

SAMPE

Europe

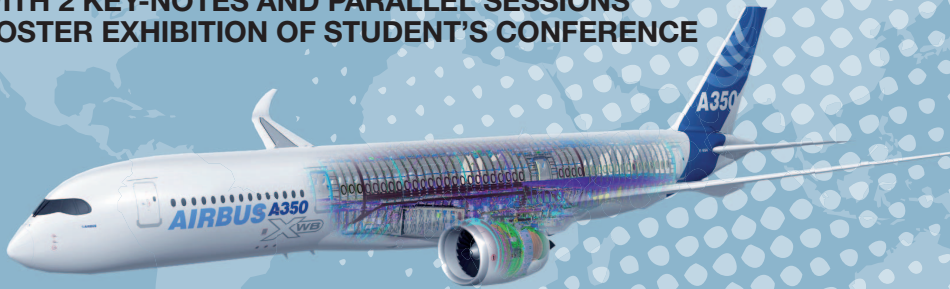


32nd International Technical Conference & Forum
March 28th - 29th 2011

New Material Characteristics to cover New Application needs

SEICO 11 - NEW : 2 DAYS CONFERENCE

WITH 2 KEY-NOTES AND PARALLEL SESSIONS
POSTER EXHIBITION OF STUDENT'S CONFERENCE



Hotel Mercure ParisPorte
de Versailles Expo
F-92174 Vanves (Paris)

SEICO 11 - Preliminary Programme, Registration & Hotel Form

www.sampe-europe.org

sebo@sampe-europe.org

SAMPE EUROPE 32nd International Conference – SEICO II Paris

At a Glance

SUNDAY, 27th. March: Welcome-Reception from 18.30–20.00h pm at Hotel MERCURE
Please refer to page 12 and to the registration form!

MONDAY, 28th March

08.00 – 16:30 Registration Sessions
09.00 – 18.05

09.00 – 10.00 Opening & Key Note Lecture 1

Opening Seico II
 B. Beral

Overview of Composites Research and Development Activities in JAXA, Japan Aerospace Exploration Agency
 Takashi Ishikawa, JAXA Tokyo

10.00 – 10.30 Coffee Break

10.30 – 12.30 **Session 1**

Plenary Session: MAAXIMUS
 J. Gaudin

MAAXIMUS – A Key European Initiative
 J. Gaudin

A/C Composite Door Structures
 J. C. Ichard & P. Pelletret

Resin Infusion for A/C Fuselage Frames
 L. H. Nguyen

Assembly Simulation for MAAXIMUS
 A. C. Galucio

AFP for A/C Fuselage Panels
 M. Nawijn

12.30 – 13.30 Lunch

13.30 – 15.35 **Session 2**

Session 2A	Session 2B	Exhibition
L. Cohen	R. Akkerman	Conference
Out of Autoclave P 41, 100-101, 103, 115	Thermoplastics P 42, 44, 119, 125, 126	Posters of Student's Conference

15.35 – 16.00 Coffee Break

16.00 – 18.05 **Session 3**

Session 3A	Session 3B	Exhibition
A. Long	R. Rametta	Conference
RTM/Infusion P 22, 52, 122-124	Design P 7, 11-13, 15	Posters of Student's Conference

19:30 – 22.30 **SEICO II Dinner**
Hotel MERCURE

TUESDAY, March 29th

08.00 – 16.00 Registration Sessions
09:00 – 18:05

09.00 – 10.00h Key-Note Lecture 2

Challenges for large Scale use of Composites in the Automotive Industry
 Jan Anders Manson, EPFL Lausanne

10.00 – 10.30 Coffee Break

10.30 – 12.30 **Session 4**

Plenary Session: AUTOMOTIVE
 K. Drechsler

Impact Behaviour Hybrid Steel-FRP Structures
 C. Mildner

Thermoplastics driving Automotive Design?
 A. Wood

GFRP Composite Bogie for Urban Subway Trains
 J. S. Kim

Cost efficient Process for CFRP Truck Side Member
 A. Erber

Advances in Discontinuous Fibre Composites
 N. Warrior

12.30 – 13.30 Lunch

13.30 – 15.35 **Session 5**

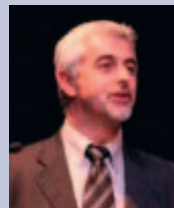
Session 5A	Session 5B	Exhibition
M. Erath	J. Vuorinen	Conference
Sandwich P 10, 23, 31, 47, 50	New Materials P 16, 45, 54, 121-122	Posters of Student's Conference

