### INVITED CONTRIBUTIONS

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<tr>
<td>P. Tixador</td>
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<td>M. Noe</td>
<td>Applications and Requirements for YBCO Coated Conductors in FCL</td>
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<td>J. Cho</td>
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<td>D. Larbalestier</td>
<td>Development of HTS Power Cable - Requirements for Wire</td>
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<td>K. Hayashi</td>
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<td>K. Tanabe</td>
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<td>Improving Performance of RABiTS/MOD-YBCO-based 2G Wire</td>
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<td>M. Rupich</td>
<td>Development of MOD-based Processing for Low Cost Coated Conductors</td>
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<tr>
<td>T. Izumi</td>
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<td>D. Wesolowski</td>
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<td>V. Solovyov</td>
<td>Optimization of YBCO Nucleation on Technical Buffers</td>
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<td>B. Moeckly</td>
<td>HTS films grown by reactive coevaporation on simplified coated conductor IBAD-MgO templates for low cost manufacturing</td>
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<td>R. Feenstra</td>
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<td>M. Miura</td>
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<td>Microstrain influence on vortex pinning in YBCO nanocomposites grown from metal organic solutions</td>
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<td>A. Pomar</td>
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<td>D. C. van der Laan</td>
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<td>S. S. Oh</td>
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<td>Design of a Compact, Lightweight Superconducting Power Transmission Cable for Specialized High Power Applications</td>
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<td>W. Goldacker</td>
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DEADLINES

Abstract submission
deadline
25 Set 2009

Early registration
deadline
20 Oct 2009

Hotel registration
deadline:
20 Oct 2009

Short Communications:
23 Nov 2009

Invited Contributions
Oral Contributions
Poster Contributions
Deadlines
Registration
Instructions for Presenters
Abstracts
Short Communication
Hotel Reservation
How to Get
REGISTRATION

The registration fee will include lunches, breaks, dinners, all technical sessions, and materials (booklet and pendrive)

REGISTRATION FORM

EARLY REGISTRATION DEADLINE
26 October 2009

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<td>FULL PARTICIPANT</td>
<td>375 €</td>
<td>475 €</td>
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<tr>
<td>STUDENT PARTICIPANT</td>
<td>250 €</td>
<td>300 €</td>
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INSTRUCTION FOR PRESENTERS

1. **Instructions for Oral presenters**
   Please bring your presentation, in PowerPoint or PDF format on a CD or USB drive, to the presentation table (will be clearly labeled at the meeting) at least 15 minutes before your session starts. These files will be loaded onto a PC and prepared for your presentation. Qualified technicians will be available. If you must use your own computer, please notify the registration desk when you arrive for the meeting. Since swapping out computers creates delays and the program is extremely full, please only request this option if you have special software needs for your presentation. For governmental agency presenters: if required, please be sure clearance information is included on the first slide of your presentation.

2. **Instructions for Poster presentations**
   Two poster sessions are scheduled. 
   **Format:** The viewable size of the poster board is vertical 1,10m and horizontal 0,90m. Convenient tape will be provided for every presenter.

3. **Short Communications**
   Presentations consisting of two-page communications can be submitted and will be published at the CCA2009 workshop website (www.icmab.es/cca2009) and EURONEWS website (www.ewh.ieee.org/tc/csc/europe/newsforum) after the workshop. The submission will be carried out through the web of the workshop with the established procedure and the deadline for the submission is 23 Nov 2009. 
   Adobe PDF or Microsoft Word (DOC)

4. **PowerPoint and Poster Presentation Materials**
   All speakers and poster presenters are asked to submit their PowerPoint Presentation or Poster Presentation in pdf format for publication on CD and/or the post-conference website. Each author should sign a release form that states the presentation can be published as a pdf file. Forms will be available at the Presentation Table in the Workshop Registration area. Please visit the table to provide your presentation for uploading.
ABSTRACTS

1. Papers intended for presentation at CCA2009 shall have been approved by a committee. You can submit your abstract by using our DOC TEMPLATE.
SHORT COMMUNICATION

- Short communications related to CCA2009 can be submitted at SHORT COMMUNICATION SUBMISSION.
- Please, format your short communication by using our DOC TEMPLATE.
## HOTEL RESERVATION

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<td>HOTEL CATALONIA RAMBLAS</td>
<td>Pelai, 28</td>
<td>08001 Barcelona</td>
<td>Single Room</td>
<td>110.-€ *</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Double Room</td>
<td>125.-€ *</td>
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TRAIN
AEROPORT-PLAÇA DE CATALUNYA

