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<http://www.thzbioworkshop2012.com>

International

3rd THz-Bio Workshop

February **06~08,**
2012
Seoul National University,
Seoul, Korea



Co-organized by
KAERI WCI Center for Quantum-Beam-based Radiation Research

Sponsoring Institutions



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PROGRAM

-Place: Engineer House, SNU

-Feb 6. 4:00pm~7:00pm Registration
7:00pm~8:30pm Reception

Feb 7. 8:20am~7:00pm
Workshop I & Poster session and Banquet

Feb 8. 8:20am~6:30pm Workshop II

KEY DATES

- Abstract Due : December 30, 2011
- Registration Due : January 20, 2012

Registration Fee (<http://www.thzbioworkshop2012.com>)

- Before January 20, 2012: Regular: 500,000KW(450 USD), Student: 350,000KW(270 USD)
- After January 20, 2012: Regular: 600,000KW(530 USD), Student: 400,000KW(360 USD)

Subjects

- THz-Bio Interaction
- THz-Bio Imaging
- THz Instrumentations

Workshop Contacts

General Chair : Gun-Sik Park
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Feb 7, Tuesday (Engineer House)

07:20~08:10	Breakfast & Registration
08:10~08:20	Opening Ceremony : Gun-Sik Park, Workshop Chair, Center for THz-Bio Application Systems, SNU, Korea
Session1 THz R&D Trend, Chair: Yong Hyup Kim(Seoul National Univ.& CTBAS)	
08:20~09:00	Imran Mehdi(JPL,USA): From chips to ships: The THz technology revolution
09:00~09:15	Shenggang Liu(UESTC,China): THz projects in China
09:15~09:30	Kiyomi Sakai(NICT,Japan) :Research on terahertz technology for future industry
09:30~09:45	Young Uk Jeong(KAERI,Korea): Free-Electron laser based high-power THz technology
09:45~10:00	Coffee Break
10:00~10:15	Celebratory Remarks (TBD)
Session2 THz-Bio interaction I , Chair: Yong Uk Jeong(KAERI & CTBAS)	
10:15~10:55	Yuri Feldman(JerusalemUniv.,Israel): The unexplored avenues of human skin:reading personal stress in the Sub-THz frequency range
10:55~11:35	Kodo Kawase(NagoyaUniv.,Japan): THz techniques for measuring human skin
11:35~12:15	Chi-Kuang Sun(TaiwanNationalUniv.,Taiwan):MMW resonant absorption of viruses through dipolar coupling with confined acoustic vibrations
12:15~12:30	Woong-Yang Park(SNU,Korea): Profiling of gene expression in mouse skin upon fs-THz radiation
12:30~13:30	Lunch
Session3 THz-water sensing, Chair: Haewook Han(POSTECH & CTBAS)	
13:30~13:45	Andrea Markelz (SUNY Buffalo,USA): Determination of THz anisotropic response in a glassy medium
13:45~14:25	Keisuke Tominaga(Kobe Univ.,Japan): Low-frequency dynamics of water: relation to the fluctuation of the solute molecule
14:25~15:05	Koichiro Tanaka(Kyoto Univ.,Japan): Terahertz Near-Field Microscope for Bio-Sensing
15:05~15:25	Wonho Jhe(SNU,Korea): Physics of water in the nanoscale and its applications
15:25~15:40	Coffee Break
Session4 THz Generation, Chair: Jaewook Ahn(KAIST & CTBAS)	
15:40~16:20	Xi-Cheng Zhang(RPI/Univ.ofRochester,USA): Handheld THz time domain spectrometer
16:20~16:35	Kyung Hyun Park(ETRI,Korea): Continuous-wave terahertz generation with high efficiency photomixer based on photonic devices
16:35~16:50	Hyyong Suk(GIST,Korea): High-power THz generation by using laser-driven plasma waves
16:50~17:05	Hyunyong Choi(Yonsei Univ.,Korea): Ultrafast optical-pump and terahertz-probe spectroscopy for low-energy quasi-particle dynamics
17:05~17:20	Eunmi Choi(UNIST,Korea): Applications of high power THz sources based on vacuum electronics
17:20~18:30	Poster Session (Engineer House)
18:30~20:30	Banquet (Engineer House for all participants)

Feb 8, Wednesday (Engineer House)

07:20~08:10	Breakfast & Registration
Session5 THz-Bio interaction II , Chair: Woong-Yang Park(Seoul National Univ.& CTBAS)	
08:20~08:35	Gian Piero Gallerano(ENEA, Italy): Electric vs. Electromagnetic pulses: An introduction to the next two speakers
08:35~09:15	AlfonsinaRamundo-Orlando(IFT,Italy): The influence of continuous and pulsed millimeter and sub-millimeter waves on lipid membrane
09:15~09:55	Shu Xiao (Old Dominion Univ.,USA): Bioelectrics: Electric pulses interacting with biological cells in nanoseconds
09:55~10:35	TBD
10:35~10:50	Coffee Break
Session6 THz Bio-imaging I , Chair: Joon Koo Han(Seoul National Univ. & CTBAS)	
10:50~11:30	Emma MacPherson(Hong Kong Univ.,HK): Bio-chemical sensing with THz
11:30~11:45	Joo-Hiuk Son(University of Seoul,Korea): Terahertz tomographic imaging of transdermal drug delivery
11:45~12:00	Pilhan Kim(KAIST,Korea): Intravital microscopy for THz-Bio interaction analysis in vivo
12:00~12:15	Jung-Il Kim (KERI,Korea): Terahertz vacuum electron device and imaging
12:15~13:30	Lunch
Session7 THz Bio-imaging II , Chair: Joo-Hiuk Son(Univ. of Seoul, & CTBAS)	
13:30~14:10	Gintras Valusis(SPI, Lithuania): Principles of compact room temperature terahertz imaging
14:10~14:50	Seongsin Margaret Kim(Univ.of Alabama, USA):High sensitivity and high selectivity THz biomedical imaging
14:50~15:05	Coffee Break
Session8 THz Devices, Chair: Changsoon Kim(Seoul National Univ. & CTBAS)	
15:05~15:20	DaiSik Kim(SNU, Korea): Terahertz nano antennas: sub-skin depth physics
15:20~15:35	Tae-In Jeon(Korea Maritime Univ.): Terahertz propagation in parallel-plate waveguide
15:35~15:50	Chul Sik Kee (GIST, Korea):Slow propagation of THz waves through a coupled plasmonic cavity in a metal-air-metal waveguide
15:50~16:05	Fabian Rotermund(Ajou Univ., Korea): TBD
16:05~17:30	PANEL DISCUSSION on "Prospects on THz-Bio", Chairs: G.P.Gallerano(ENEA,Italy), G.S.Park(SNU,Korea)