



13th International Conference on Modeling, Optimization and Simulation - MOSIM 2020

"New Advances and Challenges for Sustainable and Smart Industries"

12-14 November 2020

Campus - UNIVERSIAPOLIS

Agadir - Morocco

Provisional Program

13:00 – 13:30 (Agadir/Paris) / 7:00 – 7:30 (Montréal)

Opening ceremony

- Welcome message from Mr Aziz Bouslikhane,
President of the International University of Agadir, Morocco
- Welcome message from Mr Laurent Champaney,
Director General of Arts et Métiers, Paris, France
- Welcome message from Mr Abdelhakim Artiba
President of the Université Polytechnique Hauts-de-France, France
- Welcome message from the MOSIM'20 Scientific Committee
- Welcome message from the MOSIM'20 Organizing Committee

13:30 – 14:30 (Agadir/Paris) / 7:30 – 8:30 (Montréal)

Keynote Speech - Chaired by F.Vernadat

- "AI for Production Engineering: Feedback and Perspectives"
Prof. Bernard Grabot, ENIT, Tarbes, France -

14:30 – 16:30 (Agadir/Paris) / 8:30 – 10:30 (Montréal)

Regular session RS-1 "Simulation and Optimization"

Chaired by Mustapha Ouhimmou and Jean-Yves Dantan




- ID40 "Simulation model for the decontamination of surgical instruments and analysis of automated scenarios"
by Marzieh Ghiyasinab, Nadia Lahrichi, Nadia Lehoux, Xavier Elie-Dit-Cosaque
- ID126 "Comparative study of two classical optimization algorithms solving economic dispatch problems"
by Tawba Dridi, Houda Jouini, El-Mouloudi Dafaoui, Abderrahman El Mhamedi, Abdelkader Mami
- ID109 "Modular cost model for Quality Management"
by Jean-Yves Dantan, Alain Etienne, Ali Siadat, Mehrdad Mohammadi, Reza Tavakkoli-Moghaddam
- ID144 "Spare parts inventory control based additive manufacturing"
by Youssef Abidar, Amin Chaabane

Day 1: 12 November 2020

14:30 – 16:00 (Agadir/Paris) / 8:30 – 10:00 (Montréal)

Special session SP-1 "Artificial Intelligence & Data Analytics in Manufacturing 4.0"





Chaired by Samia Chehbi-Gamoura

-  ID92 "Improvement of sales prediction by fitted-to-product time-series models"
by Mohamed Sameh Belaid, Stéphane Lecoeuque, Anthony Fleury, Baptiste Hervé
-  ID118 "Supporting strategic decision-making in Manufacturing 4.0 with mix of qualitative and quantitative data analytics"
by Dmitry Kucharavy, David Damand, Samia Gamoura, Marc Barth
-  ID141 "Contribution to sales forecasting based on recurrent neural network in the context of a Moroccan company"
by Ghita Rguiga, Nabil Mouttaki, Jamal Benhra

14:30 – 16:30 (Agadir/Paris) / 8:30 – 10:30 (Montréal)

Special session SP-2.1 "Risk Management in Logistics"

Chaired by Sofiene Dellagi and Zied Hajej

-  ID24 "Optimisation conjointe de la planification de la production d'énergie, de la maintenance et des pièces de rechange d'un parc éolien"
by Abderrahmane Faker, Salim Bouslikhane, Zied Hajej
-  ID58 "Optimal maintenance policy for equipment leased with warranty"
by Amel Ben Mabrouk, Anis Chelbi
-  ID61 "Stratégie intégrée de production, maintenance et carte de contrôle d'une chaîne logistique sous contrainte de qualité"
by Aminu Sahabi Abubakar, Aime Nyongue, Zied Hajej
-  ID104 "Etude des critères d'optimisation pour la replanification des chaînes d'assemblage aéronautiques"
by Damien Lovato, Romain Guillaume, Caroline Thierry, Olga Battaïa





16:30 – 16:45 (Agadir/Paris) / 10:30 – 10:45 (Montréal)

 Conference break

16:45 – 18:45 (Agadir/Paris) / 10:45 – 12:45 (Montréal)

Regular session RS-2 "Demand-Driven Material Requirements Planning"





