The 13th MicRO Alliance Meeting

第 13 回 京都大－ミシガン大－フライブルク大
3 大学連携シンポジウム

－京都大学工学研究科高等研究院ナノミクス研究部門
  若手研究者交流会
－第 2 回マイクロ-ナノテクノロジー技術に関する
  日仏ワークショップ

7-8 NOVEMBER 2016, KYOTO UNIVERSITY

11 月 7 日：桂キャンパス Ｂクラスター 桂ホール
11 月 8 日：吉田キャンパス 国際科学イノベーション棟 5 階 シンポジウムホール

【主催】マイクロアライアンス（京都大学、ミシガン大学、フライブルク大学アライアンス）
【協賛】ナノテクキャリアアップアライアンス事業（Nanotech CUPAL）

http://www.nms.me.kyoto-u.ac.jp/labintro/micro-alliance/
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<th>Time</th>
<th>Session</th>
<th>Speaker(s)</th>
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<tr>
<td>10:00</td>
<td>OPENING ADDRESS</td>
<td>Osamu Tabata (Kyoto University)</td>
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<td>10:10</td>
<td>THE UNIVERSITY OF MICHIGAN ENGINEERING RESEARCH CENTER FOR WIRELESS INTEGRATED MICRO SENSING AND SYSTEMS: AN OVERVIEW</td>
<td>Yogesh B. Gianchandani (University of Michigan)</td>
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<td>10:40</td>
<td>THREE-DIMENSIONAL SU-8 MICROSTRUCTURES BY SINGLE-EXPOSURE PROJECTION LITHOGRAPHY: TECHNOLOGY, APPLICATIONS AND SIMULATION</td>
<td>Oliver Paul (Freiburg University), and Yoshikazu Hirai (Kyoto University)</td>
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<td>11:10</td>
<td>TEMPURA – TEETH MEASUREMENT AND PROFILING USING REPLICAED ADVANCED OPTICS</td>
<td>Phuong Ha Cu Nguyen (Freiburg University)</td>
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<td>11:40</td>
<td>LUNCH</td>
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<td>13:30</td>
<td>ENGINEERED BIOINTERFACES THROUGH TAILORMADE SURFACE-ATTACHED POLYMER NETWORKS – FROM TO NEW DIAGNOSTIC TOOLS TO IMPLANTABLE MATERIALS</td>
<td>Jürgen Rühe (Freiburg University)</td>
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<td>14:00</td>
<td>NANO-PLASMONIC THIN FILMS FOR CONTROLLING MARANGONI FLOWS AROUND A MICROBUBBLE</td>
<td>Kyoko Namura, and Motofumi Suzuki (Kyoto University)</td>
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<td>14:30</td>
<td>NANOPLASMONIC BIOSENSING: FROM CLINICAL DIAGNOSTICS DOWN TO SINGLE-CELL STUDY</td>
<td>Katsuo Kurabayashi (University of Michigan)</td>
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<td>15:00</td>
<td>COFFEE BREAK</td>
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<td>15:10</td>
<td>CONCURRENT MR AND OPTICAL MICROSCOPY USING ADAPTIVE OPTICS</td>
<td>Matthias Wapler, and Ulrike Wallrabe (Freiburg University)</td>
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<td>15:40</td>
<td>MICROFLUIDIC DEVICES FOR BIOPHYSICAL STUDIES AND ENGINEERING APPLICATIONS OF MOTOR PROTEINS</td>
<td>Ryuji Yokokawa (Kyoto University)</td>
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<td>16:10</td>
<td>MICROFLUIDIC PLATFORMS FOR SINGLE CELL HETEROGENEITY STUDIES IN CANCER</td>
<td>Euisik Yoon (University of Michigan)</td>
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<td>16:40</td>
<td>TOFU – TUBULAR OPTOFLUIDICS</td>
<td>Hans Zappe (Freiburg University)</td>
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<td>17:10</td>
<td>CLOSING ADDRESS</td>
<td>Osamu Tabata (Kyoto University)</td>
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**Session summary**

Bioinformatics has played an important role in many areas of biology, such as genomics, proteomics, transcriptomics, and metabolomics over the last decade. Next-generation DNA sequencers are creating a huge amount of raw DNA sequence data that have to be analyzed and associated with genomes, reference maps, RNAs, proteins, chemicals, pathways, systems, and structures. State-of-the-art biological function analysis requires data mining from the enormous digitalized data, that only can be done by experts understanding both field of biology and computer science. A cooperation with bioinformaticians is one of the key factors to success in exploring the life phenomena. The lecturers give different aspects of bioinformatic analysis on each objective organisms from the basics.

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### Lecture Schedule

**09:30**  
**INTRODUCTION**  
Kentaro Kawai (Osaka University)

**09:45**  
**MULTI-OMICS STRATEGY TO UNVEIL THE MOLECULAR MECHANISMS OF NON-CLASSICAL MODEL ORGANISMS**  
Kazuharu Arakawa (Keio University)

**10:30**  
**DNA METHYLATION AND METABOLIC DISTURBANCES: BEYOND GENETICS**  
Marie Loh (National University of Singapore (NUS) and A*STAR)

**11:15**  
**DIGITALIZING TRANSCRIPTION BY SINGLE CELL TRANSCRIPTOMICS**  
Akira Watanabe (Kyoto University)

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**12:00 – 13:00**  
**LUNCH**

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### 2nd French-Japanese Workshop on Micro & Nanotechnology

This workshop between French nanotechnology research network, RENATECH and Nanotechnology Platform Japan aims at information exchange and promotion of the collaboration among engineers working for user facilities. The workshop following the first workshop at Lyon last year, is held at Kyoto as a satellite event of 29th International Micro-processes and Nanotechnology Conference (MNC 2016). In the workshop, new technologies supporting researches of micro and nanotechnology will be discussed through oral and poster presentations.

**URL:** [http://nsn.kyoto-u.ac.jp/french-japanese_workshop_en](http://nsn.kyoto-u.ac.jp/french-japanese_workshop_en)

**13:00**  
**OPENING**

**13:10**  
**KEYNOTE SPEECH 1**

**13:40**  
**KEYNOTE SPEECH 2**

**14:10**  
**ENATECH INTRODUCTION**

**14:25**  
**NANOTECHNOLOGY PLATFORM JAPAN INTRODUCTION**  
COFFEE BREAK

**15:00**  
**PRESENTATION OF TECHNOLOGICAL TOPICS BY NANOTECHNOLOGY PLATFORM JAPAN**

**16:00**  
**PRESENTATION OF TECHNOLOGICAL TOPICS BY RENATECH**

**17:00**  
**SHORT PRESENTATION BY NANOMICS RESEARCH DIVISION OF KATSURA INT’TECH CENTER**

**17:30**  
**POSTER SESSION & BANQUET**