Japan-Korea Joint Workshop 2001
on Applied Superconductivity and Cryogenics

23 - 26 November, 2001

Co-chaired by Prof. K. Noto (Iwate Univ.) and Prof. S. H. Kim (Gyeongsang National Univ.)

Scope

The Japan-Korea Joint Workshop on Applied Superconductivity and Cryogenics will give an opportunity to present the latest developments in technology regarding applied superconductivity and cryogenics to experts from Korea and Japan. The workshop was planned as an event based on the MOU agreed between CAJ and KIASC in 1999. The second Japan-Korea Joint Workshop will focus on the future vision of the frontier project 21st century starting in Korea and the achievement of the superconductivity projects in Japan.

International Committee

Prof. Koshichi Noto (Chairman of Cryogenic Society of Japan, Iwate Univ., Japan)
Prof. Sang-Hyun Kim (President of KIASC, Gyeongsang National University, Korea)

Prof. Chu. Sekiguchi (President of Cryogenic Association of Japan, Japan)
Prof. Toichi Okada (Vice-President of Cryogenic Association of Japan, Fukui University of Techonology, Japan)
Dr. Akio Sato (Chairman of Planning Committee of CSJ, National Institute for Materials Science (NIMS), Japan)
Dr. Young-Kil Kwon (Korea Electrotechnology Research Institute, Korea)
Dr. Sang-Soo Oh (Korea Electrotechnology Research Institute, Korea)
Dr. Deuk-Yong Ko (Korea Institute of Machinery and Materials, Korea)
Dr. Kang-Sik Ryu (Project Manager of 21C frontier project, Center for Applied Superconductivity Technology, Korea)

Local Organizing Committee

Prof. Toichi Okada (Chairman, Fukui University of Technology)
Prof. Tsutomu Hoshino (Kyoto University)
Mr. Yoshiyuki Monju (Osaka Alloying Works, Co., Ltd.)
Dr. Yoon-Myung Kang (Daikin Industries)
Mr. Takashi Komoshita (Cryovac Corp.)
Mr. Takashi Miki (Kobe Steel, Ltd.)
Prof. Shigehiro Nishijima (Osaka University)
Mr. Yasushi Ochi (Iwatani Industrial Gases Corp.)
Dr. Kenichi Sato (Sumitomo Electric Industries, Ltd.)
Dr. Kazutaka Seo (Mitsubishi Elec. Corp., Advanced Technology R&D Center)
Prof. Tomiyoshi Haruyama (Asian Editor of Cryogenics, High Energy Accelerator Research Organization)
Dr. Toshio Ogata (Delegate of Planning Committee of CSJ, in charge of International Communication, NIMS)

Tojinbo

Rosoku Iwa (Candle Rock)

Eiheiji Temple

Venue and Location

The workshop will be held at Fukui University of Technology and Fukui International Activities Plaza located in Fukui. Fukui Prefecture has held an important position as a " Gateway for Exchange " to Korea and other countries in Asia. Fukui Prefecture is blessed with beautiful natural surroundings. Within driving distance you can see Tojimbo and experience the severity of Zen at Eiheiji.

About Fukui: http://www.pref.fukui.jp/english/

Map of Fukui : http://www.city.fukui.fukui.jp/english/guide/map/map.html

Sessions

The Conference at the Fukui International Activities Plaza on 26 November is the special session about the future vision of the frontier project 21st century in Korea and the achievement of the superconductivity projects in Japan. The other general themes will be presented at the Meeting on the 65th Meeting on Cryogenics and Superconductivity, 23-25 November.

General Session : 23 - 25 November, 2001 at Fukui University of Technology

http://www.fukui-ut.ac.jp/ (in Japanese)

Special Session : 26 November, 2001 at Fukui International Activities Plaza.

http://www2.interbroad.or.jp/fia-net/plaza_e/FIAP1-top-e.htm (in English)

http://www.city.fukui.fukui.jp/conve/sisetu/kokusai.html (in Japanese)

Oral Presentation

Oral presentations in the general session will take place in Room A - D.

Room A: 701 on the 7th floor of building 2

Room B: 702 on the 7th floor of building 2

Room C: 602 on the 6th floor of building 2

Room D: 604 on the 6th floor of building 2

The presentations are scheduled for 15 minutes, inclusive of discussion of 5 minutes.

Oral presentations in the special session on 26 November will take place in the Special Conference Room on the third floor of Fukui International Activities Plaza. The presentations are scheduled for 30 minutes inclusive of discussion.

You can use an overhead projector.

Poster Presentation

The Poster sessions will take place in the Library (the second and the third floors). Pasteboards measure 0.9 meters wide by 1.8 meters high.

Registration / Information Desk

On 23 - 25 November the Conference Registration/ Information Desk will be situated at the main lobby, in the first floor of building 2 of Fukui University of Technology. On Monday 26 November the registration desk will be open in front of the Special Conference Room of third floor of Fukui International Activities Plaza. The Registration / Information Desk will be open at

Friday, November 23	9:00 - 17:30
Saturday, November 24	9:00 - 17:30
Sunday, November 25	9:00 - 16:30
Monday, November 26	9:00 - 16:00.

Paper Submission

The proceedings will be published as part of the Cryogenics.

To submit a paper, please, don't forget

- One original and three copies of each paper.

Please refer the web site for details of the form of papers etc.

http://www.elsevier.nl/locate/inca/30407

Authors and Editors > Guide for Authors

Paper Submittal Deadline : 26 November, 2001 (Monday)

Hotel

Several hotels in the center of Fukui have been selected at different price levels.

http://akahoshi.nims.go.jp/jcryo/JKW/hotel.html

Transportation

Kansai International Airport ⇒ Fukui

Take limited express " Haruka" at Kansai Airport. This limited express goes to Shin-Osaka directly. Change to Tokaido line at Shin-Osaka. Limited Express "Thunder bird" is a direct train to Fukui, going through Kosei line.

Time table: http://akahoshi.nims.go.jp/jcryo/JKW/get_fukui.html

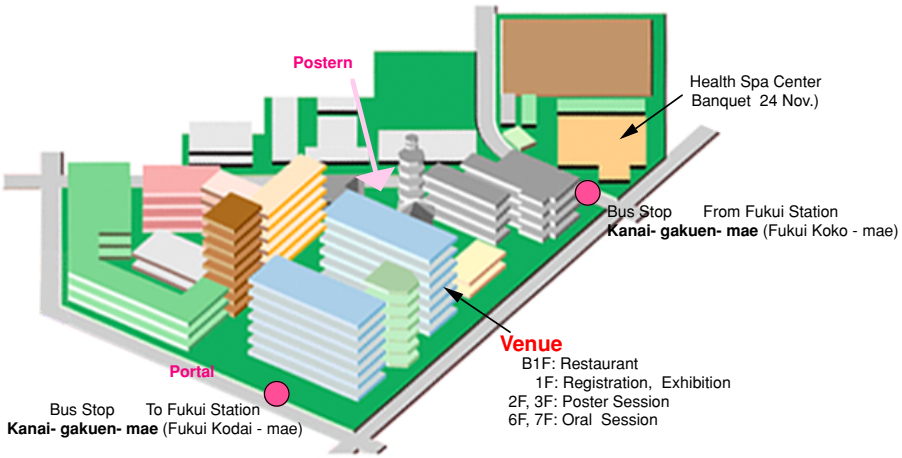
Fukui Station ⇒ Fukui University of Technology

10 minutes from Fukui Station to Fukui University of Technology by bus.

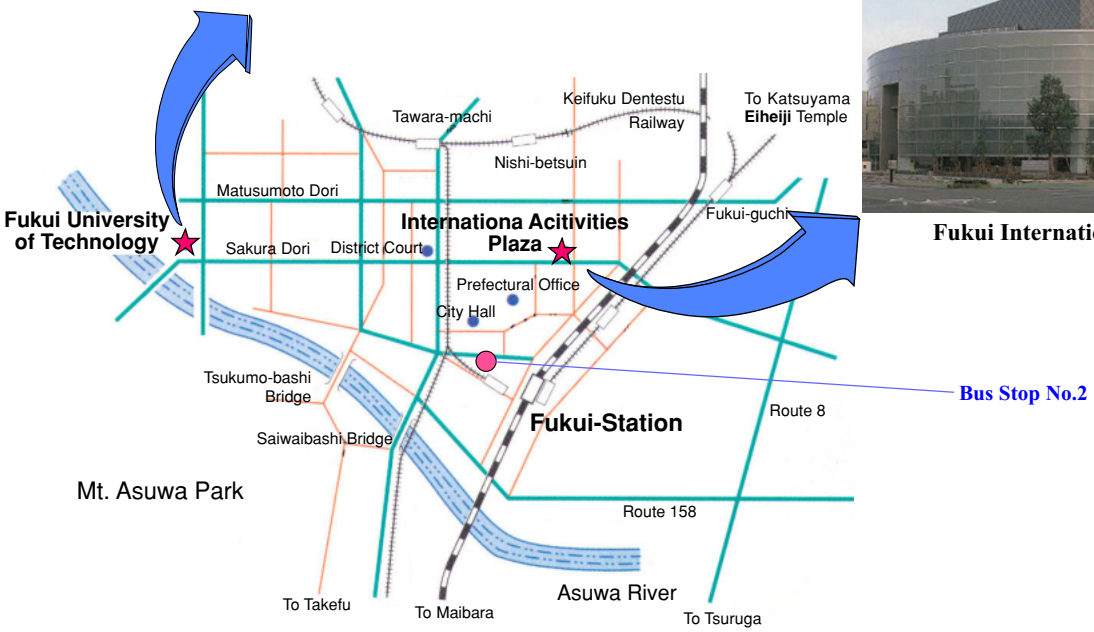
Take a bus ("Keifuku-bus"; Rout 11 and 12, Gakuen-sen) at the **bus stop No.2**.

Get off at "Kanaigakuen-mae" bus stop

Campus of Fukui University of Technology



Fukui Internationa Acitivities Plaza



Fukui International Activities Plaza

10 minutes from Fukui Station on foot.

Map: http://www2.interbroad.or.jp/fia-net/plaza_e/FIAP1-top-e.htm

Conference Banquet

Saturday, November 24, 18:00 - 20:00

Banquet fee: 5,000 yen

The Conference Banquet will be held at Health Spa Center in the campus of the Fukui University of Technology.

Coffee Breaks

Coffee and refreshments will be served during the morning and afternoon breaks of the Special Session of the workshop. The refreshments service will be supported by JECC TORISHA Co., Ltd.