TAXI
24h a day. Price about 30 euro (depends on traffic and luggage)

MORE INFO
OVERVIEW OF SESSIONS AND CONTRIBUTIONS

SUNDAY, NOVEMBER 22

12:00  REGISTRATION

14:00-14:25  WELCOME & OPENING

14:00  Welcome
14:15  10 Years of CCA. What did we achieve?
      H. C. Freyhardt
      University of Houston, USA

14:25-15:55  SESSION A: HTS APPLICATIONS REQUIREMENTS

14:25  Futurred: towards the 2025 Spanish Grid
      S. Cascante
      Spanish Electric Grid Platform, Spain

14:55  Design of Coated Conductors for FCL
      P. Tixador, N. T. Nguyen, C. Barnier
      Institut Nuél/ G2Elab, CNRS, Grenoble, France

15:10  Applications and Requirements for YBCO Coated Conductors in Fault Current Limiters
      M. Noe
      Karlsruhe Institute of Technology, Institute for Technical Physics, Germany

15:25  Development of REBCO superconducting motors in Japan
      Kyushu University, Japan

15:40  High efficient superconducting motors for 100 up to 1000 kWs using 2G tapes
      T. Reis
      Oswald Elektromotoren GmbH, Germany

15:55-16:25  COFFEE/TEA BREAK

16:25-17:35  SESSION A: continued

16:25  High Field Magnets with YBCO coated conductors
      Applied Superconductivity Center, Florida State University, USA

16:40  Development of HTS Power Cable - Requirements for Wire
      K. Hayashi
      Sumitomo Electric Industries, Japan

16:55  Update on HTS cables
      C.-E. Bruzek and Jean maxime Saugrain
      Nexans France, France

17:10  The R&D status of HTS Power Cable in DAPAS Program
      J. Cho, S.-K. Lee, B.-M. Yang
      Korea Electrotechnology Research Institute, Korea

17:25  Development of REBCO HTS cables in Japan
      N. Fujiwara, Y. Shiohara, T. Masuda, S. Mukoyama, T. Saitoh, Y. Aoki
      International Superconductivity Technology Center, ISTEC, Japan
OVERVIEW OF SESSIONS AND CONTRIBUTIONS

17:35-18:05 DISCUSSION ON SESSION A

18:05-19:05 POSTER SESSION

A-P01: Kinetics of response and recovery of CC based fault current limiting devices
A. Usoskin, D. Kirschel, A. Handaze, A. Rutt, B. Prause, K. Schlenza, F. Mumford
Bruker HTS GmbH, Germany

A-P02: Finite element modelisation of the magnetization of a radial flux superconducting low power motor
R. Maynou, J. Lopez, R. Torres, X. Granados
Escola Universitària d’Enginyeria Tècnica Industrial de Barcelona, UPC, Spain

A-P03: Striated strands for ROEBEL cables
S. Terzieva, R. Nast, W. Goldacker, A. Kudymow, F. Grilli
Forschungszentrum Karlsruhe, Institute for Technical Physics, Germany

A-P04: Steady State Modelling of a HTSC Cable in PSS/E for Grid Impact Analysis
G. Del Rosario, A. Sumper, X. Granados, A. Sudrià-Andreu
Escola Universitària d’Enginyeria Tècnica Industrial de Barcelona, UPC, Spain

C-P05: Sustainable CSD methods for coated conductor designs
Ghent University, Belgium

C-P06: Effect of Humidity of Ar-5%H2 Processing Atmosphere on Epitaxy of (Ce0.8Gd0.2)O2 and La2−xZr2−xO7 Buffered Ni-5%W RABITS Produced Using Chemical Solution Deposition
M. Rikel, S. Mahachi, M. Klein, J. Schütz, J. Ehrenberg, J. Bock
Nexans SuperConductors GmbH, Germany

C-P07: Decomposition and Reformation of YBCO Layer during Multiple MOD-TFA Coatings
M. Rikel, S. Mahachi, B. Hoppe, J. Bock
Nexans SuperConductors GmbH, Germany

C-P08: Chemical process for buffers layers
S. Petit, J. L. Soubeyroux, P. Odier, V. Roche, E. Sarigiannidou, C. Jiménez, D. Luneau
CRETA, Grenoble, France

C-P09: Mechanical stability of CeO2 buffer layers for coated conductors
Centro DIOPMA, University of Barcelona, Spain

C-P10: Improvement of surface roughness of metallic substrate using MOD oxide layer for highly in plane textured IBAD-MgO buffer layer
Superconductivity Research Laboratory, ISTEC, Japan