Chaired by Jacques Lamothe and Pierre Baptiste

-  ID167 "Demand-Driven MRP: Literature review and research issues"
by Mustapha El Marzougui, N. Messaoudi, W. Dachry, H. Sarir, B. Bensassi
-  ID16 "Corrélation entre taux de service, taux de charge et paramètres du DDMRP : Utilisation d'abaques réalisés par simulation"
by Guillaume Dessèvre, Pierre Baptiste, Jacques Lamothe
-  ID66 "Modélisation et simulation d'un module d'ajustement de la capacité d'un système DDMRP"
by Guillaume Dessèvre, Maha Ben Ali
-  ID70 "Modélisation et simulation d'un système DDMRP protégé par un délai tampon"
by Mahmoud Elhakam, Maha Ben Ali, Diane Riopel

16:45 – 18:45 (Agadir/Paris) / 10:45 – 12:45 (Montréal)

Special session SP-3 "Risk Management and Performance Assessment"





Chaired by Élise Vareilles, Thierry Coudert and Konstantinos Kirytopoulos

-  ID132 "Holistic management of risks for road tunnels"
by Konstantinos Kirytopoulos, Emmanouil Dermitzakis, Panagiotis Ntzeremes, Georgios Chatzistelios
-  ID90 "Risk-based simulation tool for prediction of process influence on product performances"
by Jelena Petronijevic, Alain Etienne, Ali Siadat
-  ID93 "FVMEARA: A new systematic approach for security and safety risk co-assesment based on ICVSS methodology"
by Riad Chemali, Blaise Conrard, Mireille Bayart
-  ID129 "Système à base de connaissances pour aider l'ingénierie des risques en réponse à appel d'offres"
by Elise Vareilles, Thierry Coudert, Michel Aldanondo, Laurent Geneste, Delphine Guillon, Rania Ayachi

16:45 – 18:45 (Agadir/Paris) / 10:45 – 12:45 (Montréal)

Special session SP-4.1 "4.0 Key Performance Indicators and Decision-Making Dynamic"

Chaired by Lamia Berrah and François Vernadat

-  ID160 "Framework of performance measurement and management for Industry 4.0 era"
by Liaqat Ali Shah, Fahd Amjad, François Vernadat
-  ID55 "Impact d'une expression de performance élémentaire sur l'expression de performance agrégée : une approche par l'intégrale de Choquet"
by Lamia Berrah, V. Clivillé, V. Verjus, R. Gandia
-  ID48 "Modularity of RMS: What about the aggregation?"
by Erica Capawa Fotsoh, Pierre Castagna, Nasser Mebarki, Pascal Berruet
-  ID28 "A framework for developing a performance measurement system in healthcare: A case study in Montreal"
by Anes Ben Fradj, Tassedda Boukherroub, Claude Olivier

16:45 – 18:45 (Agadir/Paris) / 10:45 – 12:45 (Montréal)

Special session SP-5 "Marine Logistics"

Chaired by Abdellah El Fallahi and Tarik Zouadi




-  ID18 "Modélisation du problème de l'allocation des planches et des postes à quai dans les ports vraciers"
by Hamza Bouzekri, Gülgün Alpan, Vincent Giard
-  ID68 "Simulation of a digital shadow in a port"
by Erik Bergeron, Jean-François Audy, Pascal Forget
-  ID165 "Study of the impact of quay crane productivity rate on berth and quay crane assignment and scheduling"
by Kaoutar Chargui, Tarik Zouadi, Abdellah El Fallahi, Mohamed Reghioui
-  ID107 "Stakeholders' analysis in LNG bunkering: An integral part of risk management process"
by Evangelos Bellos, George Chatzistelios, Angeliki Deligianni, Vrassidas Leopoulos

Day 1: 12 November 2020

18:45 – 20:15 (Agadir/Paris) / 12:45 – 14:15 (Montréal)

Regular session RS-3 "Model-Based System Engineering",



Chaired by Hervé Pingaud and Xavier Godot

-  ID14 "On the continuity of the swarm robot design using MBSE method and simulation"
by Khalil Alaoui, Moncef Hammadi, Thierry Soriano, Mohamed Addar
-  ID112 "Adopting a model-based approach for satellite operations' diagnosis"
by Nikolena Christofi, Claude Baron, Xavier Pucel, Marc Pantel, Mathilde Machin, Christophe Ducamp
-  ID119 "Investigating the use of a model-based approach to assess automotive embedded software safety"
by Yandika Sirgabsou, Claude Baron, Cyril Bonnard, Laurent Pahun, Lorenzo Grenier, Philippe Esteban

