



International workshop on nano-spin conversion science & quantum spin dynamics

Oct 12-15, 2016, Tokyo, Japan

Takeda Hall, The University of Tokyo

NSCS-QSD2016

PROGRAM BOOK

Organizers :

[KAKENHI(Nano-Spin Conversion Science)] Y. Otani, S. Murakami, M. Shiraishi, A. Oiwa, E. Saitoh

[RIKEN CEMS] S. Tarucha, K. Ishibashi, K. Kono, G. Tatara



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<http://www.spinconversion.jp/nscs-qsd/index.html>

NSCS-QSD 2016

PROGRAM

WEDNESDAY, 12 OCTOBER

08:30-09:15 Registration & Opening

CHAIR : Eiji Saitoh

09:15-10:00 W1 **Kang Wang** Spin Dynamics and Textures via
(University of California Los Interfacial Spin-Orbit Coupling
Angeles)

10:00-10:30 W2 **YoshiChika Otani** Spin to charge interconversion at the
(University of Tokyo, interfaces with strong SOI
RIKEN CEMS)

10:30-11:00 Coffee Break

11:00-11:45 W3 **Juan Carlos** Rashba interfaces and Topological
Rojas Sanchez Insulators for efficient spin-to-charge
(CNRS) current conversion at room temperature

11:45-12:15 W4 **Masashi Shiraishi** Spin transport and conversion in
(Kyoto University) semiconductors and topological
insulators

12:15-13:00 W5 **Felix Casanova** Spin Hall effect in heavy metals:
(CIC Nano GUNE) mechanisms and optimization

13:00-14:30 Lunch

CHAIR : Masashi Shiraishi

14:30-15:15 W6 **Se Kwon Kim** A Realization of the Haldane-Kane-Mele
(University of California Los Model in a System of Localized Spins
Angeles)

15:15-15:45 W7 **Takahiro Moriyama** Antiferromagnetic spintronics and recent
(Kyoto University) results

15:45-16:15 Coffee Break

16:15-17:00 W8 **Hyunsoo Yang** Flexible magnetic tunnel junctions and
(National University of spin-orbit torque dynamics
Singapore)

17:00-17:30	W9 Eiji Saitoh (Tohoku University)	Spin Current Generators
17:30-18:15	W10 Xiaofeng Jin (Fudan University)	Spin Hall effect in epitaxial Cu(111) films with δ -doped Bi measured by H-Pattern

THURSDAY, 13 OCTOBER

CHAIR : YoshiChika Otani

09:00-09:45	T1 Yoshinori Tokura (RIKEN CEMS, University of Toyo)	Meta-stable skyrmions in chiral magnets
09:45-10:30	T2 Christopher Marrows (University of Leeds)	Chiral interactions in thin film magnets
10:30-11:00	Coffee Break	
11:00-11:45	T3 Vladislav Demidov (University of Münster)	Magnetization oscillations and waves driven by pure spin currents
11:45-12:15	T4 Gen Tatara (RIKEN CEMS)	Transport, magnetic and optical properties induced by emergent spin electromagnetic fields in metallic ferromagnet
12:15-13:00	T5 Theo Rasing (Radboud University)	Femtosecond optical control of magnetism : Towards THz spintronics
13:00-14:30	Lunch	

CHAIR : Akira Oiwa

14:30-15:15	T6 Timothy Phung (IBM)	Spin-orbitronic materials and devices
15:15-15:45	T7 Shuichi Murakami (Tokyo Institute of Technology)	Current-induced magnetizations in chiral systems
15:45-16:15	Coffee Break	
16:15-17:00	T8 Jairo Sinova (Johannes Gutenberg University of Mainz)	Antiferromagnetic spin-orbitronics
17:00-17:45	T9 Dieter Weiss (University of Regensburg)	Spin injection into two-dimensional electron systems

17:45-19:45 Poster Session : Bierstube

FRIDAY, 14 OCTOBER

CHAIR : Takis Kontos

09:00-09:45	F1 Sam Carter (US Naval Research Laboratory)	Cavity-enhanced Raman spin flip emission from single and coupled quantum dots
09:45-10:15	F2 Akira Oiwa (ISIR,Osaka University)	Photon-electron spin Poincaré interface using gate-defined quantum dots
10:15-10:30	Coffee Break	
10:30-11:15	F3 Matthew Sellars (Australian National University)	Spin wave storage of light using rare-earth doped crystals
11:15-11:45	F4 Yasunobu Nakamura (RIKEN CEMS, RCAST University of Tokyo)	Quantum magnonics in a ferromagnetic sphere
11:45-12:15	F5 Franco Nori (RIKEN CEMS, University of Michigan)	Parity–Time (PT)-symmetry in optics and the quantum spin Hall effect of light
12:15-13:45	Photo + Lunch	