C-P11: Application of textured IBAD-TiN layers in coated conductor architectures
R. Hühlne, R. Gärtner, K. Güth, L. Schultz, B. Holzapfel
IFW Dresden, Germany

C-P12: Highly reproducible inkjet deposition of smooth and biaxially textured cerium gadolinium oxide layer
M. Mosiadz, R. I. Tomov, S. C. Hopkins, B. A. Glowacki, G. Martin, B. Holzapfel
Department of Materials Science and Metallurgy, University of Cambridge, UK

C-P13: Inkjet printing of superconducting layers
Institut de Ciencia de Materials de Barcelona-CSIC, Spain

C-P14: MOD Deposition of Ce0.2Zr0.8O2−y Single Buffer Layer for YBa2Cu3O7−x Coated Conductors
Institut de Ciencia de Materials de Barcelona-CSIC, Spain

UPDATED: NOVEMBER, 13, 2009
C-P15: Fast pyrolysis and low fluorine precursors for YBCO film growth
X. Palmer, N. Romà, S. Ricart, A. Pomar, T. Puig, X. Obradors
Institut de Ciència de Materials de Barcelona-CSIC, Spain

C-P16: Intermediate phase evolution and growth of high critical current YBCO thin films by TFA-MOD process
K. Zalamova, A. Pomar, T. Puig, X. Obradors
Institut de Ciència de Materials de Barcelona-CSIC, Spain

C-P17: Growth kinetics and its influence on microstructure and critical current of TFA-YBCO films under low-pressure conditions
H. Chen, K. Zalamova, A. Pomar, X. Granados, T. Puig, X. Obradors
Institut de Ciència de Materials de Barcelona-CSIC, Spain

C-P18: Fabrication of Thick SmBCO/IBAD-MgO Coated Conductors using co-evaporation for High Critical Current
Korea Electrotechnology Research Institute, Korea

C-P19: Evolution of Y1Ba2Cu3O7-x films derived from low fluorine propionate precursors coating solution
A. Angrisani Armenio, G. Celentano, V. Galluzzi, A. Mancini, A. Augieri, A. Rufoloni, A. Vannozzi, L. Ciontea, T. Petrisor, I. Davoli, I. Colantoni, G. Contini
ENEA, Frascati Research Centre, Italy

C-P20: Ink-jet printing of water-based YBa2Cu3Ox coatings and patterns
J. Feys, P. Vermeir, M. Bäcker, B.A. Glowacki, P. Lommens, K. De Buysser, I Van Driessche
Ghent University, Belgium

20:00 DINNER
MONDAY, NOVEMBER 23

08:30-09:50 SESSION B: CHALLENGES IN LONG LENGTH SCALE UP OF HIGH PERFORMANCE COATED CONDUCTORS

08:30 Present Status of Long PLD-IBAD Tapes in Japan
Superconductivity Research Laboratory, ISTEC, Japan

08:45 Scaling up PLD-based CCs
A. Usoskin, M. Waschulewski, K. Schlenga
Bruker HTS GmbH, Germany

09:00 Status and outlook for IBAD-MOCVD-based coated conductors
V. Selvamanickam, Y. Chen, G. Carota, Y. Qiao, A. Rar, A. Knoll, Y. Xie, J. Dackow
University of Houston, USA

09:15 R&D status of long length coated conductor in Korea
S.-S. Oh
Korea Electrotechnology Research Institute, Korea

09:30 Development of GdBaCoCoO Coated Conductor on 30mm Wide Clad-Type Textured Metal Substrates
K. Hayashi
Sumitomo Electric Industries, LTD, Japan

09:40 Multi-filamentary process for various coated conductors by laser scribing method
T. Machi, K. Tanabe
Superconductivity Research Laboratory, ISTEC, Japan

09:50-10:20 COFFEE/TEA BREAK

10:20-12:50 SESSION C: STRATEGIES TOWARD LOW-COST COATED CONDUCTORS

10:20 Improving Performance of RABiTS/MOD-YBCO-based 2G Wire
M. Rupich, X. Li, S. Sathyamurthy, C. Thieme. S. Fleshler, X. Liu
American Superconductor Corporation, USA

10:35 Development of MOD-based Processing for Low Cost Coated Conductors
Superconductivity Research Laboratory, ISTEC, Japan

10:50 High rate all-solution deposited YBCO coated conductors
D. Wesolowski, P. Clem
Sandia National Laboratory, USA

11:05 Advances in TFA YBaCuO thin film growth
Institut de Ciencia de Materials de Barcelona-CSIC, Spain