18:45 – 20:15 (Agadir/Paris) / 12:45 – 14:15 (Montréal)

Regular session RS-4 "Operations Research in Production Management"




Chaired by Sylvie Norre and Nathalie Klement

-  ID49 "Programmation linéaire en nombres entiers pour l'ordonnancement de projet multi-compétence avec préemption partielle"
by Christian Artigues, Pierre Lopez, Olivier Polo Mejía
-  ID67 "A Min-Max path approach for balancing robotic assembly lines with sequence-dependent setup times"
by Youssef Lahrichi, Laurent Deroussi, Nathalie Grangeon, Sylvie Norre
-  ID75 "Un modèle de blending pour la planification dynamique d'une chaîne logistique minière"
by Mouna Bamoumen, Vincent Hovelaque, Vincent Giard

18:45 – 20:15 (Agadir/Paris) / 12:45 – 14:15 (Montréal)

Special session SP-6 "Territoire et Logistique : Un Système Complexe"

Chaired by Abdellatif Benabdelhafid, Ouafae Zerwali Ouariti and Ilias Majdouline

-  ID26 "Smart ports design features analysis: A systematic literature review"
by Sahbia Bessid, A. Zouari, A. Frikha, A. Benabdelhafid
-  ID94 "The complexity of the territorial logistics ecosystem"
by Ebtissem Sassi, Abdellatif Benabdelhafid
-  ID100 "Ports and spatial planning: An exploratory study in the Moroccan context"
by Ouafae Zerouali Ouariti, El Mehdi Jebrane

13:30 – 14:30 (Agadir/Paris) / 7:30 – 8:30 (Montréal)

Keynote Speech - Chaired by Anis Chelbi

- “Ingénierie de la fiabilité et de la maintenance : Pour des solutions innovantes, performantes et durables”
Prof. Daoud Ait-Kadi, ENIT, Université Laval, Canada -

14:30 – 16:30 (Agadir/Paris) / 8:30 – 10:30 (Montréal)

Regular session RS-5 "Material and Resource Planning / Production Planning"

Chaired by Alexandre Dolgui, Farouk Yalaoui

- ID172 "Modélisation et optimisation du problème de planification de type RMRP"
by Ilhem Slama, Oussama Ben-Ammar, Alexandre Dolgui, Faouzi Masmoudi
- ID173 "Multi-period multi-item lot sizing under random yield and stochastic capacity"
by Mehrnoosh Mohammadi, Simon Thévenin, Alexandre Dolgui
- ID177 "A mixed integer linear program for human and material resources optimization in emergency department"
by Ibtissem Chouba, Lionel Amodeo, Farouk Yalaoui, Taha Arbaoui, David Laplanche
- ID29 "Commande optimale de systèmes hybrides de fabrication-refabrication utilisant des installations dédiée et flexible"
by Morad Assid, Ali Gharbi, Adnène Hajji

14:30 – 16:30 (Agadir/Paris) / 8:30 – 10:30 (Montréal)

Special session SP-2.2 "Risk Management in Logistics"





Chaired by Lahcen Mifdal and Sofiene Dellagi

- ID111 "Towards a predictive maintenance based on ultrasonic guided waves non-destructive testing technique: A case study"
by Mohamed Sfar, Slah Yaacoubi, Sofiene Dellagi, Mahjoub El Mountassir, Sadok Turki
- ID123 "Maritime risks taxonomy: A structured literature review of maritime risk factors classification"
by Cheik Aboubakar Ouedraogo, Sina Namakiaraghi, Cédric Rosemont, Aurélie Montarnal, Didier Gourc
- ID130 "Stratégie de maintenance optimale d'une station de panneaux solaires sur un horizon de temps fini"
by Safouane Elkouiri, Lahcen Mifdal, Sofiene Dellagi, Anis Chelbi
- ID158 "Optimal design of a leased vehicle fleet with consideration of maintenance and environmental constraints"
by Malek Ben Mechlia, Jérémie Schutz, Sofiene Dellagi, Anis Chelbi

14:30 – 16:30 (Agadir/Paris) / 8:30 – 10:30 (Montréal)

Special session SP-4.2 "4.0 Key Performance Indicators and Decision-Making Dynamic"