Correspondence

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THE 65TH MEETING ON CRYOGENICS AND SUPERCONDUCTIVITY
PROGRAM OUTLINE

	Room A	Room B	Room C	Room D
23-Nov	Y-based Superconductors, Physical Properties	Magnet Technology	Heat Transfer	Structural Materials
	Coffee Break			
	Y-based Long Superconducting wire	Supeconductor's Properties	ADR	Physical Properties
	lunch			
	(Poster) Y-based Superconductors / AC Loss (I) / SC Magnet & Application / Current Limiters/ Bulk Materials Application/ Measurement & Control (I)			
	Y-based Superconductors (II)	LHD	Superconducting Device	Measurement & Control (II)
	Coffee Break			
	Y-based Superconductors (III)	Bulk Materials Application	Cryogenics in Helium Liquefaction Center	Education
	Room A	Room B	Room C	Room D
24-Nov	Bi-based Superconductors (II)	ITER	Superfluid helium (I)	Nb_3Sn
	Coffee Break			
	Bi-based Superconductors & Application	Accelerators	Superfluid helium (II)	Nb_3Al
	lunch			
	(Poster) Bi-based Superconductors / Superconducting materials / SC Coils / Cooling System & Refrigerator			
	Coffee Break			
	Best Paper Award Lecture Feature Lecture			
	Get-together Meeting at Health Spa Center			
	Room A	Room B	Room C	Room D
25.Nov	Fundamental	Current Limiters	Thermodynamics	MgB_2
	Coffee Break			
	Fundamental and Bulk	Power Electronics	Cryocooler (I)	NbTi, Multi-strand conductors
	lunch			
	HTS Bulk Materials	Magnetic Separation	Cryocooler (II)	Mechanical Properties of SC Coil
	Coffee Break			
	ACLoss (II)	Cable/Leads	Cooling System	HTS Coil

Scientific Program of the 65th Meeting on Cryogenics and Superconductivity

Nov. 23, 9:00 - 10:30

Room A

Y-based Superconductors, Physical Properties

Chairman: **YAMADA, Yasuji and MAEDA, Toshihiko**

A1-01 **Angular dependence of transport characteristics in YBCO-coated tape**
KUGA, Takamichi et al. (Kyushu University), t_kuga@sc.kyushu-u.ac.jp

A1-02 **Width dependence on current transport properties in YBCO thin film**
ISHIMARU, Makoto et al. (Kyushu University), m_ishi@ees.kyushu-u.ac.jp

A1-03 **Characteristics of AC transport current losses in YBCO coated conductors and their dependence on distributions of critical current density in the conductor**
MIYAGI, Daisuke et al. (Yokohama National University), dai@tsukalab.dnj.ynu.ac.jp

A1-04 **Development of transposed segment conductors with several tape materials**
SUZUKI, Chikashi et al. (Fujikura Ltd.), csuzuki@rd.fujikura.co.jp

A1-05 **Microwave properties of RE123 superconducting films improved in the homogeneity deposited by PLD method**
YOSHIDA, Yutaka et al. (Department of energy engieering and science, Nagoya university), yoshida@nuee.nagoya-u.ac.jp

Submitted to Japan-Korea Joint Workshop 2001

A1-06 **Fabrication of low cost YBCO coated conductor using Ag clad Hastelloy substrate**
MA, Yanwei et al. (Institute for Materials Research, Tohoku University; CREST-JST), mayw@imr.tohoku.ac.jp

Nov. 23, 10:45 - 12:15

Room A

Y-based Long Superconducting wire

Chairman: **ICHINOSE, Ataru and YOSHIDA, Takashi**

A1-07 **Multilayer deposition of YBCO film on Ag-Cu alloy tape by PLD**
YOSHINO, Hisashi et al. (Corporate Research & Development Center, Toshiba Corporation), hisashi.yoshino@toshiba.co.jp

A1-08 **Preparation of long YBCO conductors with IBAD substrates by the PLD method**
KAKIMOTO, Kazuomi et al. (Fujikura Ltd.), kakimoto@rd.fujikura.co.jp

A1-09 **Enhancement of Jc and crystal alignment by Reverse ISD method**
TANEDA, Takahiro et al. (Sumitomo Electric Industries, Ltd.), taneda-takahiro@sei.co.jp

A1-10 **Preparation of YBCO film by post-annealing of precursor film including BaF_2 on surface-oxidation epitaxy (SOE) processed substrates**
WATANABE, Tomonori et al. (The Furukawa Electric Co., Ltd.), t-nabe@ho.furukawa.co.jp

A1-11 **$YBa_2Cu_3O_{7-d}$ thin film growth on NiO by pulsed-laser-deposition method**
MAEDA, Toshihiko et al. (Superconductivity Research Laboratory), tmaeda@istec.or.jp

A1-12 **Surface-oxidation epitaxy to control Jc of YBCO coated conductors**
MATSUMOTO, Kaname et al. (Department of Materials Science and Engineering), matsu@hightc.mtl.kyoto-u.ac.jp

Nov. 23, 15:00 - 16:00

Room A

Y-based Superconductors (II)

Chairman: **SATO, Kenich and DOI, Toshiya**

A1-13 **Preparation of YBCO films by post-annealing of precursor films including BaF_2 at low pressure of oxygen atmosphere — TEM observation -**
ICHINOSE, Ataru et al. (Central Research Institute of Electric Power Industry), ai@criepi.denken.or.jp

A1-14 **Critical Current of YBCO Film Prepared by Coating-Pyrolysis Process**
TORII, Shinji et al. (Central Research Institute of Electric Power Industry), tori@criepi.denken.or.jp

A1-15 **High Jc YBCO tape by metalorganic deposition method using trifluoroacetates**
ARAKI, Takeshi et al. (Superconductivity Research Laboratory), araki@istec.or.jp

A1-16 **Fabrication of thicker Y123 films for coated conductor by TFA-MOD method (2)**
FUJI, Hiroshi et al. (ISTEC, SRL), hfuji@istec.or.jp

Nov. 23, 16:15 - 17:15

Room A

Y-based Superconductors (III)

Chairman: **MATSUMOTO, Kaname and ARAKI, Takeshi**

A1-17 **YBCO films on Ni alloy tape by low temperature LPE**
YAMADA, Yasuji et al. (SRL/ISTEC), yamada@istec.or.jp

A1-18 **Preparation of $SmBa_2Cu_3Ox$ Films on $BaZrO_3$ Buffer Layers by Pulsed Laser Deposition**
HASEGAWA, Katsuya et al. (Superconductivity Research Laboratory), khasegawa@istec.or.jp

A1-19 **HoBCO thin films on sapphire substrates using two- dimensional scanning mechanism PLD method**
HAHAKURA, Shuji et al. (Sumitomo Electric Industries, Ltd.), hahakura-shuji@sei.co.jp

A1-20 **HoBCO thin films on sapphire substrates using two- dimensional rotation PLD method**
OHMATSU, Kazuya et al. (Sumitomo Electric Industries, Ltd.), ohmatsu-kazuya@sei.co.jp

Nov. 23, 9:00 - 10:30

Room B

Magnet Technology

Chairman: **TAKAHASHI, Yoshikazu and YAZAWA, Takashi**

B1-01 **Development of a Superconducting Magnet for Scientific Observation in Space (4) — Development of Small Size High-Strength Aluminum Stabilized Superconducting Wires —**
KIKUCHI, Kenichi et al. (Hitachi Cable, Ltd.), kikuchi.kenichi@hitachi-cable.co.jp

B1-02 **Development of an thin superconducting solenoid for particle astrophysics (5) Test result of model coil .**
OHOMIYA, Hidenori et al. (Tokyo scientific university), yasuhiro.makida@kek.jp

B1-03 **Development of Superconducting Magnets for Uniform and High Magnetic Force Field Generation 1. Design and Electromagnetic Properties**
OZAKI, Osamu et al. (National Institute for Materials Science), ozaki.osamu@nims.go.jp

B1-04 **Development of superconducting magnets for uniform and high magnetic force field generation 2. Cooling performance**
KOYANAGI, Kei et al. (National Institute for Materials Science), koyanagi.kei@nims.go.jp

B1-05 **Development of a superconducting magnet used in a high-level radiation**
OHNISHI, Hiroyuki et al. (Kyushu University), ohnishih@post.kek.jp

B1-07 **Development of 1 GHz NMR magnet (V) — field stability and homogeneity at 920MHz —**
KIYOSHI, Tsukasa et al. (National Institute for Materials Science), KIYOSHI.tsukasa@nims.go.jp

Nov. 23, 10:45 - 12:15
Room B

Superconductor's Properties

Chairman: **MITO, Toshiyuki and KATO, Takashi**

B1-08 **Experimental Observation of Strand Movements in Cable-in-conduit Conductors (2)**
TAKAHATA, Kazuya et al. (National Institute for Fusion Science), takahata@nifs.ac.jp

B1-09 **Behavior of current redistribution in twisted cables under various helium conditions**
MORI, Toshiyuki et al. (Graduate University for Advanced Studies), mori-t@nifs.ac.jp

B1-10 **Monte carlo simulation of stability and mechanical properties in the CS-coil**
AOKI, Kosuke et al. (Osaka University), aoki35@sanken.osaka-u.ac.jp

B1-11 **Calculation of helical magnetic field for the superconducting multifilamentary composites (2)**
TOMINAKA, Toshiharu (Institute Of Physical & Chemical Research (Riken)), tominaka@postman.riken.go.jp

B1-12 **Measurement of dynamic normal zone propagating currents of aluminum stabilized conductors.**
IMAGAWA, Shinsaku et al. (National Institute for Fusion Science), imagawa@lhd.nifs.ac.jp

B1-13 **AC loss performance on strain of CIC conductor for fusion facility**
MATSUI, Kunihiro et al. (Japan Atomic Energy Research Institute), matsuik@fusion.naka.jaeri.go.jp

Nov. 23, 15:00 - 16:00
Room B

LHD

Chairman: **ONISHI, Toshitada and KAMIJO, Hiroki**

B1-14 **Present Status of the Operations of the Superconducting Magnets for the Large Helical Device —Autumn 2001—**
SATOW, Takashi et al. (National Institute for Fusion Science), satotaka@LHD.nifs.ac.jp

B1-15 **Consideration of the position of normal zone propagation in the helical coil of the Large Helical Device.**
IMAGAWA, Shinsaku et al. (National Institute for Fusion Science), imagawa@lhd.nifs.ac.jp

B1-16 **Analysis on the Mechanical Properties of the LHD Helical Coils using Pulse Height Analysis**
YANAGI, Nagato et al. (National Institute for Fusion Science), yanagi@nifs.ac.jp

B1-17 **AC losses of LHD poloidal coils (3)**
TAKAHATA, Kazuya et al. (National Institute for Fusion Science), takahata@nifs.ac.jp

Nov. 23, 16:15 - 17:15
Room B

Bulk Materials Application

Chairman: **KUBOTA, Hiroshi and ARAI, Kazuaki**

B1-18 **Study of The Thermal Stress Strength in A Bulk High Tc Superconductor**
TAKASHIMA, Hideyoshi et al. (Hokkaido University), taka_koba@nifty.com

B1-19 **Characteristics evaluation of Levitating X-Y Transporter using HTS Bulks**
AKAMATSU, Takeshi et al. (Department of EECE, Waseda University), takeshi@super.elec.waseda.ac.jp

B1-20 **Assessment of Load Characteristic and Flux-trapping Condition in Active Magnetic Levitation**
TAMURA, Masahiro et al. (Yamaguchi University), tsuda@po.cc.yamaguchi-u.ac.jp

B1-21 **Repeated field-cooling magnetization with temperature control in a high-Tc superconducting bulk**
KAMIJO, Hiroki et al. (Railway Technical Research Institute), hiroki@rtri.or.jp