11:20 Interlayer Mitigation and Fabrication of High-Ic Conductors from Thick Multi-coated MOD Precursors
Oak Ridge National Laboratory, USA

11:35 Optimization of YBCO Nucleation on Technical Buffers
V. Solovyov, Q. Li, J. Qing, Z. Jie, K. Develos-Bagarinoa
Brookhaven National Laboratory, USA

11:50 HTS films grown by reactive coevaporation on simplified coated conductor IBAD-MgO templates for low cost manufacturing
B. Moekly, V. Matias
Superconductor Technologies, Inc., USA
12:05  **Ink-jet printing of Coated Conductors**  
*Zenergy Power GmbH, Germany*

12:20  **Development of MOCVD-YBCO carrying higher currents on chemically coated buffers**  
R. Muydinov, G. Bräuer, O. Stadel  
*Institut für Oberflächentechnik, Braunschweig, Germany*

12:30  **Planarization of Metallic Substrate for IBAD-MgO by MOD-GZO Layers**  
T. Izumi  
*Superconductivity Research Laboratory, ISTEC, Japan*

12:40  **La₂Zr₂O₇ layers obtained by MOD as a single buffer layer for low cost coated conductors**  
*Institut Néel/CERTA-CNRS, France*

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**12:50-13:50  LUNCH**

**13:50-16:05  SESSION D1: EFFECTIVE APPROACHES TO ENHANCE COATED CONDUCTORS PERFORMANCE: PINNING AND CRITICAL CURRENTS**

13:50  **Thermal fluctuations and the limits to vortex pinning in superconductors**  
L. Civale  
*Los Alamos National Laboratory, USA*
14:05  Effect of strain and incorporation of double-perovskite-based Ta- and Nb- oxides on flux-pinning in coated conductors  
A. Goyal, S.H. Wee, E. Specht, Y. Zuev, C. Cantoni and Y. Gao  
Oak Ridge National Laboratory, USA

14:20  Improved in-field performance in MOCVD-based coated conductors  
University of Houston, USA

14:35  High Current, Low Cost YBCO Conductors - What’s Next?  
University of Cambridge, UK

14:50  Microstrain influence on vortex pinning in YBCO nanocomposites grown from metal organic solutions  
Institut de Ciència de Materials de Barcelona-CSIC, Spain

15:05  Relationships between JC enhancement and dimensionality of artificial pinning centers  
Kyushu University, Japan

15:20  Nano-Engineering of Phase Separable Inclusions in High Performance YBCO Thick Films for Coated Conductors  
Los Alamos National Laboratory, USA

15:35  Irreversibility Line up to 65T in Nanoparticles Dispersed TFA-MOD YGdBCO Coated Conductors  
M. Miura, S. A. Baily, B. Maiorov, L. Civale, J. O. Willis, T. Izumi, K. Tanabe, Y. Shiohara  
Superconductivity Research Laboratory, ISTEC, Japan

15:50  Influence of the deposition temperature on the superconducting properties of YBCO/BZO quasimultilayers  
A. Kießling, J. Hänisch, E. Reich, T. Thersleff, B. Holzapfel, L. Schultz, M. Weigand, J. Durrell  
IFW Dresden, Germany

16:05-16:35  COFFEE/TEA BREAK

16:35-16:55  SESSION D1: continued

16:35  In-Field Critical Current of YBa$_2$Cu$_3$O$_{7-x}$ Films with Correlated Pinning Centers by 3D Computer Simulations of Vortex Dynamics  
J. Rodriguez  
California State University, USA

16:45  Multipurpose Additions to YBCO Thin Films  
S. Harrington, J. Durrell, H. Wang, J. MacManus-Driscoll  
University of Cambridge, UK
**OVERVIEW OF SESSIONS AND CONTRIBUTIONS**

**16:55-17:45  SESSION D2: EFFECTIVE APPROACHES TO ENHANCE COATED CONDUCTORS PERFORMANCE: BEYOND PINNING**

16:55  **Effect of Strain on Flux Pinning in YBCO Coated Conductors**  
*National Institute of Standards and Technology, and University of Colorado, USA*

17:10  **Application of textured highly alloyed Ni-W tapes for coated conductors**  
*IFW Dresden, Germany*

17:25  **Development of cube textured nickel-copper-tungsten substrate for YBCO coated conductors**  
A. Vannozzi, A. Mancini, A. Angrisani Armenio, A. Augieri, V. Galluzzi, A. Rufoloni, G. Celentano, M. Nasui, L. Ciontea, T. Petrisor  
*ENEA Centro Ricerche Frascati, Italy*