15:35 – 16:00 Coffee Break

16:00 – 18:05 **Session 6**

Session 6A	Session 6B	Exhibition
G. Ziegmann	T. Gries	Conference
Joining P 14, 28, 51, 114, 127	Textile Structures P 3, 55, 116-118	Posters of Student's Conference

32nd. SAMPE Europe International Conference SEICO II, Paris, Hotel MERCURE, Paris Porte de Versailles EXPO, Vanves, (Paris) and to attend the 46th. JEC COMPOSITE SHOW, at PARIS EXPO, Porte de Versailles EXPO Complex. on March 29th. – 31st. 2011.



Dear Attendee and dear SAMPE Member,

Soyez le bienvenue à Paris pour participer à SEICO II Conférence de SAMPE Europe.
Welcome in Paris to attend SAMPE Europe SEICO II Conference.

SAMPE Europe is pleased and proud to inform you about the programme of the 32nd. SEICO II International Conference to be held from March 28th – 29th. 2011 at the Hotel MERCURE Paris Porte de Versailles EXPO, which is in walking distance from the JEC COMPOSITE SHOW to be held from March 29th. – 31st. 2011 at the Paris EXPO Complex Porte de Versailles.

The venue of SEICO II, got defined on a New Strategy and Structure to provide to all attendees Top Quality papers which have been defined and selected with special attention. The presentation of those papers will be organized in Plenary- and Parallel Sessions, lasting for two (2) days – Monday, March 28th. and Tuesday March 29th. 2011. By this new concept all attendees can enjoy the possibility to have at least 2 days available to visit JEC COMPOSITE SHOW. The SEICO II registration badge will provide you free access to JEC Composite Show 2011. A free Bus Shuttle Service will operate from SEICO II Conference Hotel MERCURE and the Main Entrance of the JEC COMPOSITE SHOW at the Paris EXPO Complex Porte de Versailles on Tuesday, March 29th. 2011, from 08.00 – 18.15h pm.

SAMPE Europe invites you to take advantage of the Special Pre-Registration Rates, applicable for all confirmed registrations up to February 15th. 2011. As from February 16th. 2011, the published Standard Rate will be processed for registrations received and confirmed as from this date.

Please provide your registration form, which is enclosed to this Preliminary Programme on a separate sheet, as a scanned form, by e-mail to sebo@sampe-europe.org - or get it faxed to + 41 61 601 81 28.

For your hotel reservation request, please consult the enclosed reservation form of ATI Congrès Organisation, Paris, which offers hotel facilities near to Paris EXPO Complex, Porte de Versailles, by applying special JEC – SAMPE Europe rates. For further information please contact:

ATI Congrès Paris, Phone + 33 1 47 27 25 25 – Fax + 33 1 44 05 01 48
E-Mail : jec2011@ati-abotel.com / Website : www.ati-abotel.com

AIR FARES: Air France offers special air fares to Paris for attendees of SEICO II and JEC COMPOSITE SHOW under the booking code : JEC COMPOSITES SHOW PARIS 2011 – code événement 10800 AF, applicable for flights from March 24th. to April 05th. 2011. Ticket reservation and sales to process under www.airfranceklm-globalmeeting.com

SAMPE Europe will be very pleased to welcome you and being your host in Paris at SEICO II.
Bruno Beral, President SAMPE Europe

**SAMPE Europe is honoured to welcome you to Paris to attend on
March 28 – 29th. 2011**

SAMPE Europe 32st SEICO 10 International Conference and to visit the 46th JEC COMPOSITE SHOW AT Paris Porte de Versailles EXPO

SEICO 10 International Conference will be held at the Hotel MERCURE Paris Porte de Versailles EXPO, VANVES, located in walking distance (10-12 minutes) – or by a free SEICO 10 Shuttle Bus, to communicate to the PARIS EXPO Complex where on March 29th – 31st the 46th JEC COMPOSITE SHOW 2011 will be held. JEC's COMPOSITE SHOW is the biggest of its kind in the world with an exhibition area of > 46000m² and expecting some 28000 visitors from all over the globe. The Preliminary Programme is composed on available data per status Dec. 20th 2010, which may be altered at a later date. The Preliminary Programme will be published on the home-page of SAMPE Europe and SAMPE International under www.sampe-europe.org – respectively www.sampe.org.

