

November 11 (MON)

Time	Session / Chair	No.	Speaker	Affiliation	Title of talk
9:00 - 9:30 (each 5 - 10min)	Opening (Chaired by Y. SANO, T. HOSOKAI)		Conference Chair		Opening, welcome to Q-BASIS 2024
			Shun'ichi KURODA	SANKEN, Osaka U., Japan	Welcome to SANKEN, Osaka University
			Masataka KAMBE	MEXT, Japan	Greetings from MEXT (Ministry of Education, Culture, Sports, Science and Technology)
9:30 -10:00	Plenary (Chaired by T. HOSOKAI)	11PL-01	Carl SCHROEDER	LBLN, USA	Plasma photocathodes for high-brightness electron beam generation
10:00 -10:30	Laser-driven particle acceleration and radiation sources 1 (Chaired by T. HOSOKAI)	11A-01	Marie-Emmanuelle COUPRIE	SOLEIL Synchrotron, France	The LPA driven COXINEL test experiment
10:30 -11:00					Break
11:00 -11:30	Laser-driven particle acceleration and radiation sources 2 (Chaired by M-E. COUPRIE)	11A-02	Sam BARBER	LBLN, USA	Reliable operation of a laser plasma accelerator driven free electron laser
11:30 - 12:00		11A-03	Ke FENG & Wentao WANG	SIOM, China	Recent progress of compact LWFA-driven FELs at SIOM
12:00 -12:30		11A-04	Zhan JIN & Masaki KANDO	SANKEN, Osaka U., / KPSI, QST, Japan	Development of a LWFA-based Table-top XUV-FEL
12:30 - 14:00					LUNCH TIME 12:30 ~ Group Photo
14:00 - 14:30	Laser-driven particle acceleration and radiation sources 3 (Chaired by S. KOJIMA)	11P-01	Jerome FAURE	LOA, France	High-repetition rate laser-plasma accelerators: present and future prospects
14:30 -15:00		11P-02	Jared De CHANT	LBLN, USA	Exploration of ultra-high dose rate radiobiology with laser-driven protons at BELLA
15:00 -15:30		11P-03	Hironao SAKAKI	KPSI, QST, Japan	Development of Ion Injector with Laser-driven ion acceleration
15:30 - 16:00					Break
16:00 -16:30	Q-LEAP STELLA (Chaired by T. SANO)	11P-04	Kenichi ISHIKAWA	The University of Tokyo, Japan	Overview of Q-LEAP ALICe STELLA Project
16:30 - 17:00		11P-05	Tomohito OTOBE	KPSI, QST, Japan	First-principles simulation of laser-matter interaction by SALMON
17:00 -17:30		11P-06	Rakesh D. SHIKNE & Hitoki YONEDA	ILS, Univ. Electro-Communications, Japan	Broadband reflectivity dynamics of copper during intense ultrashort pulse laser irradiation
17:30 -18:00		11P-07	Yohei KOBAYASHI	The University of Tokyo, Japan	The world's smallest hole drilling on semiconductor substrates with a DUV laser

November 12 (TUE)

Time	Session / Chair		Speaker	Affiliation	Title of talk
9:00 - 9:30	Plenary (Chaired by Y. SANO)	12PL-01	Kaoru YAMANOUCHI	The University of Tokyo, Japan	Frontiers in attosecond and intense field sciences
9:30 - 10:00	Applications for imaging and inspection 1 (Chaired by J. FAURE)	12A-01	Eric ESAREY	LBNL, USA	Laser-plasma accelerator research and applications at the BELLA Center
10:00 - 10:30		12A-02	Haruo MIYADERA	Toshiba Corporation, Japan	Muon imaging and application
10:30 - 11:00	Break				
11:00 -11:30	Applications for imaging and inspection 2 (Chaired by Z. Jin)	12A-03	Matt FREEMAN	LANL, USA	Laser-Plasma Accelerator Driven Electron Radiography
11:30 -12:00		12A-04	Martin SCHANZ	GSI, Germany	PRIOR-II – the first proton and heavy-ion particle radiography facility for probing ns-scale HED physics and material science experiments
12:00 - 12:30		12A-05	John SCHMIDT	LANL, USA	Experimental Results and the Future of Achromatic Imaging at LANSCE
12:30 - 14:00	LUNCH TIME				
14:00 -14:30	Medical and biological science & engineering 1 (Chaired by M. YAGI)	12P-01	Shinichi SHIMIZU	Osaka U., Japan	Quantum Beams as a Weapon Fight Against Cancer - New Theory, New Technology and Implementation.
14:30 - 15:00		12P-02	Kazumasa MINAMI	Osaka U., Japan	The biological effects of ultra-high dose rate irradiation on cells.
15:00 -15:30		12P-03	Jamie INMAN	LBNL, USA	Sparing of healthy tissue in FLASH radiotherapy experiments using laser-accelerated ion beams
15:30 - 16:00	Break				
16:00 - 16:30	Medical and biological science & engineering 2 (Chaired by K. MINAMI)	12P-04	Tomonao HOSOKAI	SANKEN, Osaka U., Japan	Drug discovery with high-energy electron beams Explore novel application for laser wakefield acceleration e-beams
16:30 - 17:00		12P-05	Keitaro TANOI	The University of Tokyo, Japan	Applications of Radiation Imaging in Plant Research and Bioscience
17:00 -17:30		12P-06	Takeharu NAGAI	SANKEN, Osaka U., Japan	Toward Enhancing Bioluminescence in Engineered Plants Using Quantum Beams for Sustainable Bioimaging and Lighting Applications
19:00 - 21:00	Banquet (Senri Hankyu Hotel)				