17:35  **Development of advanced texture templates for YBCO coated tapes**  
H. L. Suo, Y. Zhao, M. M. Gao, M. Liu, L. Ma, J.-C. Grivel  
*Beijing University of Technology, China*

**17:45-18:45  POSTER SESSION**

B-P21:  **Alternating beam assisted deposition (ABAD) and it’s up-scaling towards large area manufacturing of HTS coated conductors**  
A. Hallbauer, L. Kirchhoff, A. Rutt, K. Schlenga, A. Usoskin  
*Bruker HTS GmbH, Germany*

D1-P22:  **Preparation of YBCO thin film- nanoparticle heterostructures in a novel PLD-Sputtering System**  
M. Sparing, R. Hühne, S. Fähler, J. Hänisch, B. Rellinghaus, L. Schultz, B. Holzapfel  
*IFW Dresden, Germany*

D1-P23:  **Ac susceptibility analysis of YBCO-BZO nanocomposites with isotropic-strong pinning**  
E. Bartolomé, A. Palau, T. Puig, X. Obradors  
*Escola Universitaria Salesiana de Sarría, Barcelona, Spain*

D1-P24:  **Pinning energetic analysis of different artificial defects in YBCO using the Bitter decoration technique**  
R. Luccas, A. Palau, X. Granados, T. Puig, X. Obradors  
*Institut de Ciencia de Materials de Barcelona-CSIC, Spain*

D1-P25:  **Effect of Strain on Flux Pinning in YBCO Coated Conductors**  
J. Douglas, D. C. van der Laan, M. W. Rupich, Y. Y. Xie, A. Usoskin, H. C. Freyhardt  
*National Institute of Standards and Technology, USA*

D1-P26:  **Thickness Dependent Grain Boundary Properties in ex situ YBCO Films on Rolling Assisted Biaxially Textured Substrates**  
*Oak Ridge National Laboratory, USA*

D1-P27:  **Current transport properties of Gd₃Ba₂Cu₂O₇₋ₓ coated conductor deposited by the in-plume PLD reel-to-reel technique**  
R. Fuger, T. Kiss, M. Inoue, N. Chikumoto, S. Lee, Y. Yamada, T. Izumi  
*Kyushu University, Japan*

D1-P28:  **Angular dependence of in-field E-J characteristics in GdBCO coated conductor**  
*Kyushu University, Japan*
D1-P29: Effective magnetic pinning in YBCO using orthoferrite RFeO₃  
University of Cambridge, UK

D1-P30: Enhanced flux pinning in YBa₂Cu₃O₇₋ₓ thin films using YBa₂NbO₆ additions  
G. Ercolano, S. A. Harrington, J. L. MacManus-Driscoll, H. Wang, C. F. Tsai  
University of Cambridge, UK

D1-P31: Synthesis of nanoparticles and its application to obtain HTSC nanocomposite thin films: Ex situ approach  
Institut de Ciencia de Materials de Barcelona-CSIC, Spain

D1-P32: Control of Ba(Er₀.₅Nb₀.₅)O₃ nanorods in PLD-ErBa₂Cu₃O₇₋ₓ films  
Kyushu University, Japan

D2-P33: Filament transposition for reduction of AC losses in CC tapes  
G. Kotzyba, R. Nast, B. Ringsdorf, W. Goldacker, R. Semerad  
Karlsruhe Institute of Technology, Germany

D2-P34: Experimentally determined transport and magnetization ac losses of small cable models constructed from YBCO coated conductors  
J. Šouc, M. Vojenčiak, F. Gömöry  
Institute of Electrical Engineering, Slovak Republic

D3-P35: Magnetization AC loss of stacks made from YBCO coated conductors with various substrates  
M. Vojenčiak, J. Sour, F. Gömöry, E. Pardo  
Institute of Electrical Engineering, Slovak Republic

D3-P36: Computed current distribution in HTS tapes obtained from Hall magnetic mapping by inverse problem solution  
M. Carrera, J. Amorós, X. Granados, R. Maynou, T. Puig, X. Obradors  
Universitat de Lleida, Spain

D3-P37: Critical currents in meandered coated conductors for Roebel cables  
M. Chudy, J. Emhofer, E. Pardo, F. Hengstberger, M. Eisterer, H. W. Weber  
Vienna University of Technology, Atominstitut, Austria