Nov. 23, 9:00 - 10:30
Room C

Heat Transfer

Chairman: **KAMIOKA, Yasuharu and FUCHINO, Shuichiro**

C1-01 **Fundamental research about long-distance cooling by slush nitrogen**
IKEUCHI, Masamitsu et al. (Mayekawa Mfg. Co., Ltd.), MYK01025@nifty.ne.jp

Submitted to Japan-Korea Joint Workshop 2001
C1-02 **Study of Thermal and Cooling Load for Thermal Shield Design**
KIM, Dong-Lak et al. (Korea Basic Science Institute), dlkim@comp.kbsi.re.kr

C1-03 **Study on the improvement of thermal stability of HTSC tape impregnated with solid nitrogen**
NAKAMURA, Taketsune et al. (Kyoto University), tk_naka@kuee.kyoto-u.ac.jp

C1-04 **Study on the dry-out energy of HTSC tape impregnated with solid nitrogen**
OKUDE, Ken'ichi et al. (Kyoto University), tk_naka@kuee.kyoto-u.ac.jp

C1-05 **Study on LXe system for particle detector (7) — Xe recondensing operation by pulse tube refrigerator —**
HARUYAMA, Tomiyoshi et al. (High Energy Accelerator Research Organization), tomiyoshi.haruyama@kek.jp

C1-06 **The real time simulation of He Brayton Cycle**
OOBA, Kouki et al. (National Institute for Fusion Science), ooba@nifs.ac.jp

Nov. 23, 10:45 - 12:35
Room C

ADR

Chairman: **MURAKAMI, Masahide and NUMAZAWA, Takenori**

C1-07 **Advanced ADR System for Continuous Cooling from 10 K to 50 mK**
Shirron,Peter et al. (Goddard Space Flight Center, NASA), konta@akahoshi.nims.go.jp

C1-08 **X-ray detectors at cryogenic temperature and their applications to X-ray astronomy**
MITSUDA, Kazuhisa et al. (ISAS), mitsuda@astro.isas.ac.jp

C1-09 **Development of high resolution x-ray detectors with Iridium superconductive transition edge sensors**
FUKUDA,Daiji et al. (Faculty of Engineering, The University of Tokyo), fukuda@sophie.q.t.u-tokyo.ac.jp

C1-10 **Spatial response analysis on superconducting x-ray detectors by Low Temperature Scanning Synchrotron Microscope**
Pressler,Harald et al. (National Institute of Advanced Industrial Science and Technology), m.ohkubo@aist.go.jp

C1-11 **Thermal and magnetic property of Gd garnet for ADR**
MATSUZAKI, Ayumi et al. (Faculty of Science, Kanazawa University), amatsu@nihonkai.kanazawa-u.ac.jp

C1-12 **Magnetic Materials for Hydrogen Liquefaction**
NAKAYAMA, Akihiro et al. (Kawasaki Heavy Industries), nakayama_a@khi.co.jp

Nov. 23, 15:00 - 16:00
Room C

Superconducting Devices

Chairman: **KAWABE, Ushio and Kato, Hideyuki**

C1-13 **Growth and characterization of Bi2223 whiskers**
NAGAO, Masanori et al. (Kitami Institute of Technology), mms01015/mms01@king.cc.kitami-it.ac.jp

C1-14 **Surface Resistance Measurement of Bi-Sr-Ca-Cu-O Whisker by Probe-Coupling Type Microstrip Resonator Method**
OKAI, Daisuke et al. (Himeji Institute of Technology, Faculty of Engineering), okai@mse.eng.himeji-tech.ac.jp

C1-15 **RF properties of 2GHz band MSL resonators with YBCO films**
Akasegawa, Akihiko et al. (FUJITSU LABORATORIES LTD.), akasegaw@flab.fujitsu.co.jp

C1-16 **Fabrication of Ba(Sn, Mg, Ta)O_3 Coaxial Resonator using Bi2223 Thick Films as Superconducting Electrodes**
KINTAKA, Yuji et al. (Murata Manufacturing Co. Ltd.), kintaka@murata.co.jp

Nov. 23, 16:15 - 17:30
Room C

Cryogenics in Helium Liquefaction Center

Chairman: **IKEDA, Hiroshi and Odashima, Yutaka**

C1-17 **Handling technology of the cryogenic devices in the South Pole: Part 1**
NOGUCHI, Takashi et al. (Ikegami Technology), HFH02354@nifty.ne.jp

C1-18 **Network monitoring system of operation data of the refrigerator for the large magnet**
NAGAI, Hideo et al. (National Institute for Materials Science), nagai.hideo@nims.go.jp

C1-19 **Construction of event data base for the operation of the refrigerator**
DANTSUKA, Tomoyuki et al. (Hitachi Techno Service Co., Ltd.), dantsuka.tomoyuki@nims.go.jp

C1-20 **Data base managing system for the 40 T hybrid magnet**
ARAKAWA, Takayuki et al. (Toshiba Corporation), arakawa.takayuki@nims.go.jp

C1-21 **Construction of 24 h-monitoring system for the controller of the large magnet**
YUYAMA, Michinari et al. (National Institute for Materials Science), mic@akahoshi.nims.go.jp

Nov. 23, 9:15 - 10:30
Room D

Structural Materials

Chairman: **NISHIMURA, Arata and YAMANAKA Atsuhiko**

D1-01 **Cryogenic Mixed Mode I/II Interlaminar Fracture Properties of Woven-Fabric GFRP Laminates**
SHINOHE, Daiki et al. (Graduate School of Engineering, Tohoku University), shindo@material.tohoku.ac.jp

D1-02 **Evaluation of Cryogenic CFRP Domed Element**
SUDO, Takayuki et al. (Kakuda Space Propulsion Laboratory), sudo@kakuda-splab.go.jp

D1-03 **Effect of Manganese Content on Low Temperature Toughness in High Carbon-High Manganese Austenitic Steel**
ONO, Yoshinori et al. (National Institute for Materials Science, Materials Engineering Laboratory), ONO.Yoshinori@nims.go.jp

D1-04 **Notch effects on high-cycle fatigue properties for Ti-5Al-2.5Sn ELI alloy at cryogenic temperatures**
YURI, Tetsumi et al. (National Institute for Materials Science), YURI.tetumi@nims.go.jp

D1-05 **Results of VAMAS activities of standardization of evaluation techniques for cryogenic structural materials — 6**
OGATA, Toshio et al. (National Institute for Materials Science), OGATA.Toshio@nims.go.jp

Nov. 23, 10:45 - 12:00
Room D

Physical Properties

Chairman: **SHINDO, Yasuihide and NISHIJIMA, Shigehiro**

D1-06 **Small extensometer for measuring superconductor motion**
NISHIMURA, Arata et al. (National Institute for Fusion Science), nishi-a@LHD.nifs.ac.jp

D1-07 **Thermal conductivity measurement of Stycast at cryogenic environment**
IWAMOTO, Akifumi et al. (National Institute for Fusion Science), iwamoto@nifs.ac.jp

D1-08 **Measurement of dynamic modulus for epoxy resin added plasticizer**
Nakane, Hiroshi et al. (Kogakuin University), nakane@cc.kogakuin.ac.jp

D1-09 **X-ray diffraction studies of $La_{0.52}Ca_{0.48}MnO_3$ under low-temperature and magnetic-field**
WATANABE, Yousuke et al. (Institute for Materials Research, Tohoku University), ywata@imr.edu

D1-10 **Magnetization properties in HTS derived from the angular dependent E-J characteristics.**
UTSUNOMIYA, Daisuke et al. (Graduate School of ISEE, Kyushu Univ.), d_utu@ees.kyushu-u.ac.jp

Nov. 23, 14:45 - 16:00
Room D

Measurement and Control (II)

Chairman: **FUJII, Keiko and OGAWA, Rikuo**

D1-11 **Development of Fixed Points (Hg, Ar) for the Calibration of the Long-Stem PRT (2)**
NARA, Koichi et al. (National Metrology Institute of Japan, AIST), koichi-nara@aist.go.jp

D1-12 **Characteristics of silicon pressure sensor in superfluid helium pressurized up to 1.5 MPa**
MAEDA, Minoru et al. (National Institute for Materials Science), maeda@akahoshi.nims.go.jp

D1-13 **Investigation of heat transport phenomena near the critical point of air.**
NAKANO, Akihiro et al. (National Institute of Advanced Industrial Science and Technology), a.nakano@aist.go.jp

D1-14 **Characteristics of pre-amplifier under high magnetic field**
ISHIGOHKA, Takeshi et al. (Seikei University), ishigoka@ee.seikei.ac.jp

D1-15 **VAMAS bending strain effect RRT**
KURODA, Tsuneo et al. (National Institute for Materials Science), KURODA.Tsuneo@nims.go.jp

Nov. 23, 16:00 - 17:30
Room D

Education

Chairman: **KABASHIMA, Seiji and KAWASHIMA, Teruko**

D1-16 **Summer School for Cryogenic Technology — Challenge to a 7 T Superconducting Magnet**
HOSOYAMA, Kenji et al. (High Energy Accel. Res. Org.), kenji.hosoyama@kek.jp

D1-17 **Superconducting Solenoid Design Software**
AGATSUMA, Koh et al. (National Institute of Advanced Industrial Science and Technology), koh.agatsuma@aist.go.jp

D1-18 **Active-maglev system with HTS bulk and electromagnet for amusement**
TSUDA, Makoto et al. (Yamaguchi University Faculty of Engineering), tsuda@po.cc.yamaguchi-u.ac.jp

D1-19 **Educations on "Superconductivity Engineering" in Undergraduate Programs of Electrical and Electronic Engineering Course at Yamaguchi University**
HARADA, Naoyuki et al. (Yamaguchi University), naoyuki@po.cc.yamaguchi-u.ac.jp

D1-20 **Education of Superconductivity in Electrical and Electronic Engineering, Faculty of Engineering, Kyoto University**
HOSHINO, Tsutomu et al. (Kyoto University), hoshino@asl.kuee.kyoto-u.ac.jp

D1-21 **Education of Superconductivity at the Departments of Electrical, Electronics, Information and Communication Engineering, the University of Tokyo**
OHSAKI, Hiroyuki (Graduate School of Frontier Sciences, the University of Tokyo), ohsaki@ee.t.u-tokyo.ac.jp

Nov. 23, 13:15 - 14:45
Poster Session

Y-based Superconductors

Chairman: **NAGATA, Akihiko and TORII Shinji**

E1-01 **Critical current density and 3rd harmonic response in superconductors**
MAWATARI, Yasunori et al. (National Institute of Advanced Industrial Science and Technology), y.mawatari@aist.go.jp

E1-02 **Reaction and microstructure of YBCO by metalorganic deposition using trifluoroacetate**
YAMADA, Yutaka et al. (ISTEC-SRL), yyamada@istec.or.jp

E1-03 **Superconducting properties of $GdBa_2Cu_3O_{7-y}$ films fabricated by the TFA-MOD method**
IGUCHI, Toshihiro et al. (Department of Crystalline Materials Science, Nagoya University), iguchi@istec.or.jp