CHAIR : Sam Carter

13:45-14:30	F6 Christian Schönenberger (University of Basel)	Magnetoresistance of quantum dots with ferromagnetic split-gates
14:30-15:15	F7 Charles M. Marcus (Niels Bohr Institute, University of Copenhagen)	Majorana zero modes in Coulomb islands
15:15-15:30	Coffee Break	
15:30-16:00	F8 Russell S. Deacon (RIKEN CEMS)	Signatures of 4π periodicity in the dynamics of HgTe Josephson Junctions
16:00-16:30	F9 Daniel Loss (RIKEN CEMS, University of Basel)	From Majorana- to Para-Fermions in Nanowires and Helical Edge States

16:30-17:15	F10 Silvano De Franceschi (CEA Grenoble)	Electrically driven hole-spin resonance in silicon devices
17:15-18:45	Poster Session	
19:00-21:00	Banquet	

SATURDAY, 15 OCTOBER

CHAIR : Akira Oiwa

09:00-09:45	S1 Tristan Meunier (CNRS Institut Néel)	Coherent long-distance spin displacement of individual electrons
09:45-10:15	S2 Seigo Tarucha (University of Tokyo)	Distance-independent Dephasing of Phase-controlled Spin Entanglement
10:15-10:45	Coffee Break	
10:45-11:30	S3 Bill Coish (McGill University)	Decoupling and decoherence for spin-resonator state transfer
11:30-12:00	S4 Yoshiro Hirayama (Tohoku University)	Interaction between electron and nuclear spins in GaAs and InSb quantum systems
12:00-12:45	S5 Menno Veldhorst (Delft University of Technology)	Quantum logic in silicon
12:45-14:15	Lunch	

CHAIR : Daniel Loss

14:15-14:45	S6 Kouichi Semba (NICT)	Stable 'Molecular' State of Photons and Artificial Atom
14:45-15:30	S7 Takis Kontos (CNRS/ENS)	Cavity quantum electrodynamics with carbon nanotubes
15:30-16:00	Coffee Break	
15:00-15:45	S7 Hongqi Xu (Peking University)	Topological superconducting devices made from semiconductor nanostructures
15:45-16:15	S8 Yukio Tanaka (Nagoya University)	Control of odd-frequency s-wave Cooper pairs in double quantum dots

