



AOSOC 2000



**Applied
Superconductivity
Conference**

Technology for the 21st Century

Pre-Conference
Booklet

September 17 - 22, 2000

Pavilion Convention Center • Virginia Beach, Virginia USA

5EL04 Nonlinear Simulation and Characterization of HTS Devices Using Harmonic Balance Algorithms (4:45pm)
Carlos Collado, Jordi Mateu, **Juan O'Callaghan**, Universitat Politècnica de Catalunya (UPC).

Large Scale Sessions

Monday Plenary Session (Pavilion Convention Center) 8:30am - 10:00am

Welcome

Harold Weinstock, ASC Chairman, AFOSR; and Hermann Grunder, Director, Thomas Jefferson National Accelerator Facility

1AP1 Superconductivity: Star Technology for the 21st Century

C.H. Rosner, Intermagnetics General Corporation.

Monday Poster Session (Pavilion Convention Center) 10:00am - 12:00pm

1LA Stability and Magnet Protection (LTS) I

1LA01 Analysis of the Behaviour of Superconducting Windings with Short-Circuited Turns.

V. Keilin, Kurchatov Institute; L. Lugansky, Kapitza Institute for Physical Problems.

1LA02 Heat Generation in Partially Plastic Conductors of Thin-Walled Solenoidal Windings

E.A. Deviatkin, Institute of Problems in Mechanics RAS.

1LA03 Study on Relation between Stabilities of Rotor Windings of a Superconducting Generator in Static and Rotating Condition

M. Furuse, O. Tsukamoto, Faculty of Eng., Yokohama National University; S. Torii, S. Akita, CRIEPI; M. Shibuya, Super-GM.

1LA04 A qualitative model to understand the stability of a superconducting cable

Seog-Whan Kim, Fermilab; Rob Wolf, CERN.

1LA05 Monte Carlo Calculation of Strand Position in CIC Conductor to Analyze Current Imbalance

Shigehiro Nishijima, Tomoki Sasaki, I.S.I.R. Osaka-Univ.

1LA06 Relation between Impedance Distribution and Current Imbalance in an Insulated Multi-strand Superconducting Cable Conductor

A. Ninomiya, T. Ishigohka, Seikei Univ.; S. Yamaguchi, NIFS; T. Sato, Nagoya Univ.; S. Hanai, Toshiba Corp.; Y. Hasegawa, Ion Engineering; H. Okumura, Matsusaka Univ.; S. Takayama, Gifu Prefectural Institute for Ceramics Research and Technology; R. Shimada, Tokyo Institute of Technology.

1LA07 Stability of Superconducting Multifilamentary Composite Wires in Helium Environment

B. Baudouy, A. Devred, F.P. Juster, F. Trillaud, CEA.

1LA08 Analysis of wire motion in a superconducting magnet by Monte Carlo method.

Hideki Ogata, Shigehiro Nishijima, I.S.I.R. Osaka-Univ.

1LA09 Wire dynamics simulation of impregnated superconducting magnet in external magnetic field

Shinichiro Ohira, Shigehiro Nishijima, I.S.I.R. Osaka-Univ.

1LB Transformers I

1LB01 Study of superconducting transformer for Shinkansen rolling stock

Hiroshi Hata, Hiroki Kamijo, Hiroyuki Fujimoto, RTRI.

1LB02 Design and Testing of a Laboratory-Prototype Superconducting Transformer

M.B. Srinivas, A.K. Bhatnagar, University of Hyderabad; K.S. Hebbar, Electromagnetic Devices Ltd..

1LB03 Electric field-transport current relation in sections of solenoidal and pancake model windings for superconducting transformer

M. Polak, P. Usak, J. Pitel, Z. Timoransky, Institute of Electrical Engineering; F. Zizek, Skoda Research; H. Piel, University of Wuppertal.

1LB04 Ac loss properties of a 1MVA single-phase HTS power transformer

M. Iwakuma, K. Funaki, Y. Fukuda, Kyushu University; T. Bohno, S. Nose, M. Konno, Y. Yagi, Fuji Electric Co.,Ltd; H. Maruyama, T. Ogata, Kyushu Trans. Co.,Ltd.; K. Tsutsumi, Kyushu Electric Power Co., Inc..

1LB05 Test and Characteristic Analysis of an HTS Power Transformer

Kyeong Dal Choi, Korea Polytechnic Univ.; Woo Seok Kim, Song Yop Hahn, Seoul National Univ.; Hee Joon Lee, Guesoo Cha, Soonchunhyang Univ.; Ji Kwang Lee, Woosuk Univ.; Kyung Woo Ryu, Chonnam National Univ..

1LB06 High Voltage Conductor Insulation of High Temperature Superconductors for Cryogenic Applications

A. Godeke, H.J.G. Krooshoop, O.A. Shevchenko, H.H.J. ten Kate, University of Twente, Faculty of Applied Physics, P.O. Box 217, 7500 AE Enschede, The Netherlands; A. Scholten, P. Klein Schiphorst, SMI Wire B.V., Nijmegen, The Netherlands.

1LB07 Magnetic Field and Electromagnetic Force Analysis of 3-Phase Air-Core Superconducting Power Transformer

T. Kataoka, H. Matsuoka, T. Mouri, S. Nishikata, Tokyo Denki Univ.; H. Yamaguchi, Electrotechnical Lab.; Y. Sato, Tokyo Inst. of Tech..

1LB08 Superconducting Power Control Demonstrator Unit

Malcolm McCulloch, Mark Childs, David Dew-Hughes, Oxford University.

1LB09 Superconducting Power Control Demonstrator Unit

Malcolm McCulloch, Mark Childs, David Dew-Hughes, Oxford University.

1LB10 The Superconducting Transformer of the Samsung Superconductor Test Facility (SSTF)

Victor Keilin, Ivan Kovalev, Sergei Kruglov, Vladimir Shcherbakov, Igor Shugaev, Mikhail Surin, Kurchatov Institute; Sungkeun Baang, Hyungjung Choi, Keeman Kim, Yongjin Kim, Samsung Advanced Institute of Technology.

1LB11 Considerations about superconducting transformers

Guillaume Donnier-Valentin, Pascal Tixador, Emmanuel Vinot, CNRS/CRTBT-LEG.