Monday, 28th March

**08.00 – 16.30
09.00 – 18.05**

Registration Sessions

09.00 – 10.00

Opening

Bruno Beral, SAMPE Europe President

Keynote Lecture 1: AEROSPACE

*Dr. Takashi Ishikawa, Japan Aerospace
Exploration Agency 1828522 Tokyo*

**Overview of Composites Research and Development
Activities in JAXA, Japan Aerospace Exploration Agency**

10.00 – 10.30

Coffee Break

10.30 – 12.35

Session I Plenary Session MAAXIMUS

Session Chairman: J. Gaudin

- P 104** MAAXIMUS a Key European Initiative to foster Simulation-based Design of innovative Composite Structures,
Speaker: J.Gaudin, AIRBUS France
- P 105** Design, Substantiation and Manufacturing of an innovative Aircraft Passenger Composite Door Structure,
Speakers: J.C. Ichard & P. Pelletret, LATECOERE France
- P 106** Resin Infusion with braided Preform Concept for Aircraft Fuselage Frames, Speaker: Le Huong Nhuyen, FACC, Ried, Austria
- P 107** Physically-based Models towards predictive Assembly Simulation a MAAXIMUS contribution
Speaker: Ana-Cristina Galucio, EADS Toulouse
- P 108** Design and Optimization of Aircraft fuselage Panels using advanced Fibre Placement Manufacturing Process Capabilities,
Speaker: M. Nawijn, NLR The Netherlands

12.35 – 13.30

Lunch

13.30 – 15.35

Session 2

Session 2A: Out of Autoclave

Chairman: L. Cohen

P 041 Integral Fabrication of Composite Fuselage Structure using VARTM Prepreg Hybrid Process

Speaker: Y. Aoki, Japan Aerospace Research Exploration Agency, Tokyo 181-0015

P 100 Aerospace out of Autoclave Composite Prepreg Technology

Speaker: C. Ridgard, Advanced Composite Group Tulsa, OK 74134

P 101 OOA Prepreg Systems capable of Manufacturing large Primary Structure Composite Components

Speaker: G. Izeluk, Cytec Engineered Materials Tempe, AZ 85284

P 115 Invar Surface Composite Tooling

Speaker: T. Cordon, Advanced Composite Group

P 103 Application of AFP to Structural Aerospace Components utilising Out of Autoclave Materials

Speaker: T. Brezina, Sheffield University AMR Catcliffe, Rotherham S60-5TZ UK

Session 2B: Thermoplastics

Chairmen: R. Akkermann

P 042 Challenge of Functional Gradation of Self-Reinforced Polypropylene Composites

Speaker: A. Ries, University of Kassel (D) Institute of Material Technology

P 044 Environmental Durability of High-Performance Thermoplastic Composites for Structural Aircraft Application

Speaker: N. Boulebad-Gomez, Delft University of Technology, NL-2629 HS Delft

P 119 PPS-Carbon reinforced Panels with improved Damage Tolerance

Speaker: S. Pappadà, Consorzio CETMA, Cittadella della Ricerca, I-72100 Brindisi

P 125 Developments in Thermoplastic Tape Placement

Speaker: D. Carité, Coriolis-Composites, F-56530 Queven

P 126 Multi-layer Thermoplastic Composite Manufacturing Processes: Simulations and Experiments

Speaker: R. H. W. ten Thije, AniForm NL-7411 LP, Deventer

Exhibition

Posters of the Student's Conference

15.35 – 16.00

Coffee Break

16.00 – 18.05

Session 3

Session 3A: RTM/Infusion

Chairman: A. Long

P 022 Demonstrating a Composite Material Repair Technique for Aerospace Structures utilizing a secondary bonded VaRTM Technique

Speaker: R. Sterkenburg, Purdue University, Purdue

P 052 Advanced Control for Accurate and Repeatable Processing of Composites

Speaker: A. Sharpe, Surface Generation LTD., Lydon, GB-LE15-8TV

P 122 Improving Time Effective and robust Techniques for measuring in-plane Permeability of Fibre Preforms for LCM Processing

