APMS 2016 INTERNATIONAL CONFERENCE
ADVANCES IN PRODUCTION MANAGEMENT SYSTEMS
Production Management Initiatives for a Sustainable World
September 3 – 7, 2016, Iguassu Falls, Brazil

FINAL PROGRAM
# SUMMARY

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Dear Members of the IFIP WG 5.7

Dear Participants of the APMS 2016

I am pleased to welcome you to the Advances in Production Management Systems - APMS 2016 Conference.

Through this meeting, I invite you to participate in an open and constructive dialogue about the innovative aspects of the production management initiatives for a sustainable world.

It is gratifying to note that the agenda of the Conference covers a broad choice of very interesting items related to Production Management Systems. It is also an excellent opportunity to renew contacts and discuss problems of mutual interest with delegates from several countries.

Welcome to Brazil. Welcome to Iguassu Falls, one of the Wonders of Nature, and the homeland for Guarani Indians since ancient times. Land of tropical forests, exotic birds, and friendly people.

That many of you travel long distances serves to remind us just how important it is to discuss the topics related to the sustainable initiatives in the Production Management Systems.

Thank you for coming.

Irenitza de Alencar Nääs
Conference Chair of APMS 2016
UNIP - Brazil
CONFERENCE COMMITTEES

CONFERENCE CHAIRS

Conference Chair
IreniIza de Alencar Nääs, UNIP, Brazil

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Dimitris Kiritsis, EPFL, Switzerland
Gregor Von Cieminski, ZF Friedrichshafen AG, Germany

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Assistant Dimitris Mourtzis, Laboratory for Manufacturing Systems and Automation (LMS) / University of Patras, Greece
Assistant Magali Bosch-Mauchand, Université de Technologie de Compiègne Department of Mechanical Systems Engineering Laboratoire Roberval, France
Assistant Thorsten Wuest, Department of Industrial and Management Systems Engineering; / Benjamin M. Statler College of Engineering and Mineral Resources; / West Virginia University, USA
Bernard Grabot, ENIT, Industrial Engineering, France
Bernd E. Hirsch, BIBA / University of Bremen, Germany,
Bernd Hamacher, University of Bremen, Germany
Bjørn Andersen, Norwegian University of Science and Technology Department of Production and Quality Engineering, Norway
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Bruno Vallespir, IMS Laboratory / University of Bordeaux, France
Byoung-Kyu Choi, KAIST Faculty of Dept of Industrial & Systems Engineering, Korea
Catherine Da Cunha, Ecole Centrale de Nantes, Industrial Engineering Dept France
Christopher Irgens, University of Strathclyde, UK
Christos Emmanouilidis, Computational Systems & Applications Dept. / Cultural & Educational Technology Institute (CETI) / Athena Research & Innovation Centre in Knowledge, Communic. & Information Technologies, Greece
Dan L. Shunk, Ira A. Fulton School of Engineering / Arizona State University, USA
David O’Sullivan, National University of Ireland, Galway, Ireland
David Romero, Tecnológico de Monterrey, Advanced MFG Research Group / Center for Innovation in Design & Technologies, Mexico
Dimitris Mourtzis, University of Patras, Industrial Engineering Dept., Greece
Eero Eloranta, Dept. of Industrial Eng. and Mgt. / Helsinki University of Technology, Finland
Eiji Arai, School of Engineering Osaka University, Japan
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Emeritus Peter Falster, Dept. of Applied Mathematics and Computer Science / Technical University of Denmark, Denmark
Erlend Alfnes, Norwegian University of Science and Technology Department of Production and Quality Engineering, Norway
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Frédérique Biennier, INSA de Lyon Department Informatique -IF LIESP Laboratory, France
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Gerhard Gudergan, FIR Research Institute for Operations Management / Aachen University of Technology, Germany
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Gilles Neubert, EMLYON Business School / Campus Saint-Etienne, France
Gregor von Cieminski, ZF Friedrichshafen AG, Germany
Guang Xun Yang, Dept. of Manufacturing Engineering & Automation / Beijing University of Aeronautics & Astronautics, China
Gündüz Ulusoy, Faculty of Engineering and Natural Sciences / Sabancı University, Turkey
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Hans-Henrik Hvolby, Centre for Logistics / Aalborg University, Denmark
Hans-Peter Wiendahl, Institute for Production Systems and Logistics / Leibniz University of Hannover, Germany
Harinder Jagdev, Digital Enterprise Research Institute / National University of Ireland, Ireland
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Hyunbo Cho, Pohang University of Science & Technology, Korea
Ichiro Inoue, Kyoto Sangyo University / Faculty of Business Administration & Graduate School of Management, Japan
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Ing. Kai Mertins, Knowledge Raven Management GmbH, Germany
Ing. Klaus-Dieter Thoben, Universität Bremen und Bremer Institut fuer Produktion und Logistik GmbH (BIBA), Germany
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- Jorge Muniz Jr., UNESP, Guaratinguetá
- Feni Agostinho, UNIP, Brazil
- Rodrigo Gonçalves, UNIP, Brazil
- Benedito Sacomano, UNIP, Brazil
- Luis Maurício Resende, Universidade Tecnológica Federal do Paraná Campus Ponta Grossa
- Ricardo J. Rabelo, Universidade Federal de Santa Catarina

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- Vittal Prabhu, Penn State University, USA
- Bernard Grabot, University of Toulouse, INP-ENIT, France
GENERAL INFORMATION

CONFERENCE DATE AND VENUE

The APMS 2016 INTERNATIONAL CONFERENCE - ADVANCES IN PRODUCTION MANAGEMENT SYSTEMS will be held on from September 3rd to 7th, 2016 in Foz do Iguacu, Brazil.

VENUE

Bourbon Cataratas Convention & SPA
Av. das Cataratas, 2345 - Foz do Iguacu-PR

Only 12 km from the Iguassu Falls - named one of the New 7 Nature Wonders - and 10 km from the Foz do Iguacu International Airport, the Bourbon Cataratas occupies a total area of 165 thousand m². The hotel offers a complete structure for business and leisure in perfect harmony with the exuberant nature in the region.

REGISTRATION DESK

The registration desk will be located at the entrance of the Foyer Iguazu, at Bourbon Cataratas Convention Center. The registration desk will be open during the following hours:

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<tr>
<th>Day</th>
<th>Date</th>
<th>Time</th>
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<tr>
<td>Saturday</td>
<td>September 3rd</td>
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<td>Wednesday</td>
<td>September 7th</td>
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Registration for participants includes:
- **General Public and Student** - Registration includes conference attendance, proceedings, conference materials, welcome reception, and gala dinner
- **Accompanying** - Registration includes a welcome reception, gala dinner, and a tour (to be defined by the organization).

The accompanying category does not allow to present or to watch papers presentations / other sessions.