Closing & Departure : Tarucha

1st Poster Session (NSCS) : October 13th

Poster #	Name	Affiliation	Title
N-1	NIIMI Yasuhiro	Osaka University	Spin-related phenomena detected by spin current
N-2	QIU Zhiyong	WPI-AIMR, Tohoku University	detection of antiferromagnetic phase transition by spin current
N-3	SAGASTA Edurne	CIC nanoGUNE	Large spin-to-charge conversion in Pt/graphene lateral nanostructures
N-4	KONDOU kouta	RIKEN CEMS	Observation of charge-to-spin current conversion by Dirac surface state of topological insulators
N-5	YASUDA Kenji	University of Tokyo	Large unidirectional magnetoresistance in magnetic topological insulator
N-6	SATO Osamu	Kyushu University	Magnetization Switching via Charge Transfer in a [CrCo] Complex
N-7	PUEBLA Jorge	RIKEN CEMS	Direct observation of spin accumulation at Rashba-like interface
N-8	OKI Soichiro	Osaka University	Spin transport in n-Ge and p-Ge
N-9	MIZUKAMI Shigemi	WPI-AIMR, Tohoku University	Laser-induced spin-wave in metals under microscope
N-10	TOSHU An	Japan Advanced Institute of Science and Technology	Spin Conversion from Spin Waves into NV Centers in Diamond
N-11	MIWA Shinji	Osaka University	Spin conversion at interface of metal and dielectric
N-12	DUSHENKO Sergey	Kyoto University	Graphene spin-charge converter controlled by gate voltage
N-13	YANG Guang	RIKEN CEMS	Majorana Bound States in Magnetic Skyrmions
N-14	OHNUMA Yuichi	Japan Atomic Energy Agency	Magnon instability driven by heat current
N-15	HAMAMOTO Keita	University of Tokyo	Non-reciprocal responses in Rashba system
N-16	SAARIKOSKI Henri	RIKEN CEMS	Efficient domain wall transport and pinning in magnetic nanowires and synthetic ferrimagnets
N-17	RANA Bivas	RIKEN CEMS	Detection of voltage excited spin wave by ps-TRMOKE
N-18	KIKUCHI Toru	RIKEN CEMS	Doppler shift picture of the Dzyaloshinskii-Moriya interaction
N-19	MATSUKURA Fumihiko	WPI-AIMR, Tohoku University	Electrical modulation of damping constants in (Ga,Mn)As
N-20	SEKI Takeshi	IMR, Tohoku University	Spin Hall effect in ferromagnetic FePt alloy
N-21	OHNISHI Kohei	Kyushu University	Phase modulation of supercurrent in the multi-layer-based lateral Josephson junction
N-22	TRETIKOV Oleg	IMR, Tohoku University	Magnetic Anisotropy due to Interplay of Curvature and Dipolar Interaction
N-23	YOKOI Naoto	IMR, Tohoku University	A Holographic Dual of Ferromagnets
N-24	TANIYAMA Tomoyasu	Tokyo Institute of Technology	Spin Wave Transmission in FeRh Thin Films
N-25	SATOH Takuya	Kyushu University	Time-resolved imaging of spin wave transmission
N-26	KAWAGUCHI Hideo	Tokyo Metropolitan University, RIKEN CEMS	Effective Hamiltonian theory for nonreciprocal light propagation in magnetic Rashba conductor
N-27	OHYA Shinobu	University of Tokyo	Spin injection into the topological crystalline insulator SnTe using spin pumping
N-28	UCHIDA Yusuke	ISSP, University of Tokyo	Size effect of electrical transport properties in NiS ₂
N-29	CHIBA Takahiro	IMR, Tohoku University	Proximity-induced magnetoresistance in two-dimensional Dirac electrons on ferromagnetic insulators
N-30	CHIBA Takahiro	IMR, Tohoku University	Electric-field-induced magnetic resonance in topological antiferromagnetic insulators
N-31	MIZUTA Yo Pierre	Kanazawa University	First-principles Approach for Skyrmion-driven Thermoelectric Conversion
N-32	KIM Junyeon	RIKEN CEMS	Edelstein magnetoresistance in CoFe/Cu/Bi ₂ O ₃
N-33	SEKI Shinichiro	RIKEN CEMS	Thermal generation of spin current in antiferromagnets
N-34	OKUMA Nobuyuki	University of Tokyo	Microscopic derivation of spin current in topological insulator/magnetic insulator heterostructure
N-35	BORYS Pablo	RIKEN CEMS	Conservation of angular momentum in DMI spin textures
N-36	MUDULI Prasanta Kumar	ISSP, University of Tokyo	Role of interfacial exchange field in the spin-current modulation with ferromagnetic insulator
N-37	TAKAHASHI Ryo	Japan Atomic Energy Agency	Spin-hydrodynamic Conversion Effect
N-38	MATSUMOTO Kenta	ISSP, Univ. of Tokyo	Transition behavior in Pd-doped FeRh wire
N-39	TAKASHIMA Rina	Kyoto University	Supercurrent-induced Skyrmion dynamics and Tunable Weyl points in Chiral Magnet with Superconductivity
N-40	YAMAGUCHI Naoya	Kanazawa University	First-principles calculation of Rashba parameters in surface alloys of bismuth and noble metals
N-41	YOSHIKAWA Hiroki	Nihon University	All-optical magnetization switching in GdFeCo stacked on different metallic layers
N-42	OKADA Hiroki	Mie-University	The fluctuation of charge, heat and spin currents
N-43	HISATOMI Ryusuke	RCAST, University of Tokyo	Bidirectional conversion between microwave and light via ferromagnetic magnons
N-44	MIZUGUCHI Masaki	Tohoku University	Anomalous Nernst effect in Co / Ni multilayers
N-45	OGATA Yudai	Japan Atomic Energy Agency	Barnett effect in rare-earth metals
N-46	NAKAYAMA Hiroyasu	Keio University	Rashba-Edelstein magnetoresistance in metallic heterostructures

