi, Saitama 351-0198, Japan
Phone: +81-48-462-1111

Workshop Dinner
Hirosawa Club
RIKEN Wako Campus