INSTRUCTIONS FOR ORAL PRESENTATIONS

Presenters are allotted 15 minutes' total presentation time (10 minutes for the presentation and 5 minutes for discussions and questions). In an effort to synchronize the parallel sessions, session co-chairs have been instructed to retain a strict control of this schedule. This is to allow participants to move from one session to another without missing anything of each presentation.

The official format of presentation is data projector using Microsoft Power Point. All presenters were instructed to bring their presentation on a USB memory stick and load their presentation at Media Desk. Presenters will not be allowed to connect their own computers to the data projectors at the conference.

It is the responsibility of the individual presenters (not the organizers) to ensure their presentations are uploaded at Media Desk at least 2 hours before the beginning of the session and to test them before uploading.
MEDIA DESK

Technicians will be available at the media desk (at Iguazu VI Room) to assist you with uploading your presentation to the correct session at the following times:

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<tr>
<th>Day</th>
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<td>September 7th</td>
<td>08:00 - 17:00</td>
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INSTRUCTIONS FOR POSTER PRESENTATIONS

Poster presenters must mount their poster on the correct board as informed by the organization. Posters may be fixed from 8:00h on the day of presentation and removed at 17:00. The organization will provide material to help fixing the posters and will not be responsible for posters left in the room. Each poster presenter has a designated time to be available at their poster and answer eventual questions (see schedule). The posters being presented each day are listed in this program book.

<table>
<thead>
<tr>
<th>Poster Session</th>
<th>Date</th>
<th>Time to fix the poster</th>
<th>Session Time</th>
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<tr>
<td>Poster Session 1</td>
<td>September 6th</td>
<td>8:00</td>
<td>13:30 - 14:00</td>
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<tr>
<td>Poster Session 2</td>
<td>September 7th</td>
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SOCIAL ACTIVITIES

WELCOME RECEPTION

September 4th, 2016  
Place: Bourbon Cataratas Hotel - Pavilion A of the Convention Center  
Time: 20:00h to 21:00h  
All registered delegates and accompanying persons are invited to an informal drink and good music in the Welcome Reception of APMS 2016. Drinks and Brazilian snacks will be served.  
Dress: Casual  
** Attendance to this reception is included in the registration fee

GALA DINNER

September 6th, 2016  
Place: Rafain Churrascaria  
Time: 20:00h to 00:00h  
A traditional local course will be served, and guests will also enjoy a great Brazilian show, with dancers and the best Brazilian popular music.  
Dress: Smart Casual  
* Transportation will be provided leaving the Bourbon Cataratas Hotel at 20:00h.  
** Attendance to this reception is included in the registration fee. Extra tickets can be purchased at the Registration desk for R$ 250,00.
SIDE MEETINGS

MEETING WORKSGROUP 5.7 IFIP

September 4th, 2016
Place: Plenary Room 1
Time: 16:00h to 18:00h

VISITS TO ITAIPU BINACIONAL

Participants registered to APMS 2016 will be able to book a tour to Itaipu Binacional on September 5th and 6th. Places are limited, and the registration can be done in the Registration Desk.

Please see below instructions to the visit:

- The visits leave at 7:00h from the APMS 2016 Registration desk. Please be at the meeting place 15 minutes in advance to not delay the departure of the tour.
- The duration of the visit is approximately 2 hours and 30 minutes.
- It is mandatory the use of closed shoes without heels and clothes with length below the knee during the Technical Visit.
- It is forbidden to enter with bags, backpacks or bags inside the power plant. If necessary, there are lockers for rent. It is allowed to bring cameras, camcorders, mobile phones and notebooks.

OFFICIAL TRAVEL AGENCY

The Official Travel Agency of APMS 2016 is LEVITATUR VIAGENS. The agency is present during APMS, near the registration desk, to help participants with accommodations, flight tickets and also sell tours through the city of Foz do Iguaçu.

LEVITATUR VIAGENS E TURISMO
Tel.: 55 11 2090 1030 | Fax: 55 11 2090 1039
www.levitatur.com.br
eventos@levitatur.com.br
TOURS

The Official Travel Agency of APMS 2016 is LEVITATUR VIAGENS. They will be available for further information as price, groups, and schedule of the tours. Please see below several options of tours in Foz do Iguaçu. Be sure to visit these incredible places of natural beauty!

CATARATAS - BRAZILIAN SIDE
The tour begins at the Iguazu National Park Visitors Center, and follows the lush vegetation of the park en route to the falls. The trail leading down to the gorge offers a wide view of over 240 different waterfalls. The walkways penetrate the drizzle of Devil’s Throat, the biggest jumps. A panoramic lift up the face of the waterfalls that gives access to higher-viewpoint. The Iguazu National Park with the park of Argentina, form the most significant reserve of rainforest in the Southern Cone, declared a Natural World Heritage Site by UNESCO. In return, visit to a craft center.

CATARATAS - ARGENTINA SIDE
Cross Tancredo Neves Bridge with its beautiful view of the Iguazu River Canyon to reach Iguazu National Park in Argentina. Visit the upper walkways that provide a different view of the falls more closely and full nature orchids, bromeliads, birds and wildlife. The culmination of the visit is the lookout suspended the brink in the “Devil Throat” - most of all falls. This tour shows the major sight on the Argentina side.

MACUCO SAFARI
Also at the Iguazu National Park, you will find the Macuco Safari boat. A ride open and towed car, accompanied by expert guide. Runs 2km in the forest at reduced speed, hearing explanations and curiosities of the native fauna and flora. Finishing the passage, a journey on foot is made to reach the banks of the Iguazu River, where it leaves a motor boat, specially prepared that takes tourists to one of the most thrilling rides, where you have a close-up view of the Falls, listening to deafening sound of water. Along the way with emotion, the boat penetrates beneath the waterfall.

BIRD PARK
The Bird Park is located at the entrance of the Iguazu National Park and well integrated nature. The tour is done from inside of immense ponds and trails through lush jungle, where you can shoot and Interact with hundreds of species of birds, snakes, alligators, monkeys and butterflies.
**SAFETY**

When traveling, as in any major city, take certain precautions. Do not carry valuables such as jewelry, airline tickets, money and important documents with you - it is advisable to leave them in a hotel safe deposit box. In the event, your room key is lost or stolen notify the hotel management as soon as possible.

**BANKS**

Banks are open weekdays from 10:00h to 16:00h; they are closed on weekends and public holidays. Automated teller machines (ATMs) can be found almost everywhere; some machines provide 24-hour cash withdrawal (R$) facilities for major credit cards. There are ATMs available at the Foz do Iguaçu Airport, one inside Bourbon Hotel (HSBC Bank) and others at the gas station located on the corner of Av. das Cataratas with Av. Iguaçu.