Speaker: B. Louis, ETH, CH 8092 Zürich

P 123 Improving the Capabilities of Infusion Resins and Processes

Speaker: D. Leach, Henkel Aerospace Inc., Bay Point

P 124 Assessment of Part Geometry regarding Non-Autoclave Infusion Technologies

Speaker: M. Feiler, Premium AEROTEC GmbH, D-86153 Augsburg

Session 3B: Design

Chairmen: R. Rametta

P 007 Features of structural Analysis of Metal-Composite Structures using Finite Element Method

Speaker: E. A. Abramova, DB Salyut, Federal State Unitary Enterprise Khronichev State Research & Production Space Center Moscow, Russia

P 011 Requirements on Composite Materials for Power Transmission

Speaker: R. Velthuis, ABB Switzerland LTD., CH-5405 Baden-Dättwil

P 012 Highly loaded Composite Strut Test Results

Speaker: K. C. Wu, NASA Langley Research Center, Hampton, VA 23681

P 013 Strength of Composite Structural Parts – Role of Fiber/Matrix Adhesion

Speaker: C. Marotzke, BAM, D-12205 Berlin

P 015 Load Bearing Capacity of Hybrid CFRP-Metal Laminates

Speaker: J. Both Technical University Munich, D-85747 Garching

Exhibition

Posters of the Student's Conference

19.30 – 22.30

SEICO II Dinner Hotel MERCURE

Tuesday, 29th March

08.00 – 16.30

09.00 – 18.05

Registration Sessions

09.00 – 10.00

Keynote Lecture 2: AUTOMOTIVE

Dr. Jan Anders Manson, EPFL Lausanne

Challenges for large Scale use of Composites in the Automotive Industry

10.30 – 12.30

Session 4

Plenary Session Automotive

Session Chairman: K. Drechsler

- P 109** Experimental investigations of the Impact Behaviour of Hybrid Steel-FRP Structures
Speaker: Ch. Mildner, DAIMLER AG, D-89073 Ulm
- P 110** Thermoplastic Composites – “Driving forward Automotive Design?” Speaker: A. Wood, Vitrex Europa GmbH., D-65719 Hofheim
- P 111** Structural and Dynamic Performance Evaluation of a GFRP Composite Bogie Frame for Urban Subway Trains
Speaker: Jung-Seok Kim, Korea Railroad Research Institute, Woram-dong, Korea
- P 112** Cost Efficient Manufacturing Process of CFRP Truck Side Member
Speaker: A. Erber, University of Stuttgart, Institute of Aircraft Design, D-70569 Stuttgart
- P 113** Advances of Discontinuous Fibre Composites
Speaker: N. Warrior, Nottingham University, University Park, Nottingham NG7 2RD, GB

12.30 – 13.30

Lunch

13.30 – 15.35

Session 5

Session 5A: Sandwich

Chairman: M. Erath

- P 010** Optimization and Comparison of stiffened Panels with Sandwich Structures for the Fuselage
Speaker: C. Yuan, TU Delft, NL
- P 023** Optimizing of Foldcore concerning Density specific Stiffness Properties
Speaker: B. Bender, Stuttgart University Institute of Aircraft Design, D-Stuttgart
- P 031** Mechanical Behaviour of Corrugated-Core Sandwich Panels under Compression
Speaker: M. R. M. Rejab, University of Liverpool, Liverpool L69 3GH, GB
- P 047** Product development of the Novel Open Cell TM Metal Sandwich Panel
Speaker: H. Hatajisto, Compoengineering Inc., SF-00180 Helsinki
- P 050** Material Model Development and Finite Element Analysis of Polystyrene Foam Core Sandwich Panels
Speaker: M. J. Maurer, The DOW Chemical Company, Midland, MI 48667, USA

Session 5B: New Materials

Chairmen: J. Vuorinen

- P 016** Development and use of Auxetic Polymers in Composites
Global Composites Group LTD., Marlow SL11-2FF, GB
- P 045** The Interlaminar Fracture Simulation of CFRP Structure with different toughened Material Systems
Speaker: Y. Nonaka, Mitsubishi Heavy Industry Nagasaki 851-0392, Japan
- P 054** Genetic engineered Protein (SPI) for Self-Assembly of complex organized Nanostructures in Fabrics
Speaker: N. Litvak, Fulcrum SP Materials LTD, Rehovot 76706, Israel
- P 120** From Nanoparticles to Composite Structures and beyond – The Idea of the virtuelle Institute of Nanotechnology in Polymer Composites
Speaker: U. Riedel, DLR Braunschweig (D)
- P 121** Effect of Silane Treatment on the Adhesion of TPE-Metal Adhesion in Injection Moulding
Speaker: M. Hoikkanen, Tampere University of Technology, SF-33101 Tampere