D3-P38: Homogeneous Flux Flow Dissipation in GdBCO PLD/IBAD Superconducting Tapes  
A. Matsekh, M. Inoue, T. Kiss, S. Miyata, A. Ibi, Y. Yamada, T. Izumi  
Kyushu University, Japan

20:00  DINNER
TUESDAY, NOVEMBER 24

08:30-10:00  SESSION D2: continued

08:30  Recent Progress in the Theory of HTS Cable AC Loss
  A. Malozemoff
  American Superconductor Corp., USA

08:45  Influence of magnetic substrate on ac loss characteristics of two-layer cables comprising coated conductors
  N. Amemiya, N. Fujiwara
  Kyoto University, Japan

09:00  AC loss of CC tape on bilayer ferromagnetic substrate
  F. Gömöry
  Institute of Electrical Engineering, Slovak Republic

09:15  New ideas to reduce ac losses in CCs (Low ac loss YBa$_2$Cu$_3$O$_7$ conductors for applications)
  B. Glowacki, N. A. Rutter, M. Majoros
  University of Cambridge, UK

09:30  Simulation of ac loss in Roebel coated conductor cables
  F. Grilli, E. Pardo, M. Vojenciak, S. Terzieva
  Karlsruhe Institute of Technology, Germany

09:40  Electromagnetic response of curved superconducting tapes conforming to a cylinder
  Y. Mawatari
  National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan

10:00-10:30  COFFEE/TEA BREAK

10:30-12:05  SESSION D3: EFFECTIVE APPROACHES TO ENHANCE COATED CONDUCTORS PERFORMANCE: CHARACTERIZATION

10:30  Non-destructive characterization techniques for long-length coated conductors
  K. Tanabe, T. Hato, T. Machi, J. Kawano, S. Adachi, K. Nakao
  Superconductivity Research Laboratory, ISTEC, Japan

10:45  Influence of chemistry on nucleation and growth in TFA-MOD coated conductors
  D. J. Miller, V. A. Maroni, N. J. Zaluzec, Z. Chen, K. Cooley, X. Li, S. Sathyamurthy, M. Rupich, R. Feenstra
  Argonne National Laboratory, USA

11:00  Advanced characterization techniques for coated conductors (cc’s)
  H. Weber
  Atomistitut, Vienna University of Technology, Austria

11:15  Thermal stability characterization of coated conductors under over-currents using transport and optical measurements
  J. Pelegrin, E. Martinez, L. A. Angurel, N. Andrés, M. P. Arroyo, Y. Y. Xie, V. Selvamanickam
  Instituto de Ciencia de Materiales de Aragón, Spain

11:30  Characterization of dissipation evolution at YBa$_2$Cu$_3$O$_{7-x}$ grain boundaries using low-temperature near-field scanning microwave microscopy
  University of Kansas, USA
11:45  Effect of pinning enhancement techniques on the critical current of grain boundaries in coated conductors
University of Cambridge, UK

11:55  Visualization of Time-Dependent AC Loss Distribution for Coated Conductors
K. Higashikawa, Y. Honda, M. Inoue, M. Iwakuma, T. Kiss, K. Nakao, Y. Yamada, T. Izumi
Kyushu University, Japan

12:05-12:50  SESSION E: NEW VISIONS FOR COATED CONDUCTOR APPLICATIONS

12:05  Design of a Compact, Lightweight Superconducting Power Transmission Cable for Specialized High Power Applications
T. J. Haugan, P. N. Barnes
Air Force Research Laboratory, USA

12:20  Possible new concepts for AC CC- cables with very high currents
W. Goldacker, S. I. Schlachter, A. Kudymow, A. Drechsler, S. Terzieva
Karlsruhe Institute of Technology, Germany

12:35  Is it possible to get what we really want from YBCO- a multifilament, preferably a round-wire conductor?
D. Larbalestier
Applied Superconductivity Center, Florida State University, USA

12:50-13:50  LUNCH

13:50-14:25  SESSION E: continued

13:50  New U.S. DOE initiatives in Superconductivity research
L. Civale
Los Alamos National Laboratory, USA

14:05  Epitaxial Growth of Superconductor on Structural, Single-Crystal, Faceted Fibers (SSIFFS): A Potential Route Towards Low ac-loss Wire
A. Goyal, S.H. Wee, E. Specht, Y. Zuev and C. Cantoni
Oak Ridge National Laboratory, USA

14:15  Energy Efficiency and Environmental Benefits of Superconducting Option in Distribution Level Grids
O. Romedenne, X. Granados, T. Puig, X. Obradors, S. Cascante
Institut de Ciència de Materials de Barcelona-CSIC, Spain