2nd Poster Session (QSD) : October 14th

Poster #	Name	Affiliation	Title
Q-1	LAMBERT Neill	RIKEN CEMS	Bistable Photon Emission in Hybrid-QED
Q-2	LAMBERT Neill	RIKEN CEMS	Non-perturbative and non-Markovian environments: exact solvers and applications
Q-3	FRISK KOCKUM Anton	RIKEN CEMS	Quantum optics with giant artificial atoms
Q-4	LI Zhou	RIKEN CEMS	Second harmonic generation in topological insulators
Q-5	WAKATSUKI Ryohei	University of Tokyo	Nonreciprocal Transport in Noncentrosymmetric Superconductors
Q-6	SHITADE Atsuo	RIKEN CEMS	Anomalous Thermal Hall Effect in a disordered Weyl ferromagnet
Q-7	HSU Chen-Hsuan	RIKEN CEMS	Antiferromagnetic nuclear spin helix and topological superconductivity in ¹³ C nanotubes
Q-8	MATSUO Sadashige	University of Tokyo	Equal-spin Andreev Reflection between Spin-resolved Quantum Hall Bulk State and Superconductor
Q-9	STANO Peter	RIKEN CEMS	Fractional charge in one-dimensional quantum dots array
Q-10	BARKER Joseph	IMR, Tohoku University	Atomistic spin dynamics with a semi-quantum thermostat
Q-11	IBA Satoshi	AIST	Development of (110) GaAs quantum wells for emission layers of spin-controlled lasers
Q-12	CIRIO Mauro	RIKEN CEMS	Ground State Electroluminescence
Q-13	KUROYAMA Kazuyuki	University of Tokyo	Single photon-electron pairs generation from polarization entangled photon pairs
Q-14	OTSUKA Tomohiro	RIKEN CEMS	Charge and spin dynamics in a quantum dot-lead coupled system
Q-15	NOIRI Akito	University of Tokyo	Measuring the time dependence of a Rabi oscillation of an electron spin in a semiconductor quantum dot
Q-16	KAMATA Hiroshi	RIKEN CEMS	Transport properties of InAs nanowires on hexagonal boronitride
Q-17	NAKAMURA Taketomo	ISSP, University of Tokyo	Proximity induced triplet supercurrent in Nb/(In, Fe)As/Nb junctions
Q-18	MORIYA Rai	IIS, University of Tokyo	Construction of van der Waals magnetic tunnel junction using ferromagnetic layered dichalcogenide
Q-19	SUZUKI Michi-To	RIKEN CEMS	Cluster-multipole-driven Anomalous Hall Effect in antiferromagnets
Q-20	GIAVARAS Giorgos	RIKEN CEMS	Spin resonance effects in parallel-coupled quantum dots
Q-21	FUJIMOTO Junji	ICR, Kyoto University	Effects of skew scattering on non-dissipative transport properties
Q-22	SAWAHATA Hikaru	Kanazawa University	Large Chern number in films of transition metal oxides
Q-23	ALLISON Giles	RIKEN CEMS	Lowering electron temperature for measurement of spin relaxation in quantum dots
Q-24	BOJESSEN Troels	RIKEN CEMS	Quantum Monte-Carlo study of quantum spin ice under a [111] magnetic field
Q-25	NAKAJIMA Takashi	RIKEN CEMS	High-Fidelity Readout of Two-Spin Correlations Using a Metastable Charge State in Triple Quantum Dots
Q-26	TAKEDA Kenta	RIKEN CEMS	Centre resonance frequency shift of a strongly driven silicon quantum dot spin qubit
Q-27	YONEDA Jun	RIKEN CEMS	High-fidelity spin control in an enriched Si/SiGe quantum dot with a micromagnet
Q-28	NAKOSAI Sho	RIKEN	Magnetic Analogue of Superconductivity in Quantum Spin Ice
Q-29	MARX Marian	University of Tokyo	Hybrid cQED architecture as a model system for non-equilibrium physics in condensed matter
Q-30	ITO Takumi	University of Tokyo	Detection and control of the charge states of a quintuple quantum dot in a scalable multiple quantum dot architecture

- A** 駅門 Akamon
- B** 総合図書館 General Library
- C** 正門 Main Gate
- D** 文化演習室 Cultural Auditorium
- E** 三田池庭 Savannah Pond
- F** 農産物と食文化の博物館 Museum of Health and Nutrition
- G** 情報センター Information Center
- H** 東京大学オフィシャルショップ The University of Tokyo Official Shop