E1-04 **YBCO film on Ni alloy tape by low temperature LPE**
YAMADA, Yasuji et al. (SRL/ISTEC), yamada@istec.or.jp

E1-05 **Superconducting property of YBCO films on silver substrates by CVD Technique**
ONABE, Kazunori et al. (Fujikura Ltd.), onabe@rd.fujikura.co.jp

E1-06 **{110}<110> textured Ag tapes and the Y-123 films prepared on them**
MORI, Yuji et al. (Kagoshima University), doi@eee.kagoshima-u.ac.jp

E1-07 **Nd-123 films prepared on {100}<001> textured Ag tapes**
NISHIDA, Tomoya et al. (Kagoshima University), doi@eee.kagoshima-u.ac.jp

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Poster Session

AC Loss

Chairman: **SUMIYOSHI, Fumio and TASAKI, Kenji**

E1-08 **Analysis on the thermal stability of Bi-2223 HTSC tape impregnated with solid nitrogen by finite difference method**
FUJIO, Akihisa et al. (Kyoto University), tk_naka@kuee.kyoto-u.ac.jp

E1-09 **Measurement of AC losses using saddle shaped pickup-coil**
NANRI, Masahiro et al. (Kyushu University), nan@sc.kyushu-u.ac.jp

E1-10 **AC loss analysis of oxide superconducting wires by the finite element method**
HAYASHI, Toshihiro et al. (Kyushu University), hayashi@sc.kyushu-u.ac.jp

E1-11 **AC loss measurement of HTS wire subject to AC longitudinal magnetic field**
OGAWA, Jun et al. (Yokohama National Univ.), jun@tsukalab.dnj.ynu.ac.jp

Nov. 23, 13:15 - 14:45
Poster Session

SC Magnet and Application

Chairman: **HIGUCHI, Noboru and OTABE, Soji**

E1-12 **Design of persistent-current switch (PCS) for HTS**
KUWANO, Katsuyuki et al. (Central Japan Railway Company), m.igarashi@jr-central.co.jp

E1-13 **Development of persistent-current switch (PCS) with YBCO film**
TOSAKA, Taizo et al. (Toshiba), m.igarashi@jr-central.co.jp

E1-14 **Studies on a Toroidal-type SMES with a Normal conducting Shield coil**
HORIUCHI, Yoko et al. (Oita University), yhori@oita-cc.cc.oita-u.ac.jp

E1-17 **Development of Fundamental Technology for More Compact and Larger Capacity Superconducting Generator**
NISHIJIMA, Kenichi et al. (Engineering Research Association for Superconductive Generation Equipment and Materials), hiroyuki_sato@pis.hitachi.co.jp

E1-18 **V-t characteristics of electrical insulation materials for HTS Power Transmission Cables**
YAGI, Masashi et al. (The Furukawa Electric CO., LTD.), m-yagi@ch.furukawa.co.jp

E1-24 **AC Losses in Parallel Conductors (9) — Additional Losses in Saturation Region —**
MATSUDA, Kouki et al. (Kyushu University), k-mat@sc.kyushu-u.ac.jp

E1-28 **Development of low-heat-leak pertier current lead (3) — Operation characteristics for half wave rectified current**
NAKAMURA, Keiji et al. (Chubu University), nakamura@solan.chubu.ac.jp

E1-31 **Design of superconducting magnets for continues change of field-direction (3)**
MATSUMOTO, Shinji et al. (National Institute for Materials Science), MATSUMOTO.Shinji@nims.go.jp

E1-32 **Feeder for ITER Magnet System**
YOSHIDA, Kiyoshi et al. (ITER-CTA), yoshida@naka.jaeri.go.jp

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Poster Session

Current Limiters / Bulk Materials Application

Chairman: **AGATSUMA, Koh and HOSHINO, Tsutomu**

E1-15 **Trial production of linear synchronous actuator with field-cooled HTS bulk secondary**
TAKAHASHI, Atsushi et al. (Department of EECE, Waseda University), atsushi@mn.waseda.ac.jp

E1-16 **Comparison of characteristics of a motor using bulk superconductors in the rotor in the transient and normal states**
TSUBOI, Yuichi et al. (The University of Tokyo), tsuboi@ohsaki.t.u-tokyo.ac.jp

Submitted to Japan-Korea Joint Workshop 2001

E1-19 **Stability of Fault Current Limiter with Conduction Cooled Bi2223 Screen**
SASAKI, Ken-ichi et al. (Graduate school of engineering, Hokkaido University), ksasaki@eng.hokudai.ac.jp

E1-20 **Generating Characteristics of Flux Flow Resistance in Bi2223 High Tc Superconducting Bulk**
SHIMIZU, Hirotaka et al. (Nagoya University), hshimizu@nuee.nagoya-u.ac.jp

E1-21 **FEM analysis of resistive superconducting thin film current limiting devices using current vector potential method**
SUGITA, Shinya et al. (Department of Electrical Engineering, The University of Tokyo), sugita@ohsaki.t.u-tokyo.ac.jp

E1-22 **Study on L-R Hybrid Type Superconducting Fault Current Limiting Interrupter**
SATO, Takao et al. (Niigata University), takaos@eng.niigata-u.ac.jp

E1-23 **HTc Superconducting AC Coil for LC Resonance Type Fault Current Limiter**
FURUSE, Mitsuho et al. (National Institute of Advanced Industrial Science and Technology), m.furuse@aist.go.jp

E1-25 **Trapped Field Characteristics of Y-Ba-Cu-O Bulk in Time-varying External Magnetic Field**
UEDA, Hiroshi et al. (Ishiyama Laboratory, Department of EECE, Waseda University), ueda@super.elec.waseda.ac.jp

E1-26 **Magnetic Levitation with High-Tc Superconductor and multiple electromagnets**
KAMOSHIDA, Ryota et al. (Department of EECE, Waseda University), atsushi@mn.waseda.ac.jp

E1-27 **Resin-Impregnated bulk-superconductor current leads for MAGLEV**
TOMITA, Masaru et al. (Superconductivity Research Laboratory), tomita@istec.or.jp

E1-29 **Effect of shielding current dependence on magnetic field for stress distribution**
TSUCHIMOTO, Masanori et al. (Hokkaido Institute of Technology), tsuchi@hit.ac.jp

E1-30 **Homogeneous Magnetic Field Generation by High-Tc Bulk Superconductors**
YOKOYAMA, Kazuya et al. (Iwate Industrial Promotion Center), yoko@iwate-techno.com

E1-33 **The fast current limiting action of the magnetic shield type superconducting fault current limiter**
KAWASUMI, Masahiro et al. (Hokkaido University), kawasumi@kiki-si.eng.hokudai.ac.jp

E1-34 **An Examination of Bias Power Supplies for Fault Current Limiters Using Superconducting Reactors**
NOMURA, Takahiro et al. (Niigata University Graduate School of Science and Technology), tnomnom@mba.sphere.ne.jp

E1-35 **Simulation analysis of one machine infinite bus system with Superconducting fault current limiter**
TAGUCHI, Masaumi et al. (Kyoto University), taguchi@pe.energy.kyoto-u.ac.jp

E1-36 **Characteristics of Superconducting Magnetic Levitation System for the Goods Transportation vehicle**
OKANO, Makoto et al. (National Institute of Advanced Industrial Science and Technology), m-okano@aist.go.jp

Nov. 23, 13:15 - 14:45
Poster Session

Measurement and Control (I)

Chairman: **ISHIGOKA, Takeshi and OGATA, Toshio**

E1-37 **Jc-B-T Test facility using oxide superconductor**
MASAICHI, Umeda et al. (National Institute of Advanced Industrial Science and Technology), Masaich Umeda

E1-38 **The Apparatus for Evaluation of The Superconducting Joint Resistance of The Oxide Superconducting Wires by Using 10K Cryocooler**
OGAWA, Rikuo et al. (Hakodate National College of Technology), ogawa@hakodate-ct.ac.jp

E1-39 **Development of a laser interferometric measurement system for thermal expansion and magnetosrtiction at cryogenic temperatures**
YAMADA, Naofumi et al. (National Institute of Advanced Industrial Science and Technology), naofumi-yamada@aist.go.jp

E1-40 **Development of an adiabatic calorimetry system for heat capacity measurement at cryogenic temperatures**
KATO, Hideyuki et al. (National Institute of Advanced Industrial Science and Technology), kato-hideyuki@aist.go.jp

E1-41 **Study of liquid volume measurement for cryogens under micro-gravity conditions.**
NAKANO, Akihiro et al. (National Institute of Advanced Industrial Science and Technology), a.nakano@aist.go.jp

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Room A

Bi-based Superconductors (II)

Chairman: **TAKEI, Hiromi and IWAKUMA, Masataka**

A2-01 **Microwave Properties and Microstructure of Screen-Printed Bi2223 Thick Films on Ba(Sn, Mg, Ta)O_3 Dielectric Disk**
Kato, Norihiro et al. (Toyohashi University of Technology), n-kato@super.eee.tut.ac.jp

A2-02 **Magnetic melt processing of Bi2212 tapes with thick superconducting core and their critical current density**
OHYA, Keiichi et al. (Kitami Institute of Technology), mms00004/mms00@king.cc.kitami-it.ac.jp

A2-03 **The effect of sintering time and mechanical deformation on critical current density of Bi2223 superconducting tapes prepared by dip-coating process**
TANINO, Hirotoshi et al. (University of Tsukuba), TANINO.Hirotoshi@nims.go.jp

A2-04 **Research of Bi-2223 based superconducting wire with oxide barrier by strand and form method**
SASAOKA, Takaaki et al. (Hitachi Cable, Ltd.), sasa@arc.hitachi-cable.co.jp

A2-05 **Superconducting properties of Ag-sheathed Bi2223 multifilamentary tapes with $Sr_6V_2O_{11}$ resistive barriers inside each filament**
Fukayama, Toshirou et al. (Kitami Institute of Technology), mms00010/mms00@king.cc.kitami-it.ac.jp

A2-06 **Development Of Ag-Mg-α Sheathed Bi-2223 Wires**
Nishioka, Junichi et al. (Showa Electric Wire & Cable Co., Ltd.), nichill@ca3.so-net.ne.jp

Nov. 24, 10:45 - 12:00
Room A

Bi-based Superconductors and Application

Chairman: **KURODA, Tsuneo and ICHIKAWA Michiharu**

A2-07 **Ic(ε, B) characteristics in RRT samples of Bi(2223)/Ag tape**
FUJINE, Yosuke et al. (Faculty of Engineering, Iwate University), t2201008@iwate-u.ac.jp

A2-08 **Study on Coil Properties of Bi-2223 Hi-Tc Oxide Superconductor**
YOKOKAWA, Hiroki et al. (Fukui University of Technology), ep82@sr.incl.ne.jp

A2-09 **Microstructure dependence of transport current in Bi2223 tapes**
OSAMURA, Kozo et al. (Kyoto University), osamura@hightc.mtl.kyoto-u.ac.jp

A2-10 **Stress-strain behavior and its correlation with superconducting properties in Ag/Bi2223 tapes**
SUGANO, Michinaka et al. (Kyoto University), msugano@kumax.mtl.kyoto-u.ac.jp