**CURRENCY**

The Brazilian currency is the Real (R$); there are 100 centavos in one Real. Brazilian coins come in denominations of 1 centavo (bronze); 5, 10, 25 and 50 centavos (silver) and a R$ 1.00 coin (nickel and bronze). Bills come in denominations of R$ 2, R$ 5, R$ 10, R$ 20, R$ 50 and R$ 100. The value of the real against the US dollar varies according to the daily exchange rate. Banks and exchange bureau charge a commission on exchange transactions, so visitors should enquire beforehand. As elsewhere, the rates of exchange for cash and traveler’s checks are marginally different, and coins are not exchangeable. Money changers are obliged by law to display net rates of exchange. Receipts for Exchange must be issued by law; it is advisable to keep these until after departure.
**ADDITIONAL TRAVEL INFORMATION**

**Electricity**
The voltage is 110 volts in Foz do Iguaçu. Most hotels bathrooms also have a 220-volt socket.

**Telecommunications**
Adjust your watch when you arrive. Foz do Iguaçu is 3 hours behind Greenwich Mean Time (GMT). Brazil is connected to all appropriate international telephone and satellite communications systems, providing trouble free connections to virtually anywhere in the world. Most hotels provide guest room International Direct Dial (IDD) services; some hotels have in-room internet hook-up and fax machines. Other offers this service through their Concierge or Business Centre.

Outside hotels, long-distance calls can be made from IDD payphones or card phones in various locations. The push-button call-home system, providing an immediate connection to the operator of the country required, is also available. For information about dialing access and IDD phone locations, contact the hotel operator. Not all local calls from private phones are free. However, shops, restaurants, and bars without payphones will usually permit free use of their phones.

**Medical Services**
Most hotels have immediate access to on call 24-hour medical assistance. There are also many public and private hospitals with 24-hour emergency and out-patient departments. All hotels have a list of recommended medical services.

**Restaurant Tipping**
When dining out, most establishments include a 10% service charge on the bill. However, it is customary to leave a little extra for good service.

**Water**
The water supply in Foz do Iguaçu conforms to international standards. Nevertheless, it is advisable to drink only mineral water.

**Climate**
The climate in Foz do Iguaçu is humid subtropical, reaching in summer temperature above 45 °C in winter and reach a temperature below 5 °C.

**Insurance**
It is strongly recommended that participants take out the adequate cover for health, travel and private liability insurance. The organizers cannot accept responsibility for personal injury, loss or damage to private property belonging to the symposium participants and accompanying persons.
PROMOTION

UNIVERSIDADE PAULISTA

SPONSOR

ITAIPO BINACIONAL
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<td>ROOM 1</td>
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<td>8:00 - 8:30</td>
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<td>Doctoral Workshop</td>
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<td>9:00 - 9:30</td>
<td>Opening Session</td>
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<td>Keynote Lecture 1</td>
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**September 4th**
- **Opening Session**
- **Keynote Lecture 1**
- **Doctoral Workshop**
- **Coffee break**
- **Lunch**
- **Meeting Workgroup 5.7 IFIP**
- **COFFEE BREAK**
- **Welcome Reception**

**September 5th**
- **Keynote Lecture 2**
- **Doctoral Workshop**
- **Coffee break**
- **COFFEE BREAK**
- **3rd IFIP WG5.7 Research Workshop**
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<tr>
<th>Time / Date</th>
<th>September 6th</th>
<th>September 7th</th>
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<tbody>
<tr>
<td>ROOM 1</td>
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<tr>
<td>Registration</td>
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<td>Keynote Lecture 3</td>
<td>Itaipu Binacional: Managing change towards</td>
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<td>Rosimeri Fauth</td>
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<td>Ramadas Martins</td>
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<tr>
<td>SESSION 9</td>
<td>Virtual, Digital &amp; Smart Factory</td>
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<td>SESSION 11</td>
<td>Large-scale supply chains</td>
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<td>SESSION 13</td>
<td>Quality in production management - 2</td>
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<tr>
<td>SESSION 20</td>
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<td>SESSION 21</td>
<td>Advances in Cleaner Production</td>
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<td>Sustainable production management - Which approaches work in practice? - 1</td>
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<tr>
<td>SESSION 10</td>
<td>Flexible, sustainable supply chains</td>
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<td>SESSION 12</td>
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<td>SESSION 14</td>
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<td>SESSION 15</td>
<td>Innovation and collaborative networks</td>
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<td>SESSION 16</td>
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<td>Smart Manufacturing System Characterization</td>
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<td>SESSION 17</td>
<td>Quality in production management</td>
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<td>SESSION 18</td>
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<td>SESSION 19</td>
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<td>- Which approaches work in practice? - 2</td>
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<td>SESSION 25</td>
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<td>SESSION 26</td>
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<td>Bottom-up Special Session - Knowledge Base Development for Smart Manufacturing, an SM &amp; CPPS SIG workshop session</td>
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<td>SESSION 27</td>
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<td>Implications of multi-stage manufacturing process chains on Smart Manufacturing, an SM &amp; CPPS SIG workshop session</td>
<td>15:30 - 16:00</td>
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<td>Closing Ceremony</td>
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<td>Gala Dinner</td>
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WORKSHOP
3rd IFIP WG5.7 Research Workshop

September 5th, 2016
17h00 - 19h30
Room 3

Organizers:
Hermann Lödding - Hamburg University of Technology
Gregor von Cieminski - ZF Friedrichshafen AG, Secretary of IFIP WG5.7

Presenters:
Paolo Gaiardelli - University of Bergamo
Ricardo Rabelo - Federal University of Santa Catarina
Hermann Lödding - Hamburg University of Technology
# DOCTORAL WORKSHOP

**September 4th, 2016**  
**8:00 - 15h30**  
**Plenary Room 1**

**Chairs:**  
João Gilberto Mendes dos Reis - Universidade Paulista  
Marcia Terra da Silva - Universidade Paulista

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>08:00</td>
<td>Doctoral Workshop Opening / Introduction</td>
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</tbody>
</table>
| 08:30  | (276) Cyber-Physical Systems in Manufacturing. Benefits and obstacles to their implementation: two side of the same coin  
*Author*: Anna de Carolis - Politecnico di Milano  
*Student Discussant*: Rodrigo Carlo Toloi |
| 09:15  | (274) The Production Transfer Process  
*Author*: Maria Flavia Mogos - Norwegian University of Science and Technology  
*Student Discussion*: Walter Cardoso Sátyro |
| 10:00  | Coffee Break                                                                                     |
| 10:30  | (263) Brazil’s Soybean Supply Chain: Developing a competitiveness model based on decision-making, enterprise relationship, logistics, and sustainability  
*Author*: Rodrigo Carlo Toloi - Paulista University-UNIP  
*Student Discussion*: Sven-Vegard Buer |
| 11:15  | (262) Advantages of Bim Tools into Civil Construction Brazilian Design Processes  
*Author*: Samuel Dereste dos Santos - Paulista University-UNIP  
*Student Discussant*: Sayyed Shoaib ul Hasan |
| 12:00  | Lunch                                                                                             |
| 13:15  | (269) Pursuit of responsiveness in production environments: Towards building plant level capabilities  
*Author*: Sayyed Shoaib ul Hasan - Politecnico di Milano  
*Student Discussion*: Maria Flavia Mogos |
| 14:00  | (270) Lean Manufacturing in High-Mix, Low-Volume Production Environments  
*Author*: Sven-Vegard Buer - Norwegian University of Science and Technology  
*Student Discussion*: Samuel Dereste dos Santos |
| 14:45  | (193) Strategic Factors to Obtain Competitive Advantage in Industries that Compete in Environmental Sustainability  
*Author*: Walter Cardoso Sátyro - Paulista University-UNIP  
*Student Discussion*: Anna de Carolis |
SCIENTIFIC PROGRAM