Exhibition

Posters of the Student's Conference

Session 6A: Joining

Chairman: G. Ziegmann

P 014 Effect of different Surface Treatments on Mechanical Properties of CFRP bonded Joints

Speaker: A. Sánchez Cebrián, ETH Zürich

P 028 Research on milled Joints for Aircraft Composite Structures

Speaker: Y. Toso, DLR, Institute for Structures and Design, D-70569 Stuttgart

P 051 Surface Treatment of CFRP by Laser and Atmospheric Pressure Plasma for Paste Adhesive Bonding

Speaker: D. Oezel, TAI-Turkish Aerospace TR-06980 Ankara

P 114 Analysis of Thermoplastic Functional Layer and Carbon Fibre Heating Element in Resistance Implant Welding of Thermosetting Composites

Speaker: W. Surjoseputro, TU Clausthal-Zellerfeld, D-38678 Clausthal-Zellerfeld

P 127 Nanocomposites via melt-compounded ALD-coated Power

Speaker: K. Nevalainen, Tampere University of Technology, SF-33101 Tampere

Session 6B: Textile Structures

Chairmen: T. Griess

P 033 Production Concepts for Textile Reinforcements made of 50K Carbon Filament Yarn for Civil Engineering Applications.

Speaker: Jan Hausding, TU Dresden D-01069 Dresden

P 055 Innovative natural Fiber Honeycomb Cores for Sandwich Structures based on Vynilester Resin Reinforced with Jute Fabrics

Speaker: A. Stocchi, INTEMA, Conicet, Argentina

P 116 Estimation of Material Properties for Draping Simulations of Carbon and Glassfiber Textiles using a 3D optical Deformation Measuring System

Speaker: H. Friebe, GOM Braunschweig (D)

P 117 Finit ElementModelling of inter-ply Delamination and intra-Yarn Cracking of Textile Laminates

Speaker: D. Ivanov, KU Leuven (B)

P 118 Ultrasonic Welding Application in Preform Automation

Speaker: F. Weiland, EADS / Eurocopter Ottobrunn (D)

Exhibition

Posters of the Student's Conference

B. Beral

SAMPE Europe 32st. SEICO II Conference Paris Conference Dinner and Award Remittance, March 28th

On Monday evening, March 28th. 2011, as from 19.30h pm, all SEICO II attendees enjoying a two day registration are kindly invited to attend the SEICO II Conference Dinner and Award remittance to be held at Hotel MERCURE, Vanves, (Paris) from 19.30h – 22.30h pm

Awards Remittance :

SAMPE Europe SEICO II Student's Award
JEC PARIS Environmental Student's Award 2011.



Your conference registration badge serves as access control to participate to the SEICO II Dinner.

SEICO II Dinner

Your conference registration badge serves as access control to participate to the SEICO II Dinner. Complementary access badges are available from the Conference desk at € 100.00 TTC each.

SEICO II Full Catering Service for all SEICO II Attendees

All registered SEICO II attendees will enjoy a full catering service on each Conference-Day consisting of a welcome coffee prior to the opening of the first session, a coffee-break during the morning and in the afternoon and to participate to the Lunch Buffet served in the Hotel Restaurant from 12.30 – 13.30h. The lunch is to be paid by remittance of the Lunch-Voucher to the MERCURE service staff.

JEC COMPOSITE SHOW 2011, March 29th – 31st 2011, Paris EXPO Porte de Versailles

Your SEICO II Conference badge provides you fee entrance to JEC COMPOSITE SHOW 2011 for all three Days.

SEICO II VISA request for immigration to France / EU

If you require a Visa for entering France / EU, please contact at the very earliest moment SAMPE Europe by e-mail (sebo@sampe-europe.org) to provide you an Invitation Letter required for your Visa request application to the French Embassy of your country of residence.