A2-11 **Analysis of thermally induced residual strain for Ag-sheathed oxide and Cu stabilized A-15 composite superconductors**
MURASE, Satoru et al. (Okayama University), murase@elec.okayama-u.ac.jp

Nov. 24, 9:00 - 10:30
Room B

ITER

Chairman: **IMAGAWA, Shinsaku and YANAGI, Nagato**

B2-01 **Thermohydraulic Properties of the TF Insert Coil**
KAWANO, Katsumi et al. (Japan Atomic Energy Research Institute), kawanoka@naka.jaeri.go.jp

B2-02 **Completion of TF insert fabrication and status of its performance test under the collaboration between Japan and Russia**
SUGIMOTO, Makoto et al. (Japan Atomic Energy Research Institute), sugimoto@naka.jaeri.go.jp

B2-03 **Achievement of feasibility study and R&D on fabrication of ITER Superconducting Magnets**
HAMADA, Kazuya et al. (Japan Atomic Energy Research Institute), hamada@naka.jaeri.go.jp

B2-04 **Achievements Obtained in the ITER CS Model Coil**
KATO, Takashi et al. (Japan Atomic Energy Research Institute), kato@naka.jaeri.go.jp

B2-05 **Correlation among energy of acoustic emission, rearrangements of cables and AC losses.**
ARAI, Kazuaki et al. (National Institute of Advanced Industrial Science and Technology), kazuaki-arai@aist.go.jp

B2-06 **Effect of Transport Current on Pulse Field Losses in ITER-CS Insert Coil (2)**
TAKAHASHI, Yoshikazu et al. (ITER-IT), takahasi@naka.jaeri.go.jp

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Room B

Accelerators

Chairman: **YOSHIDA, Kiyoshi and TAKAHATA, Kazuya**

B2-07 **Development and performance test of the ATLAS superconducting solenoid magnet.**
DOI, Yoshikuni et al. (High Energy Accelerator Research Organization (KEK)), ydoi@post.kek.jp

B2-08 **Mechanical and Thermal Characteristics of the ATLAS Central Solenoid**
MIZUMAKI, Shoichi et al. (Toshiba Corporation), shoichi.mizumaki@toshiba.co.jp

B2-09 **Performance test of ATLAS thin superconducting solenoid — superconducting properties**
MAKIDA, Yasuhiro et al. (KEK), yasuhiro.makida@kek.jp

B2-10 **Performance test result of ATLAS central solenoid — control**
KAWAI, Masanori (KEK), masanori.kawai@kek.jp

B2-11 **Development of the insertion quadrupole magnets for CERN-LHC — Present Status —**
OGITSU, Toru et al. (High Energy Accelerator Research Organization), toru.ogitsu@kek.jp

B2-12 **Development of superconducting quadrupole magnets for beam-interaction regions at CERN-LHC (17) — Field quality of first production magnet —**
HIRANO, Hiroyuki et al. (High Energy Accelerator Research Organization), hiroyuki.hirano@kek.jp

Nov. 24, 9:00 - 10:30
Room C

Superfluid helium (I)

Chairman: **FUKUDA, Kenji and HAMAGUCHI, Shinji**

C2-01 **Thermoacoustic effect and heat transport in saturated He II — II**
YOSHIDA, Hideyuki et al. (Nihon University), hideyuki1227@hotmail.com

C2-02 **Thermoacoustic effect and heat transport in pressurized He II — II**
SUGANUMA, Yoichi et al. (Nihon University), numa_41@hotmail.com

C2-03 **Improvement on Cooling Performance in He II Channel Using Fountain Effect**
TAKAHASHI, Masato et al. (Tokyo Institute of Technology), masato@es.titech.ac.jp

C2-04 **Heat Transfer From A Flat Plate Located at The Middle of A Channel Filled with Pressurized He II**
SHIOTSU, Masahiro et al. (Kyoto University), tatumoto@pe.energy.kyoto-u.ac.jp

C2-05 **Numerical Analysis For Two-Dimensional Heat Transfer From A Flat Plate Located at The Middle of A Channel Filled with Pressurized He II**
TATSUMOTO, Hideki et al. (Kyoto University), tatumoto@pe.energy.kyoto-u.ac.jp

C2-06 **Two-dimensional numerical analysis of He II heat transfer in vertical channel**
SENZAKI, Ayae et al. (Department of Energy Sciences Tokyo Institute of Technology), ayae@mhd.es.titech.ac.jp

Nov. 24, 10:45 - 12:00
Room C

Superfluid helium (II)

Chairman: **SHIOTSU, Masahiro and OKAMURA, Tetsuji**

C2-07 **Heat transfer in a channel containing superfluid helium pressurized up to 1 MPa (II)**
MAEDA, Minoru et al. (National Institute for Materials Science), maeda@akahoshi.nims.go.jp

C2-08 **Two-dimensional Numerical Analysis on the Heat Transport Characteristics of Pressurized Superfluid Helium in Channels.**
HAMAGUCHI, Shinji et al. (National Institute for Fusion Science), hamaguchi@LHD.nifs.ac.jp

C2-09 **Heat Transfer through Narrow Cooing Channel in Pressurized He II**
KIMURA, Nobuhiro et al. (High Energy Accelerator Research Organization), nobuhiro.kimura@kek.jp

C2-11 **Study of the cavitation in liquid helium flow using Venturi channel of different shapes**
MURAKAMI, Masahide et al. (University of Tsukuba), jishii@hotei.riko.tsukuba.ac.jp

C2-12 **Numerical Simulation of Cavitating Flow of Superfluid Helium**
ISHIMOTO, Jun et al. (Hirosaki University), ishimoto@cc.hirosaki-u.ac.jp

Nov. 24, 9:00 - 10:30
Room D

Nb_3Sn

Chairman: **MURASE, Satoru and KIKUCHI, Akihiro**

D2-01 **Structure and high-field performance of (Nb, Ta)3Sn conductors prepared from Ta-Sn core**
TACHIKAWA, Kyoji et al. (Faculty of Engineering, Tokai University), tacsuper@keyaki.cc.u-tokai.ac.jp

D2-02 **Development in Nb_3Sn superconducting wire for high field magnets.**
MIYAZAKI, Takayoshi et al. (Electronics Reseach Laboratory, KOBE STEEL, LTD.), t-miyazaki@rd.kcrl.kobelco.co.jp

D2-03 **Comparison between Niobium-Tin Superconductors Reinforced by Tantalum Cores (1) — Critical Current —**
KONDOH, Junji et al. (National Institute of Advanced Industrial Science and Technology (AIST)), j.kondoh@aist.go.jp

D2-04 **Comparison between Niobium-Tin Superconductors Reinforced by Tantalum Cores (2) — Mechanical Properties —**
KONDOH, Junji et al. (National Institute of Advanced Industrial Science and Technology (AIST)), j.kondoh@aist.go.jp

D2-05 **Merit of the high field magnet using Ta-FRS-Nb_3Sn wire**
UMEDA, Masaichi et al. (National Institute of Advanced Industrial Science and Technology)

D2-06 **Effect of bending strain on R&W coil using high strength CuNb/$(Nb, Ti)_3Sn$ wire under large stress states**
AWAJI, Satoshi et al. (Institute for Materials Research, Tohoku University), awaji@mail.cc.tohoku.ac.jp

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Room D

Nb_3Al

Chairman: **HARADA, Naoyuki and AWAJI, Satoshi**

D2-07 **Al alloy-core diameter dependence of Cu added RHQ processed Nb_3Al superconductors**
IIJIMA, Yasuo et al. (National Institute for Materials Science), iijima.yasuo@nims.go.jp

D2-08 **Jelly-roll Nb_3Al superconducting wire by using Al-Cu alloy (2)**
TATSUMI, Noriyuki et al. (NIMS), TATSUMI.Noriyuki@nims.go.jp

D2-10 **Fabrication of Nb_3(Al, Ge) wires having high Ge concentration**
KIKUCHI, Akihiro et al. (National Institute for Materials Science), KIKUCHI.Akihiro@nims.go.jp

D2-11 **Relationship between superconducting properties and rapidly heating temperature of Nb_3Al conductors with a different Al composition**
FUKUZAKI, Tomokazu et al. (Shonan Institute of Technology), flux@qd5.so-net.ne.jp

D2-13 **Influence of composition and heating rate on TRUQ Nb_3Al superconductors**
BANNO, Nobuya et al. (National Institute for Materials Science), banno@nims.go.jp

D2-09 **TRUQ process of Nb_3Al superconductors by ohmic heating**
FUKUSHIMA, Keiji et al. (National Institute for Materials Science), kfukusi@gm.hrl.hitachi.co.jp

D2-12 **Development of long length RHQT-Nb_3Al wires**
TAGAWA, Kohei et al. (Hitachi Cable, Ltd.), tagawa.k@arc.hitachi-cable.co.jp

Nov. 24, 13:15 - 14:45
Poster Session

Bi-based Superconductors

Chairman: **SASAOKA, Takaaki and SATO, Mitsunori**

E2-01 **Subgrain structures in RE123 bulk superconductors and their effects on superconducting properties**
OGASAWARA, Kei et al. (Superconductivity Research Laboratory), czn00206@nifty.com

E2-02 **Grain Alignment Control of Bi2212 tape by Te Dope**
UEHARA, Ryouhei et al. (Kitami Institute of Technology), mms00002/mms00@king.cc.kitami-it.ac.jp

E2-03 **Diffusion of Pb into Bi2212 phase and its application to Bi2212/Ag tapes**
TOJIMA, Motoki et al. (Kitami Institute of Technology), mms01013/mms01@king.cc.kitami-it.ac.jp

E2-04 **Improvement in critical current of AgCu-sheathed Bi-2212 wires in long length**
KURODA, Tsuneo et al. (National Institute for Materials Science), KURODA.Tsuneo@nims.go.jp

E2-05 **The Influence of The Pre-Heat Treatment Conditions on The Critical Currents of The Multi-filamentary Bi2212 Wires**
OGAWA, Rikuo et al. (Hakodate National College of Technology), ogawa@hakodate-ct.ac.jp

E2-06 **Effect of CIP on superconducting properties of Bi-2223/Ag wires composite bulk**
HIRANO, Shinji et al. (Advanced Materials R&D Center, Meisei University), 01m2011@chem.meisei-u.ac.jp

E2-07 **Jc properties of Bi-2223 thick films on a MgO substrate prepared by a coating method**
ICHIKAWA, Michiharu et al. (Central Research Institute of Electric Power Industry), michi@criepi.denken.or.jp

E2-08 **Influence of Ca_2CuO_3 doping on Jc in Ag-sheathed Bi2223 tapes**
YAMAMOTO, Tatsuya et al. (Toyohashi University of Technology), t-yamamoto@super.eee.tut.ac.jp

Nov. 24, 13:15 - 14:45
Poster Session

Superconducting materials

Chairman: **MATSUSHITA, Teruo and TAKEUCHI Takao**

E2-09 **Effect of periodic flux pinning centers in Nb films by the photo-lithography III**
IWAMOTO, Tadashi et al. (Faculty of Engineering, Yamaguchi University), b7926@stu.cc.yamaguchi-u.ac.jp