September 5th, 2016

09:00
09:30
Plenary
Room 1

OPENING SESSION

09:30
10:30
Plenary
Room 1

KEYNOTE LECTURE 1
The Embraer Case
Session Chair: Pedro Luiz Oliveira Neto

Jose Serrador - Embraer

CV: José Serrador Neto is a Production Engineer graduated from Pontifícia Universidade Católica do Rio de Janeiro (PUC-RJ), holding a postgraduate degree on International Trade Law and Economics from Fundação Getúlio Vargas in São Paulo. He joined Embraer in 2000 as an advisor to the VP External Relations, and since then has been working in that field.

He is currently Director of External Relations at Embraer, headquartered in Brasília and holding responsibilities on Domestic Public Policy Issues and International Trade, such as Tax, Sector Regulations, Logistics, besides International Litigation at the WTO, European Union, and the OECD negotiations.

In 2009, he was elected Director of the Aerospace Industries Association of Brazil (AIAB) and since then represents the Aerospace and Defense sectors in various industry business associations, think tanks, in particular the Brazilian National Confederation of Industry (CNI).

His professional career includes positions as Government Relations at Xerox in Brazil, Arthur Andersen Business Consulting and several publications on Trade Policy. In 2008, he was appointed as Brazilian representative at the Global Leadership Seminar by the University of Georgetown (Washington, D.C.) and awarded with the Order of Aeronautical Merit by the Brazilian Air Force (2013, Brasilia).

11:00
12:30
Plenary
Room 1

ORAL SESSION 01
Computational Intelligence in Production Management
Session Chair: Rodrigo Gonçalves

11:00 - 11:15 (114) Determination of operating parameters and performance analysis of computer networks with Paraconsistent Annotated Evidential Logic Et
Avelino Palma Pimenta Junior

11:15 - 11:30 (155) Logical Decision-Making method relating to Innovation Management
Nelio Fernando dos Reis

11:30 - 11:45 (156) IT Incident Management and analysis using Non-Classical Logics
Priscila Faccioli Tavares

11:45 - 12:00 (186) Paraconsistent Decision Making for Intelligent Traffic Control
Eduardo Prudente Dacorso

12:00 - 12:15 (212) Hierarchical clustering based on reports generated by script Lattes
Wonder Alexandre Luz Alves

12:15 - 12:30 (231) Using Logic Concepts on Six Sigma
Caique Zaneti Kirilo
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<tr>
<th>Time</th>
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<tr>
<td>11:00</td>
<td><strong>ORAL SESSION 02</strong></td>
<td><strong>Intelligent Manufacturing Systems</strong></td>
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<td>Session Chair: Matti Majuri</td>
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<td>11:00</td>
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<td>(123) Toward a Semantically Enriched Modelling Environment for Dynamic Systems</td>
<td>Damiano Nunzio Arena</td>
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<td>11:15</td>
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<td>(217) Formal Information Model for Representing Production Resources</td>
<td>Eeva Järvenpää</td>
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<td>11:30</td>
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<td>(242) A communication procedure between tactical and operational levels in spare parts supply chains</td>
<td>Matheus Cardoso Pires</td>
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<tr>
<td>11:45</td>
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<td>(267) Digital Factories for Capability Modeling and Visualization</td>
<td>Farhad Ameri</td>
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<td>12:00</td>
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<td>(259) Learning Analytics deployment at a University</td>
<td>Elisangela Monaco Moraes</td>
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<td>12:15</td>
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<td>(258) Relationship networks: Social innovation and earnings for companies</td>
<td>Marcelo Tsuquip Okano</td>
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<td><strong>ORAL SESSION 03</strong></td>
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<td><strong>Special session - Lean manufacturing</strong></td>
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<td>Session Chairs: Masaru Nakano and Christoph Roser</td>
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<td>11:00</td>
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<td>(103) Supermarkets vs. FIFO Lanes - A Comparison of Work-in-Process Inventories and Delivery Performance</td>
<td>Denis Wiesse</td>
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<td>11:15</td>
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<td>(110) Lean Manufacturing and Sustainability: an integrated view</td>
<td>Barbara Resta</td>
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<td>11:30</td>
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<td>(137) Direction of the Bottleneck in Dependence on Inventory Levels</td>
<td>Carolin Romeser</td>
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<td>(172) Commercial Vehicle Production Flexibility Factors</td>
<td>Luis de Oliveira Nascimento</td>
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<td>12:00</td>
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<td>(224) Mapping a Value Stream with the Perspective of Sustainability</td>
<td>Veronica Lindström</td>
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<tr>
<td>12:15</td>
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<td>(184) Managing the Socially and Environmentally Sustainable Global Manufacturing Network</td>
<td>Paul Schönsleben</td>
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</table>
Global supply chain management: Past, present and future  
Session Chair: Marcia Terra da Silva  

Henrique Luiz Correa

**Briefing:** A broad perspective of the field throughout time, a discussion about the state of the art and an outlook for the future of research and practice of global supply chain management.

**CV:** Professor of Operations and Supply Chain Management at Rollins College - Crummer Graduate School of Business, since 2006. Awarded in 2011/2012 the prestigious Rollins College Bornstein Faculty Scholarship Award and various awards for excellence in teaching. Professor Correa previously taught at the Fundacao Getulio Vargas Business School, Sao Paulo, Brazil (1998-2006), the leading business school in Brazil and at the University of Sao Paulo (Escola Politecnica), the leading University, also in Brazil (1986-1996). He has also served and serves visiting appointments at MIP Business School, Politecnico di Milano (Italy), FIA Business School (Brazil), Porto Business School (Portugal), the University of Warwick (UK), IESA (Venezuela), INCAE (Costa Rica), University of Texas at San Antonio (USA), IE Business School (Spain), Fundacao Dom Cabral (Brazil), Federal University of Rio de Janeiro (Brazil), among other institutions. His research interests include global supply chain management and flexible operations.