November 13 (WED)

Time	Session / Chair		Speaker	Affiliation	Title of talk
9:00 - 9:30	Plenary (Chaired by K. ISHIKAWA)	13PL-01	Takashi NAKANO	RCNP, Osaka Univ.	From Fundamental Physics to Real-World Applications: Research Highlights from Research Center for Nuclear Physics
9:30 - 10:00	High-power laser and applications1 (Chaired by K. ISHIKAWA)	13A-01	Daniele MARGARONE	ELI Beamlines, Czech Rep.	Laser Plasma Sources of Charged Particles and Radiation, and Their Applications at ELI Beamlines
10:00 - 10:30		13A-02	Tomas MOCEK	APRI-GIST, Korea & HiLASE, Czech Rep.	High-Average Power Laser Technologies: Status, Innovations, and Prospects
10:30 - 11:00	Break				
11:00 -11:30	High-power laser and applications2 (Chaired by R. L-MARTENS)	13A-03	Liming CHEN	SJTU, China	Enhancement of electron acceleration for plasma exciter/reactor
11:30 -12:00		13A-04	Jie FENG	SJTU, China	Enhancing electron acceleration for nuclear applications
12:00 -12:30		13A-05	Yanjun GU	SANKEN, Osaka U., Japan	Numerically assisted stability optimization for laser plasma electron acceleration
12:30 - 15:30	LUNCH TIME / Poster presentations at SANKEN CReA (Chaired by Y. GU)				
15:30 - 16:00	Quantum beam applications and relativistic plasmas (Chaired by T. MOCEK)	13P-01	Fesseha MARIAM	LANL, USA	The Future of Proton Radiography
16:00 -16:30		13P-02	Rodrigo LOPEZ-MARTENS	LOA, France	KAIO ACCELERATOR: A project for developing commercial high repetition rate laser-plasma accelerators
16:30 - 17:00		13P-03	Gerrit BRUHAUG	LANL, USA	Experimental Designs for Probing the Quantum FEL Regime

November 14 (THU)

Time	Session / Chair		Speaker	Affiliation	Title of talk
9:00 - 9:30	Material science and industry (AMADA Session) (Chaired by Y. SANO)	14-A01	Domenico FURFARI	Airbus Operations GmbH, Germany	Manufacturing with Light in Aerospace Industries: An overview of Potential Applications using High-Intensity pulsed Lasers
9:30 - 10:00		14A-02	Tomokazu SANO	Dept. Eng, Osaka U., Japan	Femtosecond Laser Shock Compression of Solids: Fundamentals and Applications
10:00 - 10:15	Break				
10:15 -10:45	Material science and industry (AMADA Session) (Chaired by M. KANDO)	14A-03	Laurent BERTHE	PIMM, CNRS, France	Shock produced by laser for adhesion test : New advances and perspectives for industrial applications.
10:45-11:15		14A-04	Yuji SANO	IMS/ SANKEN Osaka U., Japan	Service Life Extension of Infrastructure with Intense Laser Pulses from Monolithic Microchip Lasers
11:15-11:45	Closing (Y. SANO, T. HOSOKAI)				
13:00 - 15:00	Optional tour(Research Center for Nuclear Physics (RCNP) , Osaka University, Japan) (Research Center for Nuclear Physics (RCNP) , Osaka University, Japan)				

Poster presentations at SANKEN CReA (November 13 (WED), Chaired by Y. GU)