- 1** レストラン アブルボア Restaurant "Abravo"
- 2** レストラン アブルボア Lounge "Abravo"
- 3** 生協 農産物直売所 Co-op dining hall in Yayoi section
- 4** レストラン 日比谷池畔本舗 Restaurant "Nihon Misakiyama"
- 5** 生協 中央食堂 Co-op dining hall
- 6** 生協 第2食堂 Co-op dining hall
- 7** 生協 農産物直売所 Co-op dining hall
- 8** レストラン 燗 Restaurant "Nawa"

- 9** ラウンジ ハーモニー Lounge "Harmony"
- 10** レストラン 北の国 Restaurant "Kitsunokuni"
- 11** レストラン 北の国 Restaurant "Kitsunokuni"
- 12** レストラン "The Star Skyway"
- 13** レストラン カボチャカレー Restaurant "Kabo MUKABAN"
- 14** レストラン 徳山屋 カオリア Restaurant Chikuzen Gansha
- 15** ファミリーレストラン Family Club



- 16** サブウェイ SUBWAY
- 17** スターバックス Starbucks
- 18** スターバックス Starbucks
- 19** スターバックス Starbucks
- 20** スターバックス Starbucks
- 21** スターバックス Starbucks
- 22** スターバックス Starbucks
- 23** スターバックス Starbucks
- 24** スターバックス Starbucks

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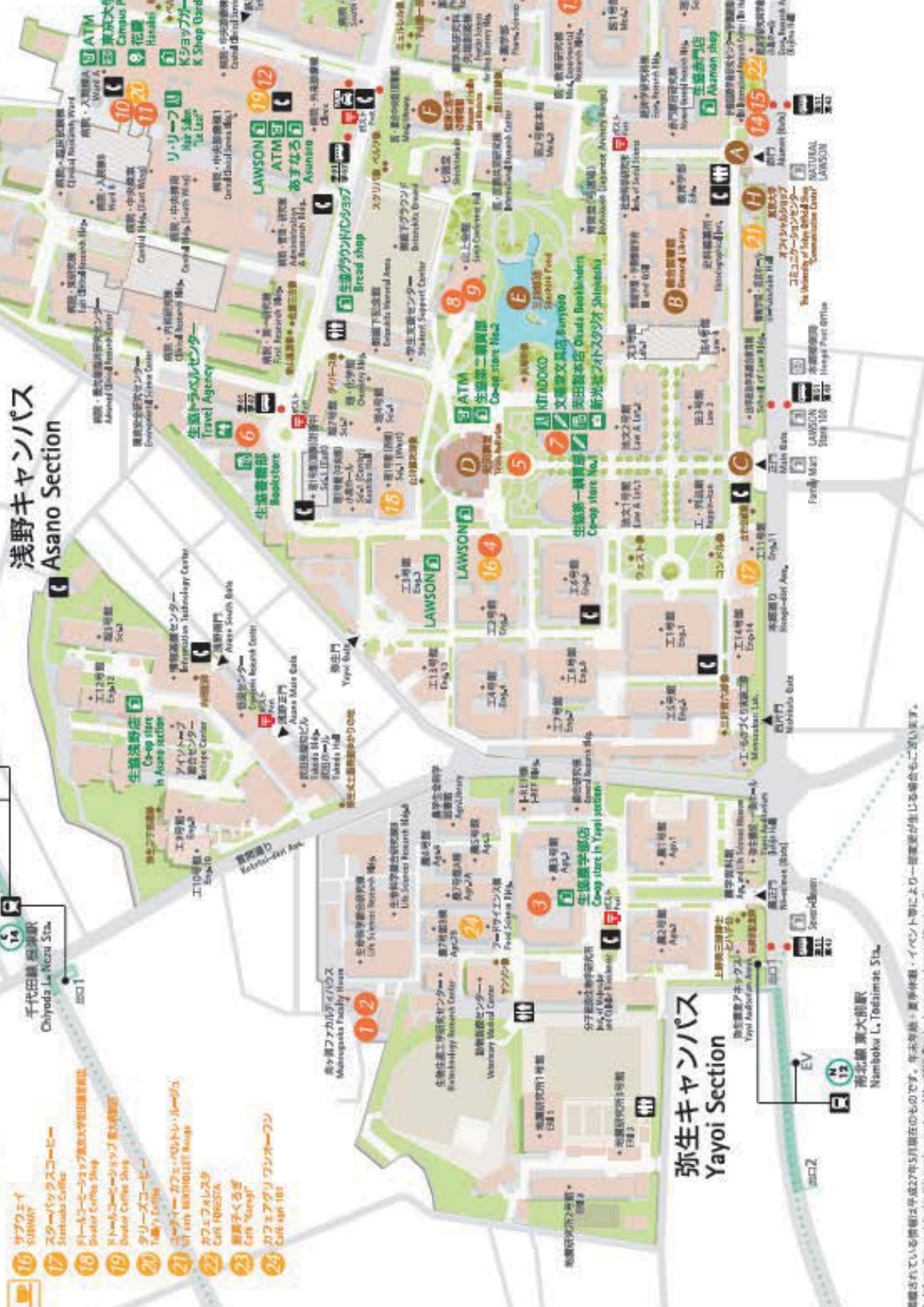
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浅野キャンパス Asano Section