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**ORAL SESSION 04**  
Knowledge-based PLM - 1  
Session Chair: David Romero

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<tr>
<td>15:00</td>
<td>(188) Environmental support for dilution of pollutants from broiler production and aquaculture in Brazil</td>
<td>Silvia Helena Bonilla</td>
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<tr>
<td>15:15</td>
<td>(189) Water usage charge in Brazil: emergy donor-side approach for calculating water costs</td>
<td>Silvia Helena Bonilla</td>
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<td>15:30</td>
<td>(112) Combining Genetic Algorithm with Constructive and Refinement Heuristics for Solving the Capacitated Vehicle Routing Problem</td>
<td>Stanley Jefferson de Araujo Lima</td>
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<tr>
<td>15:45</td>
<td>(268) Container crane controller with the use of a NeuroFuzzy Network</td>
<td>Ricardo Ferreira</td>
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<tr>
<td>16:00</td>
<td>(127) Agility Challenges in Finnish Manufacturing Companies - Manufacturing Operations Management Viewpoint</td>
<td>Eeva Jarvenpaa</td>
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<tr>
<td>16:15</td>
<td>(161) Improving Process Management in a Water Treatment Plant Using Control Modelling</td>
<td>Cleber Gustavo Dias</td>
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### ORAL SESSION 05
**Modeling of Business and Operational Processes - 1**  
*Session Chairs: Jair Minoro Abe and Vittal Prabhu*

- **15:00 - 15:15**  
  - *(106)* Strategic Portfolios for the Integral Design of Value-added Networks  
  - *Paul Schoensleben and Manuel Rippel*

- **15:15 - 15:30**  
  - *Marcelo Bernardino Araújo*

- **15:30 - 15:45**  
  - *(122)* Workforce Planning Models for Distribution Center Operations  
  - *Vittaldas Prabhu*

- **15:45 - 16:00**  
  - *(144)* From English to RDF - A Meta-modeling Approach for Predictive maintenance knowledge base design  
  - *Ana Milicic*

- **16:00 - 16:15**  
  - *(166)* An Application of Operation Research for Reducing Fuel Costs  
  - *Joao Roberto Maiellaro*

- **16:15 - 16:30**  
  - *(241)* The profile of high-tech start-ups: An approach by graphical analysis of the prism on relations in networks  
  - *Diego Dias Rodrigues*

### ORAL SESSION 06
**Special session - Cyber-physical (IIoT) technology deployments in Smart Manufacturing Systems, an SM & CPPS SIG workshop session**  
*Session Chair: Stefan Weisner*

- **15:00 - 15:15**  
  - *(130)* The Operator 4.0: Human Cyber-Physical Systems & Adaptive Automation towards Human-Automation Symbiosis Work Systems  
  - *David Romero*

- **15:15 - 15:30**  
  - *(223)* Supporting the Requirements Elicitation Process for cyber-physical Product-Service Systems through a gamified Approach  
  - *Stefan Wiesner*

- **15:30 - 15:45**  
  - *(247)* Application of Core Technologies for Smart Manufacturing: A Case Study on Cost Benefit Analysis based on Modelling and Simulation for Sustainability  
  - *Chanmo Jun*

- **15:45 - 16:00**  
  - *(191)* Virtual Factory Supporting Production Planning and Control  
  - *Deogratias Kibira*
17:00 - 18:30
Room 1

**ORAL SESSION 07**
Knowledge-based PLM - 2
Session Chair: Fabio Papalardo

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<td>17:00 - 17:15</td>
<td>An integrative model of productivity and logistic objectives</td>
<td>Robert Glöckner</td>
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<td>17:15 - 17:30</td>
<td>Pursuit of responsiveness in SMEs through dynamic allocation of flexible workers: a simulation study</td>
<td>Sayyed Shoaib ul Hasan</td>
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<td>17:30 - 17:45</td>
<td>Effectiveness of Production Planning and Control (PPC) in a Baby Fashion Cluster, under the prism of Paraconsistent Logic</td>
<td>Elizangela Maria Menegassi de Lima</td>
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<td>17:45 - 18:00</td>
<td>Dynamic Seed Genetic Algorithm to Solve Job Shop Scheduling Problems</td>
<td>Flávio Grassi</td>
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<td>18:00 - 18:15</td>
<td>An Improved Computer-Aided Process Planning Method Considering Production Scheduling</td>
<td>Eiji Morinaga</td>
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<td>18:15 - 18:30</td>
<td>The Identification of the Professional Profile that uses Canvas Approach</td>
<td>Irapuan Gloria Junior</td>
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17:00 - 18:30
Room 2

**ORAL SESSION 08**
Modeling of Business and Operational Processes - 2
Session Chairs: Vittal Prabhu and Jair Minoro Abe

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<td>17:00 - 17:15</td>
<td>Business Modeling Toward Competitiveness and Ciborra´s Criticism: Results from an IT-Business Strategic Alignment via an Action-Research</td>
<td>Nemer Alberto Zaguir</td>
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<td>17:15 - 17:30</td>
<td>AHP modeling and sensitivity analysis for evaluating the criticality of software programs</td>
<td>Adriana Cristina Aipp da Cunha</td>
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<td>17:30 - 17:45</td>
<td>A comparative analysis between BPMN and ISO 19440 language constructs</td>
<td>Angela Teresa Rochetti</td>
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<td>17:45 - 18:00</td>
<td>Adaptive configuration of the organization in manufacturing startup companies</td>
<td>Christina Reuter</td>
</tr>
<tr>
<td>18:00 - 18:15</td>
<td>Support Policies and Collective Efficiency in a Furniture Cluster</td>
<td>Elizangela Maria Menegassi de Lima</td>
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<td>18:15 - 18:30</td>
<td>Applying the Paraconsistent Annotated Evidential Logic Eτ in a Solar Tracker for Photovoltaic Panels</td>
<td>Álvaro André Colombero Prado</td>
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17:00 - 19:30
Room 3

**WORKSHOP**
3rd IFIP WG5.7 Research Workshop

Organizers:
Hermann Lödding - Hamburg University of Technology
Gregor von Cieminski - ZF Friedrichshafen AG, Secretary of IFIP WG5.7

Presenters:
Paolo Gaiardelli - University of Bergamo
Ricardo Rabelo - Federal University of Santa Catarina
Hermann Lödding - Hamburg University of Technology
KEYNOTE LECTURE 3
Itaipu Binacional: Managing change towards sustainability
Session Chair: João Gilberto Mendes

Rosimeri Fauth Ramadas Martins

Briefing: The Itaipu dam, a world leader in clean and renewable energy, is an iconic infrastructure between two countries that requires 3000 staff and $150M of spend with suppliers per year. The vision and strong commitment to the top management triggered a structured program SUSTAINABLE PROCUREMENT in which everybody has a role to play.

CV: Rosimeri Fauth Ramadas Martins is a Business Administrator with over 30 years of experience in procurement and public biddings. 10 years of experience in managing people, processes, and systems as Chief Procurement Officer. In her role as CPO, Rosimeri manages all national, bi-national and international bidding and procurement processes, coordinating all procurement activities to ensure the effectiveness of processes and systems to meet the expectations of the different areas integrating the ITAIPU BINACIONAL, the CFO, and CEO, efficiently and transparently. Among other projects within her CPO activities, Rosimeri implemented an Electronic Procurement System, with emphasis on national, bi-national and international Reverse Auctions. She also developed a Sustainable Procurement Program which is being effectively used since 2013, as well as a Supplier Development Program. As a strategist with extensive experience in managing people, Rosimeri manages 90 people, Brazilians, and Paraguayans, in 4 different cities (Curitiba, Asuncion, Ciudad del Este and Foz de Iguazu) in which ITAIPU BINACIONAL has offices.