14:25-15:25  ROUND TABLE PARALLEL DISCUSSION
(SESSIONS B,C,D1,D2)

15:25-16:05  SUMMARIES OF ROUND TABLE DISCUSSION

16:05-16:30  CLOSING
VENUE

BARCELONA
Sprawled between the beaches of the Mediterranean and the hills of Montjuïc, Barcelona is a city whose personality bursts at every natural seam. The capital of Catalonia, one of Spain's 17 autonomous communities, Barcelona is also known as the country's most progressive city, always on the cutting-edge of European art, fashion and cuisine. What's more, its energy is unparalleled, with hundreds of bars, restaurants, cafes and clubs... so be prepared to party 'till dawn and hit the streets with the rest of the city's nearly 2 million inhabitants.

ICMAB-CSIC
The Institut de Ciència de Materials de Barcelona (ICMAB) is a research center which depends on the Consejo Superior de Investigaciones Científicas (CSIC). The Institute was set up in 1987 and subsequently, in April 1991, the laboratories were opened on the campus of the Autonomous University of Barcelona (UAB).

In 2007 the CSIC and the UAB created the UAB research park (PRUAB) as a joint entity to promote technology transfer.

The aim of the institute is to carry out research aimed at obtaining and characterising materials of industrial interest. Its activities are based on the synthesis, preparation, crystallization and characterisation of functional high-performance materials and nanomaterials which in some cases have led to the construction of device prototypes based on these materials.

Studies and improvements both of conventional materials as well as new molecular, supramolecular, magnetic, superconducting and porous materials etc. are being developed through projects and research contracts.
To develop these activities, at present there are 52 permanent research staff and a total of about 200 persons.

**DEPARTMENT OF SUPERCONDUCTING MATERIALS**

Superconducting Materials Department has been active in the field of superconducting materials since the discovery of High Temperature superconductors, more than 20 years ago, it has widely contributed to the field of vortex pinning analysis and materials development for more than 15 years and more recently, since about six years, it has shifted its interests towards the chemical solution approaches to superconducting thin films and coated conductors, due to its high potential in terms of cost-effectiveness for practical applications.

Overall, the research approach of the department is based on very vast scientific and technological interests which try to combine the generation of new knowledge in several fields (physics, materials, chemistry, nanotechnology) with the development of processes and materials generating industrial outputs (coated conductors, multifunctional oxide nanostructures) at effective costs (chemical deposition methods) and having a very significant attractive for a strategic sector with one of the highest social and environmental concern: the development of a sustainable energy paradigm.

**CONFERENCE SITE**

The Conference will be hosted at Hotel Catalonia Ramblas, just in the center of the city in the neighbourhood of the Plaza de Catalunya and the worldwide known boulevard "Las Ramblas".

**Address:** C/ Pelai, 28. 08001 Barcelona  Tel 34 93 316 84 00
**Fax.** (34) 93 2360026
**E-mail:** congresos.incentivos@hoteles-catalonia.es

**ACCOMPANYING PERSONS**

A large number of visit activities in widely spread topics are available. Activities such as visiting museums, from fine arts to science, music, architecture, dance, or simply enjoying the flavour of the city walking trough its streets and boulevards or getting a bath in the mediterranean sea in the long beaches, are waiting for you. Tour buses are available at plaça de Catalunya. Please, contact the reception desk at the hotel, get a look [here](#) or feel free to ask to the conference assistants: cca2009@icmab.es
PRESENTATION

SCOPE
The 2nd generation of high temperature superconductors, coated conductors (CC), have experienced a remarkable advancement in R&D and processing as well as in applications. CC will have a large impact on electrical and power engineering devices such as cables, fault current limiters, feeder lines, motors, generators and transformers, and on transportation and processing technologies as well as magnet systems, e.g. for medical diagnostics. The benefits of employing CC in future novel systems are lower costs, reduced energy consumption, higher efficiency of components with reduced volume and weight (thereby saving resources), fewer environmental concerns, and new functionalities. CCA 2009 will continue a series of international topical workshops on CCs for applications. The series was initiated in 2000 at the University of Göttingen, Germany, followed by workshops at Honolulu, Hawaii (2001), Gatlinburg, USA (2002), Orta S. Giulio, Italy (2003), Oiso Prince Hotel near Kamakura, Japan (2004), Santa Fe, USA (2005), Schloss Monrepos, Ludwigsburg, Germany (2006) and Jeju Island, Korea (2007), Houston (2008).

The venue at Barcelona will provide an atmosphere for intense discussions on substrate materials and buffer layers, processing technologies and strategies toward improved critical current performance and requirements and designs of CC for applications and future opportunities.