Chaired by Vincent Clivillé and François Vernadat

-  ID30 "Usage de pénalités dans les modèles économiques de management industriel"
by Najat Bara, Frédéric Gautier, Vincent Giard
-  ID163 "Modélisation du programme directeur de production en vue de la transition numérique des PME manufacturières"
by Estéfania Tobon Valencia, Samir Lamouri, Robert Pellerin, Alexandre Moeuf
-  ID91 "Linking 4.0 technologies and performance indicators based on a reference model for supply chain"
by Yousra El Kihel, Aicha Amrani and Yves Ducq
-  ID164 "L'entrepôt 4.0 à l'ère des nouvelles technologies et de l'internet physique "
by Aurélie Édouard, Samir Lamouri, Virginie Fortineau, Yves Sallez, Alexandre Berger

14:30 – 16:30 (Agadir/Paris) / 8:30 – 10:30 (Montréal)

Special session SP-8.1 "Health Care Management"

Chaired by Omar ElBeqqali and Said Kharraja

-  ID63 "Déploiement des véhicules de secours et d'assistance aux victimes en tenant compte de l'optimisme du décideur"
by Oussama Ben-Ammar, Romain Guillaume, Caroline Thierry
-  ID116 "Modeling patient flow in the emergency department using machine learning and simulation"
by Emad Alenany, Abdessamad Ait El Cadi
-  ID125 "Resources scheduling in the emergency department using simulation in disaster conditions: Case of COVID-19"
by Ibrahim Cheaitou, Abdessamad Ait El Cadi, Abdelghani Bekrar, David Duvivier, Anwar Sahili
-  ID128 "Complexité de la chaîne logistique hospitalière et du Covid-19 : vers une modélisation multi-agents"
by Ahmed Chtioui, Imane Bouhaddou, Abla Chaouni Benabdellah, Asmaa Benghabrit

Day 2: 13 November 2020




16:30 – 16:45 (Agadir/Paris) / 10:30 – 10:45 (Montréal)

 Conference break

16:45 – 18:15 (Agadir/Paris) / 10:45 – 12:15 (Montréal)

Regular session RS-6 "Industrial Maintenance"

Chaired by Bruno Agard, Nidhal Rezg

-  ID13 "Diagnostic et pronostic de la maintenance basée sur la dégradation : Cas d'un système vibratoire"
by Imad El Adraoui, Hassan Gziri, Ahmed Mousrij
-  ID151 "Prédictions de RUL par analyse de similarités"
by Laure Siret, Bruno Agard, Christophe Danjou, Renan Bonnard
-  ID180 "Stratégie de maintenance imparfaite intégrée pour un système de production d'énergie sous variation de taux de défaillance (cas d'une éolienne)"
by Maryem Bouzoubaa, Zied Hajej, Nidhal Rezg

16:45 – 18:45 (Agadir/Paris) / 10:45 – 12:45 (Montréal)

Special session SP-7 "Recent Advances and Fuzzy-Logic Applications in Sustainable Manufacturing and Logistics",

Chaired by Lyes Benyoucef and Hichem Haddou-Benderbal

-  ID47 "Multi-objective process and production planning integration in reconfigurable manufacturing environment: Augmented e-constraint based approach"
by Mohammad Amin Yazdani, Lyes Benyoucef, Amirhossein Khezri, Ali Siadat
-  ID142 "Evaluation environnementale couplée à l'analyse multidimensionnelle des données pour l'économie circulaire"
by Nancy Prioux, Rachid Ouaret, Zirul Chen, Gilles Hêtreux et Jean-Pierre Bélaud
-  ID99 "Evaluation de l'incertitude pour l'aide à la replanification en horizon glissant d'une chaîne logistique"
by Sanaa Tiss, Jacques Lamothe, Caroline Thierry
-  ID170 "Big data for supply chain management in Industry 4.0 context: A comprehensive survey"
by Lahcen Tamym, Moulay Driss El Ouadghiri, Lyes Benyoucef, Ahmed Nait Sidi Moh

16:45 – 18:45 (Agadir/Paris) / 10:45 – 12:45 (Montréal)

Special session SP-8.2 "Health Care Management"