ORAL SESSION 09
Virtual, Digital & Smart Factory
Session Chair: Paolo Gaiardelli

10:30 - 10:45 (238) Reflections on Smart Industry: the paradox of Theseus’ ship and beyond
Hans Wortmann

10:45 - 11:00 (140) The importance of timely feedback to interactivity in Online Education
Esdras Jorge Santos Barboza

ORAL SESSION 10
Flexible, Sustainable Supply Chains
Session Chair: Feni D. R. Agostinho

11:15 - 11:30 (233) Assessment of structural qualities of production systems
Matthias Heinicke

11:30 - 11:45 (252) The introduction process of low-volume products: challenges and potentials of information management
Siavash Javadi

11:45 - 12:00 (253) Sustainability practices diffusion: the role of buying firms from the perspective of diffusion of innovation theory
Handson Pimenta
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:30</td>
<td>ORAL SESSION 11</td>
<td>(179) A simulation based approach to investigate the procurement process and its effect on the performance of supply chains</td>
<td>Daniel Pause</td>
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<tr>
<td>10:30</td>
<td>ORAL SESSION 11</td>
<td>(182) Sensor Triggered Replacement of Spare Parts: Customer Service Process Innovation</td>
<td>Gabriela Lais Rozati</td>
</tr>
<tr>
<td>11:00</td>
<td>ORAL SESSION 11</td>
<td>(254) Impact of Raw Material Commoditization on Supply Chains</td>
<td>Siavash Khajavi</td>
</tr>
<tr>
<td>11:15</td>
<td>ORAL SESSION 11</td>
<td>(133) Simulation and optimization models in a business game for decision-making in logistics processes</td>
<td>Marco Aurelio Butzke</td>
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<tr>
<td>11:30</td>
<td>ORAL SESSION 12</td>
<td>(239) Human-Centric Manufacturing Workplaces: aiming at increasing attractiveness and user experience</td>
<td>Marco Taisch</td>
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<tr>
<td>11:30</td>
<td>ORAL SESSION 12</td>
<td>(280) Comparing Techniques for Selecting Automation Technology</td>
<td>Erlend Alfnes</td>
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<tr>
<td>10:30</td>
<td>ORAL SESSION 13</td>
<td>(176) Customization process of the process for the development of embedded components for the aerospace industry</td>
<td>Magda Aparecida Silvério Miyashiro</td>
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<tr>
<td>10:30</td>
<td>ORAL SESSION 13</td>
<td>(177) Base and Extended One-Dimensional Warranties Analyses for Remanufactured Products</td>
<td>Ammar Y. Alqahtani</td>
</tr>
<tr>
<td>11:00</td>
<td>ORAL SESSION 13</td>
<td>(128) Sustainable Economic Development and High-Quality Engineering Education</td>
<td>Vitor Mendes Caldana</td>
</tr>
<tr>
<td>11:30</td>
<td>ORAL SESSION 13</td>
<td>(260) Evaluation of Additive Manufacturing Processes in Fabrication of Personalized Robot</td>
<td>Shushu Wang</td>
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<tr>
<td>11:30</td>
<td>ORAL SESSION 13</td>
<td>(281) Retail Tactical Planning: An Aligned Process?</td>
<td>Kasper Kiil</td>
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<tr>
<td>11:30</td>
<td>ORAL SESSION 13</td>
<td>(283) Capability maturity model for engineering change management in ETO environment</td>
<td>Erlend Alfnes</td>
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POSTER SESSION 1
Session Chairs: Bruno A. Rodrigues Filho and William Machado Emiliano
(the list of the posters are at page 33)

ORAL SESSION 14
Special session - Smart Manufacturing System Characterization, an SM & CPPS SIG
workshop session
Session Chair: Márcia Terra da Silva

14:00 - 14:15 (178) System Thinking and Business Model Canvas for collaborative business models design
Sergio Gustavo Medina Pereira

14:15 - 14:30 (192) An Investigation to Manufacturing Analytical Services Composition using the Analytical Target Cascading Method
Kai-Wen Tien

14:30 - 14:45 (115) Systems ERP/BSC in Production/Operations Management: An Analysis of Results by Companies
Celso Afonso Couto

14:45 - 15:00 (180) Toward a Matching Approach to Support CBM (Collaborative Business Model) Processes between Regional Entrepreneurs within the RIS3 Policy
Jérémie Faham

15:00 - 15:15 (249) Location of Office, a Strategy for Legal Logistics
Cicero Tadeu Tavares Duarte

15:15 - 15:30 (257) RFID integration for material management considering engineering changes in ETO industry
Quan Yu

ORAL SESSION 15
Innovation and Collaborative Networks
Session Chair: Robert Waker

14:00 - 14:15 (136) Improving the sustainability of SOA providers’ networks via a collaborative process innovation model
João Ferreira Santana-Filho

14:15 - 14:30 (158) Theoretical models to classify the type of interorganizational networks in productive systems
Marcelo Tsuguio Okano

14:30 - 14:45 (196) Business model innovation in state-owned and private-owned enterprises in China
Yan Li

14:45 - 15:00 (273) Analysis of Inter-firm Co-operation in Joint Research and Development Projects
Matti Majuri

15:00 - 15:15 (146) Economic and Environmental Advantages of Rubber Recycling
Henrírico Nieves Pujol Tucci

15:15 - 15:30 (229) Sustainable Development Within Enterprise Architecture
Daniel F. R. Alves
### ORAL SESSION 16

**Special session - Smart Manufacturing System Characterization, an SM & CPPS SIG workshop session**

Session Chair: Serm Kulvatunyou

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:00</td>
<td>(198) Applications of the Factory Design and Improvement Reference Activity Model</td>
<td>SangSu Choi</td>
</tr>
<tr>
<td>14:15</td>
<td>(261) An Overview of a Smart Manufacturing System Readiness Assessment</td>
<td>Kiwook Jung</td>
</tr>
<tr>
<td>14:30</td>
<td>(244) Applying gamification for developing formal knowledge models: challenges and requirements</td>
<td>Klaus-Dieter Thober</td>
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### ORAL SESSION 17