本郷キャンパス Hongo Section

弥生キャンパス Yayoi Section



掲載されている情報は平成27年5月現在のものです。年次更新・更新後、イベント等により一部変更が生じる場合もございます。
 The information contained in this map is correct as of May 2015. Ongoing events may cause change without notice.

TAKEDA HALL

THE UNIVERSITY OF TOKYO

東京大学 武田ホールへのアクセス

- 地下鉄 千代田線「根津駅」1 番出口徒歩 5 分
- 地下鉄 南北線「東大前駅」1 番出口徒歩 10 分
- 地下鉄 大江戸線・丸ノ内線「本郷三丁目駅」徒歩 25 分

浅野キャンパス内 武田先端知ビル 5 階
武田ホール



※Please smoke in the smoking area

喫煙場所：smoking area

キャンパス内では指定された喫煙場所以外は禁煙です

地下鉄 東大前駅 (徒歩 10 分)
地下鉄 本郷三丁目駅 (徒歩 25 分)

地下鉄 根津駅 (徒歩 5 分)

Oct 12 (Wed)		Oct 13 (Thurs)		Oct 14 (Fri)		Oct 15 (Sat)	
9:00	8:30-9:15 Registration & Opening						
	W1 9:15-10:00 Kang Wang	T1	9:00-9:45 Yoshinori Tokura	F1	9:00-9:45 Sam Carter	S1	9:00-9:45 Tristan Meunier
10:00	W2 10:00-10:30 YoshiChika Otani	T2	9:45-10:30 Christopher Marrows	F2	9:45-10:15 Akira Oiwa	S2	9:45-10:15 Seigo Tarucha
	10:30-11:00 Break		10:30-11:00 Break		10:15-10:30 Break		10:15-10:45 Break
11:00	W3 11:00-11:45 Juan Carlos Rojas Sanchez	T3	11:00-11:45 Vladislav Demidov	F3	10:30-11:15 Matthew Sellars	S3	10:45-11:30 Bill Coish
	W4 11:45-12:15 Masashi Shiraishi	T4	11:45-12:15 Gen Tatara	F4	11:15-11:45 Yasunobu Nakamura	S4	11:30-12:00 Yoshiro Hirayama
12:00	W5 12:15-13:00 Felix Casanova	T5	12:15-13:00 Theo Rasing	F5	11:45-12:15 Franco Nori	S5	12:00-12:45 Menno Veldhorst
13:00	13:00-14:30 Lunch		13:00-14:30 Lunch		12:15-13:45 Photo + Lunch		12:45-14:15 Lunch
14:00				F6	13:45-14:30 Christian Schönenberger	S6	14:15-14:45 Kouichi Semba
15:00	W6 14:30-15:15 Se Kwon Kim	T6	14:30-15:15 Timothy Phung	F7	14:30-15:15 Charles M. Marcus	S7	14:45-15:30 Takis Kontos
	W7 15:15-15:45 Takahiro Moriyama	T7	15:15-15:45 Shuichi Murakami		15:15-15:30 Break		15:30-16:00 Break
16:00	15:45-16:15 Break		15:45-16:15 Break	F8	15:30-16:00 Russell Deacon		15:30-16:00 Break
	W8 16:15-17:00 Hyunsoo Yang	T8	16:15-17:00 Jairo Sinova	F9	16:00-16:30 Daniel Loss	S8	16:00-16:45 Hongqi Xu
17:00	W9 17:00-17:30 Eiji Saitoh	T9	17:00-17:45 Dieter Weiss	F10	16:30-17:15 Silvano De Franceschi	S9	16:45-17:15 Yukio Tanaka
18:00	W10 17:30-18:15 Xiaofeng Jin				17:15-18:45 Poster Session		Closing & Departure Tarucha
			17:45-19:45 Poster Session : Bierstube		Move to Banquet		
19:00							
20:00					19:00-21:00 Banquet		
21:00							