Poster No.	Presenter	Affiliation	Title
PO-01	Song Li	Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences	High-brightness betatron X-ray source driven by SULF-1PW laser
PO-02	Yasunobu Yamashita	SANKEN, Osaka University	Prodrug activation triggered by relativistic electron beam
PO-03	Yoshio Mizuta	SANKEN, Osaka University	Potential of laser peening to improve residual stresses and fatigue strength of additive manufactured alloys
PO-04	Shinichi Watanabe	Faculty of Science and Technology, Keio University	Frequency-comb based asynchronous optical sampling for rapid optical pump and optical probe experiments
PO-05	Ayaka Okuuchi	Osaka University	Fractionated medium-dose carbon ion beams with anti-CTLA-4 antibody induces the abscopal effect in murine pancreatic cancer model
PO-06	Shuri Tsuda	Osaka University	Elucidation of the mechanisms of radioresistance acquisition in TNBC that has acquired radioresistance.
PO-07	Kazuyuki Sakaue	The University of Tokyo	Particle acceleration by photoelectric fields using dielectric microstructures (DLA)
PO-08	Shohei KATSUKI	Osaka University Graduate School of Medicine	The impact of ultra-high dose rate (FLASH) carbon ion irradiation on antitumor immunity
PO-09	Zhenzhe Lei	SANKEN, Osaka University	The Study of the Hydrodynamic Instabilities Impacts on Electron Beam Stability in Laser Wakefield Acceleration
PO-10	Ai Harako	Osaka University	Can dopamine suppress the metastatic potential of radiation and create a better therapeutic effect of radiation?
PO-11	Keigo Kawase	KPST, QST	Design study for intense THz pulse extraction by cavity dumping of SANKEN THz-FEL
PO-12	Shingo Sato	SANKEN, Osaka University	High temporal-spatial resolution schlieren measurement for LWFA plasma target development
PO-13	Tomoya Murakami	Osaka University / School of Medicine	Investigation of the mechanism of radiotherapy resistance in tumors by cellular senescence
PO-14	Haruya Matsumoto	QST / Kyushu University	Evaluation of Space Charge Neutralization in Laser-Driven Ion Acceleration Beams
PO-15	Thanh Hung, Dinh	KPST, QST	Development of a Compact, High-Intensity Laser for Generating High-Energy Photon and Particle Beams
PO-16	Masayasu Hata	KPST, QST	Laser requirements for ion injector in the quantum scalpel project
PO-17	Kazuki Fujita	Osaka University	THE ULTRA-HIGH DOSE RATE CARBON ION IRRADIATION IMPACTS TO GENERATE HYDROGEN PEROXIDE
PO-18	Kana Nagata	Osaka University	Sparing effect on cell survival under normoxia using Ultra-high dose rate proton beams
PO-19	Karin Oniwa	Osaka University Graduate School of Medicine	Effect of ultra-High dose rate particle irradiation on cell invasion in breast cancer cells
PO-20	Kai Huang	KPST, QST	Electro-optic spatial-temporal characterization of the laser wakefield accelerated kilo-ampere electron bunches
PO-21	Jinfeng Yang	SANKEN, Osaka University	Ultrafast imaging with relativistic femtosecond electron pulses
PO-22	Konika Rani	Graduate School of Engineering, Osaka University	Prediction of the Laser Absorption Threshold Using Hybrid Deep Learning Model
PO-23	Yusa Muroya	SANKEN, Osaka U.	Study on radiation-induced reaction mechanisms of candidate materials for relativistic electron beam induced chemotherapy (REBIT)
PO-24	Nobuhiko Nakanii	KPSI, QST	Highly monoenergetic bunch generation via laser wakefield acceleration using near-field shaped laser pulse with structured density target
PO-25	Eiyu Gushiken	The University of Tokyo	Ab-initio calculations of energy transfer from femtosecond laser pulse to amorphous silicon
PO-26	Yoshihide Honda	SANKEN, Osaka University	Current Status of RLQBS in SANKEN
PO-27	Tianyun Wei	KPST, QST	Laser Driven Quasi-monoenergetic Deuteron Acceleration with in-situ D2O-deposited target
PO-28	Hiroaki Sano	Osaka University	Simulation study of the effect of blade in LWFA using Shock Injection
PO-29	Hiroki Katow	The University of Tokyo	Topological Data Analysis of the Ultrafast Melting Process
PO-30	Toshiya Muto	Tohoku University	Stabilization of Radiation Wavelength on Energy Spread and Jitter of driven beam using Transverse Gradient Undulator