**Quality in production management**

Session Chair: Pedro Luiz Oliveira Neto

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<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Presenter</th>
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<tbody>
<tr>
<td>16:00</td>
<td>(149) Influence of Quality and Productivity on Milk Production Sustainability: from an Anthropocentric to an Ecocentric View</td>
<td>Max Wilson Oliveira</td>
</tr>
<tr>
<td>16:15</td>
<td>(138) Innovation and Quality</td>
<td>Pedro Luiz de Oliveira Costa Neto</td>
</tr>
<tr>
<td>16:30</td>
<td>(145) Health Tourism as an Inducer of Economic and Social Development in Teresina City</td>
<td>Reinaldo Araujo Lopes</td>
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<tr>
<td>16:45</td>
<td>(174) Mitigating Serialization and Traceability, an Implementation and Suitability Study about Strategies of RDC nº. 54 of 2013</td>
<td>André Gomes de Lira Muniz</td>
</tr>
<tr>
<td>17:00</td>
<td>(264) Theoretical Framework of Performance Indicators with BSC for the Private Higher Education Institution</td>
<td>Atílio de Melo Lira</td>
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</table>

### ORAL SESSION 18

**Special Session-Knowledge management in production systems**

Session Chair: Jorge Muniz Junior

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<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Presenter</th>
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<tbody>
<tr>
<td>16:00</td>
<td>(129) Workers’ perspective about Organizational Climate in Knowledge Management: automotive assembly-line case</td>
<td>Inaira Arias Rodriguez</td>
</tr>
<tr>
<td>16:15</td>
<td>(157) ERP Software Quality using Paraconsistent Logic</td>
<td>Priscila Facciolli Tavares</td>
</tr>
<tr>
<td>16:30</td>
<td>(185) A Structured Outsourcing Procedure</td>
<td>Maria Flavia Mogos</td>
</tr>
<tr>
<td>16:45</td>
<td>(221) The need for Knowledge Management when Backsourcing is embraced</td>
<td>Bella Beleviana Nujen</td>
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### ORAL SESSION 19

**Special session - Service-oriented Architecture for Smart Manufacturing System, an SM & CPPS SIG workshop session**  
Session Chairs: Yan Lu and Sanjeev Srivastava

<table>
<thead>
<tr>
<th>Time</th>
<th>Presentation Title</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>16:00</td>
<td><strong>(234) Industrial IoT Gateway with Machine Learning for Smart Manufacturing</strong></td>
<td>Martin Miskuf</td>
</tr>
<tr>
<td>16:15</td>
<td><strong>(248) The Paradigm Shift in Smart Manufacturing System Architecture</strong></td>
<td>Yan Lu</td>
</tr>
<tr>
<td>16:30</td>
<td><strong>(255) A Hybrid Method for Manufacturing Text Mining Based on Document Clustering and Topic Modeling Techniques</strong></td>
<td>Farhad Ameri</td>
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</tbody>
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### SPECIAL SESSION A

**Bottom-up Special session - Knowledge Base Development for Smart Manufacturing, an SM & CPPS SIG workshop session**  
Session Chairs: Serm Kulvatunyou and Farhad Ameri

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>17:30</td>
<td><strong>(234) Industrial IoT Gateway with Machine Learning for Smart Manufacturing</strong></td>
<td>Martin Miskuf</td>
</tr>
<tr>
<td>19:00</td>
<td><strong>(248) The Paradigm Shift in Smart Manufacturing System Architecture</strong></td>
<td>Yan Lu</td>
</tr>
<tr>
<td>19:00</td>
<td><strong>(255) A Hybrid Method for Manufacturing Text Mining Based on Document Clustering and Topic Modeling Techniques</strong></td>
<td>Farhad Ameri</td>
</tr>
</tbody>
</table>

### SPECIAL SESSION B

**Implications of multi-stage manufacturing process chains on Smart Manufacturing, an SM & CPPS SIG workshop session**  
Session Chair: Klaus-Dieter Thoben

<table>
<thead>
<tr>
<th>Time</th>
<th>Presentation Title</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>17:30</td>
<td><strong>(234) Industrial IoT Gateway with Machine Learning for Smart Manufacturing</strong></td>
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</tr>
<tr>
<td>19:00</td>
<td><strong>(248) The Paradigm Shift in Smart Manufacturing System Architecture</strong></td>
<td>Yan Lu</td>
</tr>
<tr>
<td>19:00</td>
<td><strong>(255) A Hybrid Method for Manufacturing Text Mining Based on Document Clustering and Topic Modeling Techniques</strong></td>
<td>Farhad Ameri</td>
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### ORAL SESSION 20

**Special Session- Advances in Cleaner Production**

Session Chairs: Biagio F. Giannetti and Ginevra L. Lombardi

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>10:30</td>
<td>(109) A Thermal System Based on Controlled Entropy for Treatment of Medical Waste by Solar Energy</td>
<td>Nilo Costa Serpa</td>
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<tr>
<td>10:45</td>
<td>(120) Analysis of Polyethylene Terephthalate Production Chain: an Approach Based on the Emergy Synthesis</td>
<td>Gustavo Adolfo Bustamante</td>
</tr>
<tr>
<td>11:00</td>
<td>(121) Urban Solid Waste: An analysis of energy recovery efficiency three different treatment systems in Brazil</td>
<td>Geslaine Frimaio</td>
</tr>
<tr>
<td>11:30</td>
<td>(125) Naphtha Production Assessment from the Perspective of the Emergy Accounting</td>
<td>Gustavo Adolfo Bustamante</td>
</tr>
<tr>
<td>11:30</td>
<td>(150) Energy Efficiency and Global Warming Potential of a Wind-Energy Complex at Brazilian Piauí State</td>
<td>Feni Agostinho</td>
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</table>

### ORAL SESSION 21

**Sustainable production management - Which approaches work in practice? - 1**

Session Chair - Gregor Von Cieminski

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<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>10:30</td>
<td>(141) Effects of climate change on the Brazilian broiler meat production chain</td>
<td>Robert Ari Waker</td>
</tr>
<tr>
<td>10:45</td>
<td>(107) Production Planning and Control: the Dissemination Tool of the Operation Strategy</td>
<td>Walter Cardoso Satyro</td>
</tr>
<tr>
<td>11:00</td>
<td>(111) Solar Water Heating: Possibilities of Use in Industrial Processes in Brazil</td>
<td>Etevaldo Francisco Carreira Junior</td>
</tr>
<tr>
<td>11:30</td>
<td>(113) Strategic Factors to Obtain Competitive Advantage in Industries that Compete in Environmental Sustainability</td>
<td>Walter Cardoso Satyro</td>
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<tr>
<td>11:30</td>
<td>(183) Approaches for the Integration of the Social and Environmental Dimensions of Sustainability in Manufacturing Companies</td>
<td>Felix Friemann</td>
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<tr>
<td>11:45</td>
<td>(226) An Emergy Environmental Accounting-Based Study of Different Biofuel Production Systems</td>
<td>Maria de Fátima de Freitas Bueno</td>
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POSTER SESSION 2
Session Chairs: Bruno A. Rodrigues Filho and William Machado Emiliano
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Poster Area

14:00 15:30
Plenary Room 1

ORAL SESSION 22
Special session - Operations management in Engineer-to-Order manufacturing
Session Chair: Erlend Alfnes

