



AOSOC 2000



**Applied
Superconductivity
Conference**

Technology for the 21st Century

Pre-Conference
Booklet

September 17 - 22, 2000

Pavilion Convention Center • Virginia Beach, Virginia USA

5EG11 Arrays of Josephson Junctions Coupled by Distributed Circuit

V.K. Kornev, N.A. Shcherbakov, Physics Department, Moscow State University, Moscow, Russia; P.B. Mozhaev, A.D. Mashtakov, K.Y. Constantinian, G.A. Ovsyannikov, Institute of Radio Engineering and Electronics RAS, Moscow, Russia .

5EH Low- Tc SQUID's

5EH01 Superconducting electronics requirements for single-photon, energy resolving detectors

A.M. Gulian, G.G. Fritz, K.S. Wood, P.L. Hertz, D. VanVechten, NRL.

5EH02 Fast ULT SQUID Multiplexer with Cold Preamplifiers

V. Polushkin, J. Lumley, Oxford Instruments, Newton House, Cambridge Business Park, Cambridge, CB4 0WZ United Kingdom.

5EH03 Fast Digital Double Relaxation Oscillation SQUID

M. Podt, A.J. Mieog, J. Flokstra, H. Rogalla, Low Temperature Div., Dept. of Applied Physics, University of Twente, Enschede, The Netherlands.

5EH04 Low-noise S-band DC SQUID Amplifier

G.V. Prokopenko, S.V. Shitov, D.V. Balashov, P.N. Dmitriev, V.P. Koshelets, Institute of Radio Engineering and Electronics RAS, Moscow, Russia; J. Mygind, Department of Physics, Technical University of Denmark, Lyngby, Denmark.

5EH05 Niobium-Copper Superconductor-Normal Metal-Superconductor Asymmetry Modulated SQUIDS

G. Burnell, F. Kahlmann, W.E. Booij, E.J. Tarte, M.G. Blamire, IRC in Superconductivity, University of Cambridge.

5EH06 Analysis of the damping of the signal coil resonances in dc SQUIDS

Mikko Kiviranta, Heikki Seppä, VTT Automation, Measurement Technology, Otakaari 7 B, Espoo, FIN-02110, Finland.

5EH07 Multi-loop Relaxation Oscillation SQUID Magnetometers with Large Flux-to-Voltage Transfer Functions

Jun Kawai, G. Uehara, M. Higuchi, H. Ogata, H. Kado, Applied Electronics Laboratory, Kanazawa Institute of Technology.

5EH08 DC SQUID Series Array Amplifiers with 120 MHz Bandwidth

P. A. Neil, M. E. Huber, R. G. Benson, D. A. Burns, A. M. Corey, C. S. Flynn, Y. Kitaygorodskaya, O. Massihzadeh, University of Colorado at Denver; G. C. Hilton, J. M. Martinis, National Institute of Standards and Technology.

5EH09 Long Baseline Thin Film SQUID Gradiometer

R. Stolz, V. Zakosarenko, L. Fritzsche, H.-G. Meyer, IPHT Jena, Dept. of Cryoelectronics, P.O.Box 100239, D-07702 Jena, Germany.

5EH10 Subranging Digital SQUID Ammeter

Deepnarayan Gupta, Masoud Radparvar, HYPRES Inc..

5EH11 SQUID Operational Amplifier

K. D. Irwin, National Institute of Standards and Technology, Boulder, Co.; Martin E. Huber, University of Colorado at Denver, Co..

5EH12 The Microstrip DC SQUID Amplifier

Michael Mück, Marc-Olivier André, John Clarke, Department of Physics, University of California, Berkeley, CA 94720-7300, U.S.A..

5EH13 Superconducting Multiple Loop Quantum Interferometers

Christoph Haeussler, Joerg Oppenlaender, Nils Schopohl, Thomas Traeuble, University of Tuebingen, Institute for Theoretical Physics, Auf der Morgenstelle 14, Tuebingen, D-72076 Germany.

5EH14 LC-resonant voltage response of superconducting multi-loop quantum interference filters

Christoph Haeussler, Joerg Oppenlaender, Nils Schopohl, University of Tuebingen, Institute for Theoretical Physics, Auf der Morgenstelle 14, Tuebingen, D-72076 Germany.

5EIa NDE Using SQUID's

5EIa01 Aircraft Wheel Testing with Remote Eddy Current Technique using a SQUID Magnetometer

R. Hohmann, D. Lomparski, H.-J. Krause, ISI, Forschungszentrum Jülich; M. v. Kreutzbruck, IAP, University of Giessen; W. Becker, Lufthansa Technik AG, Frankfurt.

5EIa02 Hybrid Double-D Sheet-Inducer for SQUID-based Nondestructive Testing of conducting materials

Jose A. Lobera-Serrano, James R. Claycomb, John H. Miller, Jr., Kamel Salama, Texas Center for Superconductivity, University of Houston, Texas.

5EIa03 Electromagnetic Microscope Eddy current probe patterned in YBCO for Nondestructive Evaluation of Airframes

Walter Podney, Marcio de Andrade, SQM Technology, Inc.; James Murduck, TRW, Inc..

5EIa04 Non Destructive Testing using the High Tc SQUID

Hideaki Nakane, Muroran Institute of Technology, 27-1 Mizumoto-cho, Muroran, Hokkaido, 050-8585 Japan.

5EIa05 Detection of Deep Flaws by Using The SQUID-based Nondestructive Evaluation System

J.T. Jeng, Y.C. Liu, S.Y. Yang, H.E. Horng, Department of Physics, National Taiwan Normal University; H.C. Yang, Department of Physics, National Taiwan University.

5EIa06 Improving the Detection of Flaws in Steel Pipes Using SQUID Planar Gradiometers

E. Andrade Lima, A. C. Bruno, Pontificia Univ. Catolica do Rio de Janeiro, 22453-900 Brazil.

5EIa07 A Linear Array of 10 HTS SQUIDS for Non-Destructive Evaluation

M. A. Espy, A. N. Matlashov, R. H. Jr. Kraus, Los Alamos National Laboratory.

5EIa08 High Tc SQUID Microscope Study of Mechanical Stress Induced Changes in Magnetic Behavior of Ferromagnetic Steels*

N.F. Heinig, J.W. Chan, T.J. Shaw, R. McDermott, J.W. Jr. Morris, John Clarke, UC Berkeley & LBNL.

5EIa09 Development of NDE Method Using SQUID for Reconstruction of Defect Shape

Yoshimi Hatsukade, Naoko Kasai, Hiroshi Takashima, Fumio Kojima, Ryosuke Kawai, Atsushi Ishiyama, Electrotechnical Laboratory, 1-1-4 Umezono, Tsukuba, Ibaraki, 305-8568 Japan.

5EIB HTS SQUID: Operation in Magnetic Fields

5EIB01 Effect of Large Magnetic Field Variations on the Performance of Directly Coupled High-Tc SQUID Magnetometers

John W. Purpura, NSW Coastal Systems Station.

5EIB02 Low-frequency noise of optimized direct-coupled high-Tc SQUID magnetometers exposed to environmental fields

F. Ludwig, D. Drung, Th. Schurig, Physikalisch-Technische Bundesanstalt, 10587 Berlin, Germany; A.B.M. Jansman, J. Flokstra, University of Twente, 7500 AE Enschede, The Netherlands.

5EIB03 HTS dc SQUID behavior in external magnetic fields

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