E2-10 **Irreversibility Fields of Nb-Ti Multifilamentary Composites with Different APC Materials (2)**
ZHU, Yun et al. (Graduate School of Engineering, Tokyo Metropolitan University), zhuyun@ecomp.metro-u.ac.jp

E2-11 **Intergrain Superconducting Transition in Chalcogenides AXV6S8(A=In, Tl, K, Rb, Cs)**
SUGINO, Masahiro et al. (Department of Applied Physics, Okayama University of Science), s01pm05@physics.dap.ous.ac.jp

E2-12 **Critical Current Densities and Hysteresis Losses of Multifilamentary Nb_3Sn Strands**
MIZUNO, Kenichiro et al. (Nihon University), mizutti10@hotmail.com

Nov. 24, 13:15 - 14:45
Poster Session

SC Coils

Chairman: **YAMAMOTO, Akira and TSUDA, Makoto**

E2-13 **Current equalization of multi-stranded conductor by T-connection reactor**
NAGASAWA, Toru et al. (Niigata University), fzj01347@nifty.ne.jp

E2-14 **Relation between inter-sub-cable contact resistance and coupling loss in multiple-stage stranded cable**
SEO, Kazutaka et al. (Mitsubishi Elec. Corp., Advanced Technology R&D Center), seo@ele.crl.melco.co.jp

E2-15 **Stability of a field winding of superconducting generator under changing magnetic field**
KAIHO, Katsuyuki et al. (National Institute of Advanced Science and Technology), k-kaiho@aist.go.jp

E2-16 **Feasibility study of large superconducting coils wound of transposed parallel conductors**
GYOUTOKU, Kenichi et al. (Department of EESE, Kyushu University), gyoutoku@sc.kyushu-u.ac.jp

E2-17 **Properties of cryocooler-cooled super conducting pulse coil (5)**
MIYAZAKI, Hiroshi et al. (Kyushu-University), miyazaki@sc.kyushu-u.ac.jp

E2-18 **Performance Estimation of Cryocooler-cooled HTS coil for SMES**
ISOMINE, Kouji et al. (Depatment of EECE, Waseda University), 601c0141@mn.waseda.ac.jp

E2-19 **Durability of High-Tc superconducting coil against pulsive excess current**
OHASHI, Satoru et al. (Tokyo Institute of Technology), rs112579@dk.catv.ne.jp

E2-20 **Study of Stabilization and Quench Protection for HTS coil**
FU, Youkun et al. (Yokohama National University), fuy@tsukalab.dnj.ynu.ac.jp

Submitted to Japan-Korea Joint Workshop 2001

E2-21 **The influence of hard bending strain on the properties of Bi-2223/Ag HTS tapes**
Ha, Hong-Soo et al. (Applied superconductivity Lab., Korea Electrotechnology Research Institute), hsha@keri.re.kr

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Poster Session

Cooling System & Refrigerator

Chairman: **SATO, Akio and OHMORI Takao**

Submitted to Japan-Korea Joint Workshop 2001

E2-22 **Counter Flow Cooling Characteristics with Liquid Nitrogen for Superconducting Power Cables**
FURUSE, Mitsuho et al. (National Institute of Advanced Industrial Science and Technology), m.furuse@aist.go.jp

E2-23 **Energy conversion mechanism in a water Stirling engine**
BIWA, Tetsushi et al. (Crystalline Materials Science, Nagoya University), biwa@mizu.xtal.nagoya-u.ac.jp

E2-24 **A thermoacoustic Stirling cooler**
UEDA, Yuki et al. (Nagoya University), ueda@mizu.xtal.nagoya-u.ac.jp

Submitted to Japan-Korea Joint Workshop 2001

E2-25 **The effect of the operating frequency and the length of the split tube for the Stirling cryocooler**
KOH, Deuk-Yong et al. (Korea Institute of Machinary and Materials (KIMM)), dykoh@mailgw.kimm.re.kr

E2-26 **Development of a Small 4K-GM Cryocooler**
SATOH, Toshimi et al. (Sumitomo Heavy Industries, Ltd. R&D Center), Tsm_Sato@shi.co.jp

E2-27 **The development of the ^{3}He circulation-type GM-JT 1K cryogenic refrigerator**
YAMADA, Yuh et al. (Interdisciplinary Faculty of Sci. and Eng.: Shimane University), yamada@riko.shimane-u.ac.jp

Submitted to Japan-Korea Joint Workshop 2001

E2-29 **Optimum charging pressure and operating frequency in the Stirling Cryocooler**
Park Seong-Je et al. (Korea Institute of Machinery & Materials (KIMM)), sjpark@kimm.re.kr

Submitted to Japan-Korea Joint Workshop 2001

E2-30 **A Study on the linear Compressor Characteristics of The Stirling Refrigerator**
KOH, Deuk-Yong et al. (Korea Institute of Machinery and Materials (KIMM)), dykoh@mailgw.kimm.re.kr

E2-31 **He II cryogenic system in NIFS**
MAEKAWA, Ryuji et al. (National Institute for Fusion Science), maekawa@lhd.nifs.ac.jp

E2-32 **Forced Convection Heat Transfer of Pressurized He II, Part 1; Apparatus and Results of Transient Heat Transfer**
HATA, Koichi et al. (Institute of Advanced Energy, Kyoto University), hata@iae.kyoto-u.ac.jp

E2-33 **Forced Convection Heat Transfer of Pressurized He II, Part 2; Steady-state Heat Transfer and Its Critical Heat Flux**
OKAMURA, Takahiro et al. (Dept. of Energy Science and Technology, Kyoto University), shiotsu@uji.energy.kyoto-u.ac.jp

E2-34 **Characteristics of cryostat using multi shell insulation**
AKAMATSU, Takeshi et al. (Department of EECE, Waseda University), takeshi@super.elec.waseda.ac.jp

Submitted to Japan-Korea Joint Workshop 2001

E2-35 **Electrical breakdown characteristics of LN_2 for superconducting power apparatus**
Baek, Seung-Myeong et al. (Dept of Electrical Eng Gyeongsang National University), trebari@hanmail.net

Submitted to Japan-Korea Joint Workshop 2001

E2-36 **Surface flashover characteristics in Liquid Nitrogen for application of superconducting pancake coils.**
Jeong, Jong-Man et al. (Dept of Electrical Eng Gyeongsang National University.), jjmany@hanmail.net

Nov. 24, 15:00 - 16:00
Room A

Best Paper Award Lecture

Chairman: **TAKEO, Masakatsu**

S2-01 **AC Loss Measurement of High Temperature Superconducting Tapes by the Pointing Vector Method**
SUMIYOSHI, Fumio (Kagoshima University)

Nov. 24, 16:15 - 17:25
Room A

Feature Lecture

Chairman: **SHIRAFUJI, Junji**

S2-02 **Basic Science supporting Civilization of 21st Century**
— Information and Communication —
KUMAGAI, Nobuaki
President of Nuclear Safety, Incorporated, Emeritus Professor of Osaka University

Nov. 25, 9:00 - 10:45
Room A

Fundamental

Chairman: **TOGANO, Kazumasa and YAMAZAKI Hirofumi**

A3-01 **Paramagnetic peculiarity in a YBCO thin film near the transition**
HARAYAMA, Tomohiro et al. (Kyushu University), tomo_h@ees.kyushu-u.ac.jp

A3-02 **Peak Effect and Flux Pinning Mechanism in Y-123 Superconductor (II)**
YOSHIMI, Daisuke et al. (Kyushu Institute of Technology), matusita@cse.kyutech.ac.jp

A3-03 **Thickness Dependence of Irreversibility Field in Bi-2212 Thin Film**
WADA, Hiroshi et al. (Kyushu Institute of Technology), matusita@cse.kyutech.ac.jp

A3-04 **Flux Pinning Mechanisms of Bi(Pb)2212 Single Crystals**
OKABE, Takehiko et al. (University of Tokyo), tt16732@mail.ecc.u-tokyo.ac.jp

A3-05 **Indirect Measurement of Current Distribution in Bi-2223 Tape by Pickup Coil Method (3)**
MATUSHITA, Kengo et al. (Kagoshima University), ee97065@h9.eee.kagoshima-u.ac.jp

A3-06 **Distribution of critical current and characteristic of magnetic flux creep in HTS**
IRIE, Shigeaki et al. (Kyushu University), s_irie@sc.kyushu-u.ac.jp

A3-07 **Thin Film Preparation of Magnetic Superconductor $RuSr_2GdCu_2O_8$**
SERITA, Daisuke et al. (Department of Materials Science, Shimane University), s009105@matsu.ipc.shimane-u.ac.jp

Nov. 25, 11:00 - 12:30
Room A

Fundamental and Bulk

Chairman: **MORITA, Mitsuru and KISU, Takanobu**

A3-08 **Magnetization of Bi2212 single crystal under tilted fields**
SUZUKI, Takahiro et al. (Department of Applied Physics Okayama University of Science), yoshiko@dap.ous.ac.jp

A3-09 **Theoretical expression for current vs. voltage characteristics in high Tc superconductors**
FUJIYOSHI, Takanori et al. (Kumamoto University), fuji@eecs.kumamoto-u.ac.jp

A3-10 **Refinement effect of Dy211 particles on the pinning properties of Dy-Ba-Cu-O bulk superconductors**
INOUE, Kazuo et al. (Superconductivity Research Labolatory), inouek@istec.or.jp

A3-11 **Dy-211 phase content dependence on superconducting properties of large-sized single-domain Dy-123 system superconductor**
HISHINUMA, Yoshimitsu et al. (National Institute for Fusion Science), hishinuma@nifs.ac.jp

A3-12 **Reactivity of RE123 bulk superconductors with water**
NARIKI, Shinya et al. (Superconductivity Research Laboratory), nariki@istec.or.jp

A3-13 **The formation and texture of Bi-2223 phase with Ag_2O, MgO and B_2O_3 addition after partial-melting and solidification in high magnetic fields**
NAGATA, Akihiko et al. (Faculty of Engineering and Resource Science, Akita University), xiaoyelu@ipc.akita-u.ac.jp

Nov. 25, 13:15 - 14:45
Room A

HTS Bulk Materials

Chairman: **YOSHIZAWA, Shuji and KUMAKURA, Hiroaki**

Submitted to Japan-Korea Joint Workshop 2001

A3-14 **Joining of Two YBCO grains by multi-seeding technique**
KIM, Chan-Joong et al. (Korea Atomic Energy Research Institute), cjkim2@kaeri.re.kr

A3-15 **Field trapping properties of large Dy123/Ag bulk superconductors**
NARIKI, Shinya et al. (Superconductivity Research Laboratory), nariki@istec.or.jp

A3-16 **New multi-seeding crystal growth method (MUSLE method)**
SAWAMURA, Mitsuru et al. (Advanced Technology Research Laboratories, Nippon Steel Corp.), sawamura@re.nsc.co.jp

A3-17 **Transport properties of ultra low resistance conductors made of QMG**
MORITA, Mitsuru et al. (Advanced Technology Research Laboratories, Nippon Steel Corp.), morita@re.nsc.co.jp

A3-18 **Effect of cooling rate on the trapped fields of Nd-Ba-Cu-O superconductors**
MATSUI, Motohide et al. (Superconductivity Research Laboratory), matsui@istec.or.jp