GOAL
The overall goal of CCA2009 is to establish the basic coated conductor (CC) characteristics necessary for use in the fabrication of practical HTS devices, and to identify the most efficient and effective means to achieve them. To realize these goals, requirements for practical HTS devices must first be established. The workshop program committee has, therefore, limited the scope to several areas of conductor development that are generally agreed upon as the top priority items to be addressed from a wire developer’s point of view. It is critical to solicit feedback from device manufacturers on these wire development efforts and of final superconducting device users.
COMMITTEE

INTERNATIONAL COMMITTEE

- Teruo Izumi (ISTEC)
- Kazuhiko Hayashi (SUMITOMO)
- Kaname Matsumoto (Kyushu Institute of Technology)
- Ken Marken (LANL)
- Venkat Selvamanickam (U. Houston)
- Amit Goyal (ORNL)
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- Herbert C. Freyhardt
- Alexander Usoskin (BRUKER)

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- Teresa Puig (ICMAB-CSIC)

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- Albert Calleja (ICMAB-CSIC)
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The Conference will be hosted at Hotel Catalonia Ramblas, just in the center of the city in the neighbourhood of the Plaza de Catalunya and the worldwide known boulevard “Las Ramblas”.

Address: C/ Pelai, 28. 08001 Barcelona  Tf 34 93 316 84 00
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BARCELONA INFO

Address

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08001 Barcelona
Tel. +34 93.316.84.00
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The workshop will start on Sunday 22nd November 2009 at 14:00 and will end on Tuesday 24th November 2009 at 17:00.

TOPICS

A. HTS Applications requirements (Fault current limiters, cables, rotating machines, SMES, transformers, high field magnets...)
B. Challenges in long length scale-up of high performance coated conductors
C. Strategies towards low cost coated conductors
D. Effective approaches to enhance coated conductors performance
   D1. Pinning and critical currents
   D2. Beyond pinning (ac losses, electromechanical properties...)
   D3. Characterization
E. New visions for coated conductor applications

STRUCTURE OF TECHNICAL SESSIONS

Sessions consist of brief invited and contributed presentations that address specific items of concern. Presentations are meant to provoke thought and insight for open discussion to follow, and not exclusively as a forum for providing latest updates.
Each session ends with a discussion with the speakers, guided by a moderator. During open discussion, speakers may clarify their presentations, and are encouraged to contribute to the session topic in general. Poster sessions will be also scheduled to promote direct contact and discussion among the participants.

Each participant is asked to attend the Tuesday roundtable discussion session, choosing one of four topical areas where ideas will be shared. A moderator will keep track of innovative ideas or achievements as they emerge, and will share them with the Session Summaries speakers in preparation for the closing session.
CONTACT

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Preparation of Abstracts for CCA2009: Two Page Abstract Format

First A. Author and Second B. Author
affiliation (all on one line if possible)

Third C. Author
affiliation

Abstract—These instructions show by example how to prepare your two page abstract which will be published on the website prior to the workshop. You will need to submit your paper as Word, Postscript or Adobe Acrobat PDF format file via email (cca2009@icmab.es). All submissions must be formatted for US Letter 8.5 inches (21.59 cm) in X 11 inches (27.94 cm) page size. Only electronic submissions will be accepted.

I. INTRODUCTION

A. Second

Follow the type sizes specified in Table I as best you can. Use a proportional, serif typeface such as Times or Dutch Roman. Avoid sans serif typefaces such as Swiss or Helvetica. If your paper is longer than 2 pages, you may shorten it by using a slightly smaller type size for the main text.

1) Third level heading Format: In formatting your 8.5 in. X 11 in. page, set the top margin to 1 in. (2.54 cm) and the bottom margin to 0.83 in. (2.11cm). Set the left and right margins to 0.7 in. (1.78 cm). This gives a column length of 9.122 in. (23.17 cm). The column width is 3.456 in. (8.78 cm). The space between the two columns is 0.100 in (0.254 cm). Paragraph indentation is about 0.14 in (0.35 cm).

Don’t use any page numbers.

II. HELPFUL HINTS

Examples for Figures, Tables and Equations are shown in the following sections:

A. Equations

\[ \int_{0}^{\infty} \exp(-\lambda) \left( z - z_i \right) \lambda^{-1} J_1(\lambda r_i) J_0(\lambda r_j) d\lambda. \]

(1)

Fig. 1. This line is the figure subtitle.

ACKNOWLEDGMENT

REFERENCES