SEICO II Proceedings

All attendees of SEICO II will receive the SEICO II Proceedings, processed in English on a CD Rom, as an integrated element of your individual Conference Registration Bag, to be collected from the Conference Desk. Complementary Proceedings are available for sales at the Conference Desk at a price of € 70.00 TTC included.



Invitation to become a member of SAMPE Europe

SAMPE Europe with now 14 National and Regional Organisations and Chapters is providing to each of its over 1100 members a rewarding network on local, national, European and worldwide contacts through meetings, seminars and conferences with the latest information and presentation of state-of-the-art Research work, Development and Application references from Industry.

The SAMPE Journal with six issues per year is circulated free of charge to all SAMPE members worldwide, provides in each addition reports on selected technical topics and the latest news and opinions of Advanced Composite Technology and references the sources and origins.

The worldwide Network of SAMPE covers more than 5000 members which provides an outstanding return to each individual member, compared to the annual membership fee of only € 80.00 per year.

Please consider the benefit you can generate for you and for your employer by joining SAMPE Europe and the SAMPE worldwide Community!

Please visit SAMPE Europe homepage, at www.sampe-europe.org where detailed information is available together with the application form for membership.

Non-SAMPE Conference attendees, paying the full rate for the two days registration are entitled to apply for one year's free membership by remitting the Membership-Application form to the Conference Registration Desk during SEICO 11.

SAMPE Europe will be very pleased to welcome you soon as new member!

Please visit SAMPE Europe's homepage under www.sampe-europe.org or contact SAMPE Europe's Membership-Service by e-mail to hm8461@bluewin.ch

Composite Assembly Made Easy (ier)

View the latest Henkel technologies for composite assembly at the **JEC PARIS** show, including:

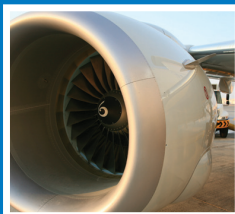
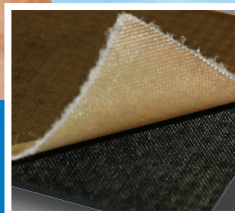
- Henkel Benzoxazine Resins for high performance composites
- Award-winning Hysol® Out-of-Autoclave film and paste adhesives
- Hysol® wet peel plies, films and paste structural adhesives
- Frekote® mold release agents

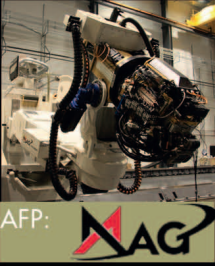


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Take advantage to participate to the two major events in Europe: SEICO II Conference (March 28th – 29th.) and JEC COMPOSITE SHOW II (March 29th. to 31st.) in the field of Advanced Composite Technology and Materials related with coverage from Raw Materials, R & D, Design, Testing and Prototyping, Qualification, individual and Industrial Production up to destruction at the end of lifecycle.

All attendees of SEICO II Conference will be invited to attend the WELCOME Reception on Sunday March 27th 18.30 – 20.00 h at Hotel MERCURE, Vanves, and enjoy free entrance to JEC COMPOSITE SHOW 2011, organized at the near-by PARIS EXPO COMPLEX Porte de Versailles, Paris.

SEICO II Conference Location and Registration:

Hotel MERCURE Paris Porte de Versailles EXPO
36-38 Rue du Moulin, F – 92174 Vanves (Paris)
Tel. +33 1 46 48 55 55 – Fax +33 1 46 48 56 56
E-Mail: H0385-SB@accor-hotels.com

On site registration:

Sunday, March 27th 2011 – 17.00 – 18.30h
Monday, March 28th 2011 – 08.00 – 16.30h
Tuesday, March 29th 2011 – 08.00 – 16.30h

The Conference Language is English

Please visit the SAMPE Europe Booth, at F4, at JEC COMPOSITE SHOW, Paris EXPO Complex, Porte de Versailles. At the SAMPE Europe Booth Proceedings from previous SAMPE Europe Conferences can be bought or ordered. You also can apply at the booth to pay your due membership for 2011 – or to remit your application form to become a SAMPE Europe member.

The Posters from all participants of the SAMPE Europe SEICO II Student's Conference will be exposed at Hotel MERCURE – in a separate room next to SEICO II Conference Auditoriums.II front.



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