A3-19 **Superconducting joint of YBCO bulk with using the various solder materials**
NEGICHI, Tomokazu et al. (Faculty of Engineering, Iwate University), t2200025@iwate-u.ac.jp

Nov. 25, 15:00 - 16:15

Room A

AC Loss (II)

Chairman: **FUJIMOTO, Hiroyuki and OSAMURA, Kozo**

A3-20 **Numerical Calculations on Magnetic Field for Multi-layer Superconductor Cables**
TANAKA, Akihiro et al. (Gifu National College of Technology), fukunaga@gifu-nct.ac.jp

A3-21 **Angler dependence of superconductor film hysteresis by FEM**
MIYAKE, Tohru et al. (Kyushu University), t_miyake@ees.kyushu-u.ac.jp

A3-22 **Numerical Calculation of AC-transport loss in Superconductor with Taking Account of Magnetic Field Dependence of Critical Current Density**
MIGITA, Minoru et al. (Kyushu Institute of Technology), migita@aquarius10.cse.kyutech.ac.jp

A3-23 **AC transport current losses in HTS tapes in an assembled conductor**
NIIDOME, Yuya et al. (Yokohama National University), nii@tsukalab.dnj.ynu.ac.jp

A3-25 **Frequency dependence of magnetic characteristics in Bi-2223 HTSC disk for motor application**
NAKAMURA, Taketsune et al. (Kyoto University), tk_naka@kuee.kyoto-u.ac.jp

Nov. 25, 9:00 - 10:30

Room B

Current Limiters

Chairman: **TAMADA, Noriharu and SEO Kazutaka**

B3-01 **Effect of Control Current on Saturated DC Reactor Type Fault Current Limiter**
SALIM, Khosru Mohammad et al. (Kyoto University), tk_naka@kuee.kyoto-u.ac.jp

B3-02 **Measurement of current distribution for a fault current limiter using YBCO films**
SHIMOHATA, Kenji et al. (Advanced Technology R&D Center), simohata@ele.crl.melco.co.jp

B3-03 **Effects of Ic dispersion on connected fault current limiters in series**
KUBOTA, Hiroshi et al. (Corporate R&D Center, Toshiba Corp.), hiroshi2.kubota@toshiba.co.jp

B3-04 **High-Tc Superconducting Magnet for Fault Current Limiter (2) Cooling Characteristics of Sub-cooled Nitrogen**
YAZAWA, Takashi et al. (Toshiba co.), takashi.yazawa@toshiba.co.jp

B3-05 **Multi-Functional SFCL — application to SVC —**
AKIMOTO, Ryo et al. (Graduate School of Engineering Hokkaido University), akimoto@kiki-si.eng.hokudai.ac.jp

B3-06 **Evaluation of Stabilities in Conduction Cooled Type High Tc Superconducting Fault Current Limiters**
NISHIZAWA, Chihiro et al. (Hokkaido University), chihiro@kiki-si.eng.hokudai.ac.jp

Nov. 25, 10:45 - 12:30

Room B

Power Electronics

Chairman: **YAMAGUCHI, Mitsugi and HORIUCHI Yoko**

B3-07 **Relationship between torque and magnetic properties of axial-type HTSC motor**
JUNG, Hunjune et al. (Kyoto University), tk_naka@kuee.kyoto-u.ac.jp

B3-08 **Study on Design Method of Superconducting Machines**
MAKI, Naoki et al. (Tokai University), naokmaki@ycc.u-tokai.ac.jp

B3-09 **Investigation Study on Applicable Possibility of Superconducting Generators**
MAKI, Naoki et al. (Tokai University), naokmaki@ycc.u-tokai.ac.jp

B3-10 **Improvement of Levitation Force and Bearing Stiffness**
KOMORI, Mochimitsu et al. (Kyushu Institute of Technology), komori@mse.kyutech.ac.jp

Submitted to Japan-Korea Joint Workshop 2001

B3-11 **HTS coil shape optimization for its minimum volume condition**
LEE, Joon-Ho et al. (Sungkyunkwan University), wsnah@yurim.skku.ac.kr

B3-12 **Test of 1000A Class Small Oxide Superconducting Transformer for Measurement Cooled by Cryocooler**
OTABE, Edmund Soji et al. (Kyushu Institute of Technology), otabe@cse.kyutech.ac.jp

Submitted to Japan-Korea Joint Workshop 2001

B3-13 **Development of an irradiation apparatus with catheter transmitting submillimeter wave for living bodies using a gyrotron**
TATSUKAWA, Toshiaki et al. (Kagawa medical university), tatu@kms.ac.jp

Nov. 25, 13:15 - 14:45
Room B

Magnetic Separation

Chairman: **MASUDA, TAKATO and MAKI Naoki**

B3-14 **Performance of Trapped Field of High-Tc Bulk Superconductors for Magnetic Separator**
SAHO, Norihide et al. (Hotachi, Ltd., Mechanical Engineering Research Laboratory), saho@merl.hitachi.co.jp

B3-15 **High Gradient Magnetic Separation for Weakly Magnetized Fine Particles**
OKADA, Hidehiko et al. (Iwate Industrial Promotion Center), okada@iwate-techno.com

B3-16 **Development of High-Tc Bulk-Superconductor-Based Magnetic Separator for Water Purification**
SAHO, Norihide et al. (Hitachi, Ltd. Mechanical Engineering Research Laboratory), saho@merl.hitachi.co.jp

B3-17 **Removal Performance of High-Tc Bulk-Based Magnetic Separator for Water Bloom**
SAHO, Norihide et al. (Hitachi, Ltd., Mechanical Engineering Research Laboratory), saho@merl.hitachi.co.jp

B3-18 **Oil Removal Performance of Magnetic Separation for Water Contaminated by Oil**
ISOGAMI, Hisashi et al. (Mechanical Engineering Research Laboratory, Hitachi, Ltd.), isogami@merl.hitachi.co.jp

B3-19 **Recovery of Abrasives from Wasted Slurry by Superconducting High Gradient Separator**
NISHIJIMA, Shigehiro et al. (Osaka University), nishijim@nucl.eng.osaka-u.ac.jp

Nov. 25, 15:00 - 16:30
Room B

Cable / Leads

Chairman: **SAHO Norihide and MUKOYAMA, Shinichi**

B3-20 **Development of a 100m, 3-core 114MVA HTSC Cable Systems (1)**
YUMURA, Hiroyasu et al. (Sumitomo Electric Industries, Ltd.), yumura-hiroyasu@sei.co.jp

B3-21 **Development of a 100m, 3-core 114MVA HTSC Cable System (2)**
YUMURA, Hiroyasu et al. (Sumitomo Electric Industries, Ltd.), yumura-hiroyasu@sei.co.jp

B3-22 **Current Distribution in a High-Tc Superconducting Cable Considering Nonlinear Characteristic of High-Tc Superconducting Tape**
ITO, Yasutaka et al. (Yamaguchi University), tsuda@po.cc.yamaguchi-u.ac.jp

B3-23 **Development of HTS current feeders for large-scale superconducting**
MITO, Toshiyuki et al. (National Institute for Fusion Science), mito@nifs.ac.jp

B3-24 **Development of Low-Heat-Leak Peltier Current Lead (1) — Operation Characteristics under Liquid Nitrogen Circumstance —**
NAKAMURA, Keiji et al. (Chubu University), nakamura@solan.chubu.ac.jp

B3-25 **Development of Low-Heat-Leak Peltier Current Lead (2) — Operation Characteristics under Liquid Helium Circumstance —**
YAMAGUCHI, Takayuki et al. (Chubu University.), tyama@isc.chubu.ac.jp

Nov. 25, 9:00 - 10:30
Room C

Thermodynamics

Chairman: **HARUYAMA, Tomiyoshi and KOBAYASHI, Hisayasu**

C3-01 **Visualization of Pool Boiling Liquid ^{3}He below 1K (II)**
KATAGIRI, Masanori et al. (Okayama University of Science), s00rd02@physics.dap.ous.ac.jp

C3-02 **Performance of thermoacoustic sound wave generators**
HATAZAWA, Masayasu (Junior college of Nihon university), hatazawa@eme.cst.nihon-u.ac.jp

C3-03 **Fluid study of liquid helium in a superconducting magnet by Lattice Boltzmann Method**
TATSUMI, Yuichiro et al. (Osaka University), tatumi35@sanken.osaka-u.ac.jp

C3-04 **Expansion of Present Thermoacoustic Theory 1: Critical Discussion on The Theory**
TOMINAGA, Akira (Institute of Physics, University of Tsukuba), tominaga@sakura.cc.tsukuba.ac.jp

C3-05 **Expansion of Present Thermoacoustic Theory 2: Entropy Flow**
TOMINAGA, Akira (Institute of Physics, University of Tsukuba), tominaga@sakura.cc.tsukuba.ac.jp

C3-06 **Expansion of Present Thermoacoustic Theory 3: Influence of The Expansion**
TOMINAGA, Akira (Institute of Physics, University of Tsukuba), tominaga@sakura.cc.tsukuba.ac.jp

Nov. 25, 10:45 - 12:15
Room C

Cryocooler (I)

Chairman: **MATSUBARA, Yoichi and INOUE, Tatsuo**

C3-07 **Observation of flow phenomena in a tapered pulse tube refrigerator**
SHIRAISHI, Masao et al. (National Institute of Advanced Industrial Science and Technology), shiraishi.m@aist.go.jp

C3-08 **Effects of taper angle on performance of a tapered pulse tube refrigerator**
SHIRAISHI, Masao et al. (National Institute of Advanced Industrial Science and Technology), shiraishi.m@aist.go.jp

C3-09 **Enthalpy Flow in a Regenerator of Pulse Tube Refrigerator**
IKEGUCHI, Takuya et al. (University of Tsukuba), shiraishi.m@aist.go.jp

C3-10 **Phase control characteristics of a 4K pulse tube cryocooler**
NAKASHIMA, Yusuke et al. (Tokyo Institute of Technology), yasumi.ootani@toshiba.co.jp

C3-11 **Development of Oxide Regenerator Materials**
IKEDA, Hiroshi et al. (Cryogenics Center University of Tsukuba), ikeda@bk.tsukuba.ac.jp

C3-12 **Cooling performance of ceramic magnetic regenerator material**
NUMAZAWA, Takenori et al. (Tsukuba Magnet Lab., NIMS), konta@akahoshi.nims.go.jp

C3-24 **Development of a Miniature Pulse Tube Cryocooler**
YASUKAWA, Yukio et al. (Fuji Electric Corp. Research & Development, Ltd.), yasukawa-yukio@fujielectric.co.jp

Nov. 25, 13:15 - 14:45
Room C

Cryocooler (II)

Chairman: **SHIRAISHI, Masao and NISHITANI, Tomio**

C3-13 **Construction of a double-loop type thermoacoustic cooler**
SUMI, Takao et al. (School of Engineering, Nagoya University), sumi@nuap.nagoya-u.ac.jp

C3-14 **4K pulse tube refrigerator with higher cooling power at first stage**
ZHU, Shaowei et al. (AISIN SEIKI CO., LTD.),