Chaired by Omar ElBeqqali and Teresa Melo

-  ID168 "A multi-objective approach for the combined master surgical schedule and surgical case assignment problems"
by Salma Makboul, Said Kharraja, Abderrahman Abbassi, Ahmed El Hilali Alaou
-  ID171 "An approach for outpatient multi-appointment booking optimization problem with strict time-lag and variable resources constraints"
by Quoc Nhat Han Tran, Hicham Chehade, Nhan Quy Nguyen, Frédérick Dugardin
-  ID169 "A three-stage approach for the multi-period green home health care problem with varying speed constraints"
by Salma Makboul, Said Kharraja, Abderrahman Abbassi, Ahmed El Hilali Alaou
-  ID138 "A collaborative supply chain network design within a territory hospital group"
by Khoulood Dorgham, Issam Nouaouri, Jean-Christophe Nicolas, Gilles Goncalves

16:45 – 18:45 (Agadir/Paris) / 10:45 – 12:45 (Montréal)

Special session SP-11 "Production System Optimization in 4.0 Context Using Continuous Improvement"

Chaired by Lazhar Homri, Nathalie Klement and Armand Baboli

-  ID50 "Simulation d'une salle de tissage : impact du nombre de tisserands sur les temps d'arrêt des machines et sur les retards de production"
by Ludwig Dumetz, Jonathan Gaudreault, Pascal Forget
-  ID106 "Dynamic scheduling through mathematical and simulation approach in the context of Industry 4.0"
by Mojtaba Ebrahimi, Behnam Einabadi, Armand Baboli, Eva Rother
-  ID131 "Risk and decision analysis for reconfigurable assembly system design under uncertainties"
by Amélie Beauville Dit Eynaud, Nathalie Klement, Lionel Roucoules, Olivier Gibaru, Laurent Durville
-  ID114 "A conceptual framework for asset management 4.0"
by Mbarek El Bounjimi, G Abdul-Nour

18:45 – 20:45 (Agadir/Paris) / 12:45 – 14:45 (Montréal)

Regular session RS-7 "Industrial Case Studies"



Chaired by Lionel Amodeo and Amal Mtibaa

-  ID15 "Supply chain planning in the petroleum industry: Libyan petroleum sector case study"
by Otman Abdussalam, Julien Trochu, Nuri Fello, Amine Chaabane
-  ID45 "Conception d'un SIAD pour la planification minière : Mise en oeuvre dans le contexte minier de l'extraction du phosphate"
by Najoua Alaoui, Ahlam Azzamouri, Selwa Elfirdoussi, Pierre Fenies
-  ID59 "Avantages potentiels du Reverse Blending sur la chaîne logistique de l'industrie des engrais"
by Latifa Benhamou, Pierre Féniès, Vincent Giard
-  ID166 "Case study of supply chain in textile industry: A dynamic product allocation decision problem"
by Alice Berthier, Hicham Chehade, Alice Yalaoui, Lionel Amodeo, Farouk Yalaoui, Christian Bouillot

18:45 – 19:45 (Agadir/Paris) / 12:45 – 13:45 (Montréal)

Regular session RS-8 "Big Data / Data Analytics"

Chaired by Benoît Eynard, Lazhar Homri

-  ID17 "Fouille de données et segmentation de chroniques par extrema : considérations préliminaires"
by Michel Fliess, Cédric Join
-  ID56 "Analyse topologique des structures de données : Application à la migration des systèmes d'information d'entreprise"
by François Loison, Pierre Barrios, Christophe Danjou, Benoît Eynard

Day 2: 13 November 2020

18:45 – 20:45 (Agadir/Paris) / 12:45 – 14:45 (Montréal)

Special session SP-9 “Organizational Engineering and Management of Business Continuity of Healthcare Systems in the Era of Numerical Society Transformation”

Chaired by Maria Di Mascolo, Thibaud Monteiro, Elyes Lamine and Sondès Chabaane

- ID101 "Business planning for home care and services"
by Alois Franzino, Thibaud Monteiro, Maria Di Mascolo
- ID102 "Sharing a ride time constraint in a multi-trip dial-a-ride problem. An application to the non-urgent patient transportation problem"
by Timothée Chane-Haï, Samuel Vercaene, Thibaut Monteiro
- ID103 "Retour d'expériences en ingénierie des parcours de patients en situation complexe"
by Hervé Pingaud, Elyes Lamine
- ID137 "Un système socio-cyber physique basé sur un réseau-infocentré pour la collecte mobile de sang"
by Ikram Ghernaout, Linda Elmhahbi, Mohamed Hedi Karray, Bernard Archimède