14:00 - 14:15 (190) Buyer-Supplier Information Sharing in ETO
Erlend Alfnes

14:15 - 14:30 (206) Developing Supplier Strategies for ETO Companies: A Case Study
Mikhail Shlopak

14:30 - 14:45 (208) Categorizing Engineer-To-Order Companies through their Project Execution Strategy
Kristina Kjersem

14:45 - 15:00 (235) Improving planning process for ETO-projects: a case study
Kristina Kjersem

15:00 - 15:15 (265) A Framework for Lean Flow in Turbulent High-Variety Low-Volume Manufacturing Environments
Erlend Alfnes

15:15 - 15:30 (282) Prescriptive Cost Management for Lean Supply Chains: Extending Inter-Organizational Cost Management through Ratio Project Planning
Paulo Sérgio Lima Pereira Afonso

14:00 15:30
Room 2

ORAL SESSION 23
Sustainable production management - Which approaches work in practice? - 2
Session Chair: Gregor Von Cieminski

14:00 - 15:30 Debate

16:00 17:30
Plenary Room 1

ORAL SESSION 24
Agrifood supply chains
Session Chairs: João Gilberto Mendes and Silvia Bonilla

16:00 - 16:15 (126) Effects of Price and Transportation Costs in Soybean Trade
João Gilberto Mendes dos Reis

16:15 - 16:30 (197) Effects of Logistics Variables in the Volume of Soybean Transported by Routes of Exportation of Mato Grosso state, Brazil
Arcione Ferreira Viagi

16:30 - 16:45 (169) Does the VHP Sugar Price Influence in the Ethanol Volume Production?
Edison Sotolani Claudino

16:45 - 17:00 (243) Performance Assessment for a Sustainable Supply Chain at Local Level
Leticia Prevez

17:00 - 17:15 (134) Food Supply Chain - Sustainability in Small Milk Industry
Arcione Ferreira Viagi

17:15 - 17:30 (105) Post-harvest soybean loss during truck transport: A Case Study of Piauí State, Brazil
Irenilza A. Nääs
16:00 - 16:15  **(207) Cost modelling approach for the source specific evaluation of alternative manufacturing networks**  
Jan-Philipp Prote

16:15 - 16:30  **(151) Measuring the economic impact of metrological frauds in trade metrology using an Input-Output Model**  
Bruno Amado Rodrigues Filho

16:30 - 16:45  **(160) Effects of Transport Infrastructure in Economic Development**  
José Alberto Alencar Luz

16:45 - 17:00  **(143) Contributions of the Program Inovar-Auto to the automotive manufacturers in Brazil**  
Nivaldo Palmeri

16:00 - 17:00  **CLOSING CEREMONY**

16:00  **The Burbidge Awards**

16:30  **The Mario Garetti Award**

17:00  **The presentation of the APMS 2017**
Board: 01
(201) Paraconsistent Logical Controller At - Open Source Platform Arduino
Genivaldo Carlos Silva

Board: 02
(101) Towards a More Sustainable Passenger Transport: Management of Disutility Related to Environmental Impacts
Helcio Raymundo

Board: 03
(147) Intelligence Activities in the São Paulo State Police: investments x results
Herbert Goncalves Espuny

Board: 04
(162) Utilization of the Milk Run Method at the Production Chain of the Brazilian Vehicle Industry - Its Efficiency According to the Optics of Annotated Paraconsistent Logic
Fábio Papalardo

Board: 05
(170) Application of Paraconsistent Logic to Assess Falling Risks Factors in the Elderly
Fábio de Araújo Leite

Board: 06
(175) FEASIBILITY ASSESSMENT IN DRUG SCREENING USING NON-CLASSICAL LOGICS
André Gomes de Lira Muniz

Board: 07
(204) Network design for Reverse Logistic
Alexandre Arnaldo Boschi

Board: 08
(209) The Modeling of Processes in Elaboration of Telecommunication Network Projects for Sharing of Poles in Piauí
Jaciara Carvalho de Sousa Oliveira

Board: 09
(237) Indicators of environmental performance of Eletrobras: Analyzing the use of resources of the electricity consumption in the State of Piauí
Jaciara Carvalho de Sousa Oliveira

Board: 10
(213) Paraconsistent Business Simulator in the Industrial Sector
Thais Rodrigues Ibiapino

Board: 11
(218) Engineering requirements for Big Data projects: Use case of a project for dengue outbreak prediction
Marcelo Aparecido Carlos

Board: 12
(228) The influence of DevOps practices in IT management processes according to COBIT 5
Ivanir Costa

Board: 13
(236) Low Cost Electronic Device for People with Disabilities in Poor Areas of Brazil based on Paraconsistent Logic
Marcello Anderson Melo Buonafina

Board: 14
(275) Legal Risk Analysis based on the Paraconsistent Annotated Evidential Logic Er
Liliam Sayuri Sakamoto

Board: 15
(277) Income-Weighted Life-Cycle Cost Model: an Application to the Case of Electric versus Diesel Buses
William Machado Emiliano
Board: 01  
(108) Green Industries: The Implementation Process of the Business Strategy on the Shop Floor  
Enio Antonio Ferigato

Board: 02  
(116) Knowledge Management as integration tool for Organizational Sustainability  
Marcos de Oliveira Morais

Board: 03  
(131) Critical analysis of the metamorphosis of 5S philosophy occurred in the change of the model of Mass Production to Lean Production and its developments in the Brazilian context  
Ulysses Martins Moreira Filho

Board: 04  
(139) Desalination of seawater for use in residential condominiums or small cities of coastal enterprises.  
Marcos Morais

Board: 05  
(148) Measuring quality in the Brazilian milk supply chain: a study of the biological aspects as the quality differentiator for bonus payment  
Marcelo Tsuguio Okano

Board: 06  
(154) Using Emergy Accounting to Assess Use and Underuse of Natural Infrastructure Resources by Educational Systems: a Case Study.  
José Hugo de Oliveira

Board: 07  
(159) Environmental Accounting for conventional strawberry production management.  
Carlos Cezar da Silva

Board: 08  
(163) The necessity of customization of mobile device interfaces for elderly people  
Franciele Alves dos Santos Medina

Board: 09  
(164) Human Capital and Innovation: A Furniture Cluster in Brazil  
Elizangela Maria Menegassi de Lima

Board: 10  
(165) Cashew Apple Juice Production in Piauí State: An exploratory case study  
Thais Rodrigues Ibiapino

Board: 11  
(171) The Gross National Happiness Assessment in a São Paulo Community  
Rose Reis de Souza

Board: 12  
(215) Logistical study to comercial point of opening the retail chair electronics  
Luiz Lozano

Board: 13  
(227) Exploring the viability of biodiesel use in a Brazilian bamboo plantation  
Luiz Ghelmandi Netto

Board: 14  
(271) Quality problems in Construction: A study case on the implantation and management of quality in a construction company of Teresina-PI  
Thais Rodrigues Ibiapino