C3-15 **Development of a 1K cooler for space use**
Narasaki, Katsuhiro et al. (Sumitomo Heavy Industries, Ltd.), Kth_Narasaki@shi.co.jp

C3-16 **Development of a small Pulse Tube Cryocooler with 5W@80K**
OGURA, Tetsuya (Sumitomo Heavy Industries, Ltd.), Tty_Ogura@shi.co.jp

Submitted to Japan-Korea Joint Workshop 2001

C3-17 **Experimental Results On V-M Cycle Pulse Tube Refrigerator**
DAI, Wei et al. (Nihon University), david@lebra.nihon-u.ac.jp

C3-18 **Study on LXe system for particle detector (6) — Development of U-shape pulse tube refrigerator—**
HARUYAMA, Tomiyoshi et al. (High Energy Accelerator Research Organization), tomiyoshi.haruyama@kek.jp

Nov. 25, 15:00 - 16:30
Room C

Cooling System

Chairman: **SATO, Toshimi and NOGUCHI, Takashi**

C3-19 **Development of 2K-GM/JT Refrigerator —Testing —**
SATO, Akio et al. (National Institute for Materials Science), asat@akahoshi.nims.go.jp

C3-20 **Design Result of ITER Cryogenic System**
HAMADA, Kazuya et al. (Japan Atomic Energy Research Institute), hamada@naka.jaeri.go.jp

C3-21 **Measurement of oil contamination in gaseous helium from a screw compressor**
OKUNO, Hiroaki et al. (Hitachi Techno Service Co., Ltd.), h-tukuba@mail.goo.ne.jp

C3-22 **Ten Years Operational Experience of the SKS Cryogenic System**
AOKI, Kanae et al. (High Energy Accelerator Research Organization), kanae.aoki@kek.jp

C3-23 **Pressurized Super-Fluid Helium Refrigeration System for Super Conducting magnet Test Bench (III) — Cooling characteristics of a 6.3m prototype quadrupole super conducting magnet —**
KIMURA, Nobuhiro et al. (High Energy Accelerator Research Organization), nobuhiro.kimura@kek.jp

Nov. 25, 9:00 - 10:30
Room D

MgB_2

Chairman: **HIRABAYSHI, Izumi and YAMADA, Yutaka**

D3-01 **Property of MgB_2 Superconductor**
MATSUMOTO, Kazuya et al. (Nihon University), kazuztek@ma3.justnet.ne.jp

D3-02 **Microstructure and current carrying properties of powder-in-tube processed MgB_2 tapes and wires**
KUMAKURA, Hiroaki et al. (National Institute for Materials Science), KUMAKURA.Hiroaki@nims.go.jp

D3-03 **The annealing effect of MgB_2/ SUS superconducting tape**
MATSUMOTO, Akiyoshi et al. (National Institute for Material Science), MATSUMOTO.Akiyoshi@nims.go.jp

D3-04 **Fabrication of Fe-sheathed MgB_2 tapes by a PIT method**
FUJII, Hiroki et al. (NIMS), FUJII.Hiroki@nims.go.jp

D3-05 **Effects of processing parameters in MgB_2 tapes prepared by a PIT process**
YAMADA, Yutaka et al. (Faculty of Engineering, Tokai University), tacsuper@keyaki.cc.u-tokai.ac.jp

D3-06 **Magnetic Characterization of Superconducting MgB_2**
FUKUDA, Mitsuhiro et al. (Kyushu Institute of Technology), otabe@cse.kyutech.ac.jp

Nov. 25, 10:45 - 12:15
Room D

NbTi, Multi-strand conductors

Chairman: **ITO, Daisuke and TAKEO, Masakatsu**

D3-07 **Proximity Effect of NbTi Multifilamentary Wires IV**
KOYAMA, Yoshiyuki et al. (Nihon University), koya61@hotmail.com

D3-08 **Proximity Effect of NbTi Multifilamentary Wires V**
HARA, Shigeo et al. (Nihon University), shi-ge-o@pop02.odn.ne.jp

D3-09 **Influence of bending strain on transverse-field losses in NbTi multifilamentary superconducting wires (2)**
TSUZURA, Hideki et al. (Kagoshima University), ee99094@h11.eee.kagoshima-u.ac.jp

D3-10 **Contact stress and resistance between strands in superconducting cable conductors**
NAKAMURA, Kazuya et al. (Sophia University), takao@toshi.ee.sophia.ac.jp

D3-11 **Development of Rutherford cable with both low losses and high stability (IV)**
Kawagoe, Akifumi et al. (Kagoshima University), kr624222@h8.eee.kagoshima-u.ac.jp

D3-12 **Development of a New Type Superconducting Conductor with Controlled Twist Angles around its Axis (2) — Design of test coil —**
KAWAGOE, Akifumi et al. (Kagoshima University), kawagoe@eee.kagoshima-u.ac.jp

Nov. 25, 13:15 - 14:45
Room D

Mechanical Properties of SC Coil

Chairman: **SHINTOMI, Takakazu and KIYOSHI, Tsukasa**

D3-13 **The evaluation of the stability in the multi-layer superconducting coil by the most appropriate winding-tension**
MINAMIZATO, Kazushige et al. (Kyushu University), kazu_m@sc.kyushu-u.ac.jp

Submitted to Japan-Korea Joint Workshop 2001

D3-14 **Study of the Mechanical Heat Generation inside the Superconducting Coil Inner Vessel**
SEINO, Hiroshi et al. (Railway Technical Research Institute), seino@rtri.or.jp

D3-15 **Mechanical disturbances in epoxy impregnated superconducting windings induced by delayed fracture**
SEO, Kazutaka et al. (Mitsubishi Elec. Corp., Advanced Technology R&D Center), seo@ele.crl.melco.co.jp

D3-16 **Analysis of wire motion in a superconducting magnet by Monte Carlo method**
OGATA, Hideki et al. (Osaka University), hideki35@sanken.osaka-u.ac.jp

D3-17 **Studies on deformation of a superconducting coil caused by electromagnetic force (5) — 600kJ solenoid coil —**
HAYASHI, Hidemi et al. (Research Laboratory, Kyushu Electric Power Co., Inc.), hidemi_hayashi@kyuden.co.jp

D3-18 **Studies on deformation of a superconducting coil caused by electromagnetic force (4)**
HANAI, Satoshi et al. (Toshiba Corporation), kazuhiko.shimada@toshiba.co.jp

Nov. 25, 15:00 - 16:30
Room D

HTS Coils

Chairman: **WATANABE, Kazuo and ONO, Michitaka**

D3-21 **Development of HTS Coils with Reduced Degradation of Properties Due to Flat-on Oriented Magnetic Fields Applied to the Wound Tape (III)**
HORIBA, Tatsuya et al. (Kagoshima University), ee97062@h9.eee.kagoshima-u.ac.jp

D3-20 **Fabrication and experiment of winding model of high Tc superconducting transformer for railway rolling stock (IV) AC loss of superconducting coil wound densely**
KAMIJO, Hiroki et al. (Railway Technical Research Institute), hiroki@rtri.or.jp

D3-19 **Basics characteristic evaluation of cryocooler-cooled HTS coil**
KASAHARA, Hirofumi et al. (CRIEPI), kasa@criepi.denken.or.jp

D3-22 **Tensile Fatigue Tests of HTS Coils**
IGARASHI, Motohiro et al. (Central Japan Railway Company), m.igarashi@jr-central.co.jp

D3-23 **Thermal Stability of a Cryocooler-cooled HTS Coil**
TASAKI, Kenji et al. (Toshiba), m.igarashi@jr-central.co.jp

D3-24 **Development of cryocooler-cooled solenoid magnet fabricated with Bi-2212 ROSAT wire (4)**
MORITA, Hiroshi et al. (Hitachi Research Laboratory, Hitachi, Ltd.), hmorita@hrl.hitachi.co.jp

Scientific Program of Japan-Korea Joint Workshop 2001 on Applied Superconductivity and Cryogenics

Special Session at Fukui International Acitivities Plaza

Nov. 26, 9:00 - 9:10

Welcome and Opening

Nov. 26, 9:10 - 10:10

Overview of National Project

Chairman: **KIM, Sang Hyun and NOTO, Koshichi**

Invited talk

F4-1 **21C Frontier Project for Application of HTS Technology in Korea**
RYU, Kang-Sik (Center for Applied Superconductivity Technology)

F4-2 **Overview of R&D activities on applications of superconductivity to power**
TSUKAMOTO, Osami (Yokohama National University), S. Akita (CRIEPI)

10:10 - 10:30 Coffee Break

Nov. 26, 10:30 - 12:30

Power Application

Chairman: **RYU, Kang-Sik and OHNISHI, Toshitada**

F4-3 **Development of a Three Phase HTS Transformer**
CHA, Gueesoo (Soonchunhyang University)

F4-4 **A Comparative Study on the Operational Characteristics according to the Structure Difference in Indective Type Superconducting Fault Current Limiter**
LEE, S., LEE, E.R., KANG, H., KO, T.K. (Yonsei University)

F4-5 **Research and Development of Superconducting Cable in Super-ACE Project**
Nakatsuka, T., KIKUCHI, A., OZAWA, Y., , UEDA, K. (Super-GM)

F4-6 **Development of Bi-2223 HTS Tape and Its Application to Coil and Current Leads**
OH, Sang-Soo, HA, H.S., HA, D.W., KWON, Y.K., RYU, K-S (Korea Electrotechnology Research Institute)

12:30-13:30 Lunch

Nov. 26, 13:30 - 15:30

Energy Storage

Chairman: **CHA, Gueesoo and HOSHINO, Tsutomu**

F4-7 **Current Status of SMES in Korea**
SEONG, K.C., KIM, H.J., CHO, J.W., KWON, Y.K. , RYU, K-S (Korea Electrotechnology Research Institute), YU, I.K. (Changwon National University)

F4-8 **Research and Development of HTS-SMES System**
ISHIYAMA, Atsushi (Waseda University), AKITA, Shirabe, KASAHARA, Hirofumi (CRIEPI), TATSUKI, H.(ISTEC)

F4-9 **Designs and Analysis of Flywheel Energy Storage Systems using High-Tc Superconductor Bearings**
SUNG, T-H , HAN, Y.H., LEE, J-S, HAN, S-C, JEONG, N.H., HWANG, S.D. (Korea Electric Power Research Institute, Korea Electric Power Corporation), CHOI, S-K(Korea Institute of Machinery and Materials)

F4-10 **R&D on Superconducting Bearing Technologies for Flywheel Energy Storage System**
KOSHIZUKA, N. (International Superconductivity Technology Center)

15:30-16:00 Coffee Break

Nov. 26, 16:00 - 17:00

Other Topics

Chairman: **KO, Tae Kook and ISHIYAMA, Atsushi**

F4-11 **Low Error Operation of High Tc Superconducting Single-Flux-Quantum Simple Circuits**
HAHN, T.S., PARK, J.H. (Korea Photonics Technology Institute), KANG, J.H. (University of Incheon)

F4-12 **All Japan Efforts on Fundamental Materials Technology Developments for HTS Applications - Focusing on R&D of Coated Conductors -**
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