18:45 – 20:45 (Agadir/Paris) / 12:45 – 14:45 (Montréal)

Special session SP-10.1 “Production Planning and Control for Industry 4.0”

Chaired by Oualid Kamach and Malek Masmoudi

- ID150 "Economic assessment of ramp-up strategies in multi-variant production"
by Antoine Pierné, Khaled Medini, Malek Masmoudi
- ID35 "Optimal integration of product configuration and process planning to meet individual customer requirements in mass customization"
by Rachel Campos Sabioni, Joanna Daaboul, Julien Le Duigou
- ID113 "A joint model for optimal capacitated multi-level lot-sizing and financing of the working capital requirement under delays in payments"
by Sabah Belil, Pierre Fenies, Asma Rakiz, Nikolay Tchernev
- ID78 "Time-indexed formulations for the order acceptance scheduling problem under energy aspects"
by Mariam Bouzid, Oussama Masmoudi, Alice Yalaoui

13:30 – 14:30 (Agadir/Paris) / 7:30 – 8:30 (Montréal)

Keynote Speech - Chaired by Ali Siadat





"Knowledge Management & Innovation in 4.x (.0 & h) industrial context: Moving QMS (Quality Management System) from 'problem solving' toward 'expandable rationality'"

Dr Stéphane Hubac, STMicroelectronics, France

14:30 – 16:30 (Agadir/Paris) / 8:30 – 10:30 (Montréal)

Regular session RS-9 "Transportation System Management"

Chaired by Chengbin Chu and Nadia Hamani

-  ID79 "A new bi-objective optimization model for bus priority network design"
by Jin Chen, Peng Wu, Feng Chu, Chengbin Chu
-  ID152 "Assessing the reduction of empty backhauls using transshipment points"
by Jean-Sébastien Tancrez, Baptiste De Haes, Thomas Hacardiaux
-  ID162 "Collaboration horizontale durable des réseaux de transport de marchandises :
Etat de l'art et perspectives"
by Aymen Aloui, Ridha Derrouiche, Nadia Hamani, Laurent Delahoche
-  ID178 "Service policy optimization for urban public transport networks: Mobility constraints
during health emergency of pandemic cycles"
by Ronald M. Martinod, Olivier Bistorin, Leonel F. Castañeda, Nidhal Rezg

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Special session SP-10.2 "Production Planning and Control for Industry 4.0"





Chaired by Oualid Kamach and Khalid Kouiss

-  ID122 "Toward application of real-time video streams in production planning and control:
A conceptual framework"
by Marjan Padidar, Samira Keivanpour, Maha Ben Ali
-  ID143 "Conception and modelization of a value stream mapping 4.0"
by Rania El Kammouni, Oualid Kamach, Malek Masmoudi
-  ID44 "Modélisation de contrôleurs discrets pour l'Industrie 4.0"
by Armand Toguyeni
-  ID57 "Jumeau numérique : Approche pour le maintien d'un inventaire géolocalisé en temps
réel d'une cour à bois"
by Sébastien Nantel, Jonathan Gaudreault, François Léger

14:30 – 16:30 (Agadir/Paris) / 8:30 – 10:30 (Montréal)

Special session SP-14.1 "Human in the Factory of the Future"

Chaired by Tahar-Hakim Benchekroun, Bruno Daille-Lefèvre

-  ID20 "Dimensionnement d'espaces de travail intégrant les surfaces d'usage des équipements"
Chaired by Daniela Vilanueva Caceres, Remiel Feno, Amal Mtibaa
-  ID64 "Industrie du futur : aide à l'identification des phénomènes dangereux lors de la conception de machines flexibles"
by Bruno Daille-Lefèvre, Jacques Marsot, Patrick Martin
-  ID80 "Prise en compte de la santé-sécurité dans la conception et l'exploitation des systèmes reconfigurables"
by Juan Camilo Gomez Echeverri, Xavier Godot, Bruno Daille-Lefèvre, Jorge Humberto Morales Aristizabal, Patrick Martin
-  ID133 "L'humain dans les systèmes de production basés sur les paradigmes IoT et CPS : Etat des lieux et perspectives"
by Etienne Valette, Hind Bril El-Haouzi, Guillaume Demesure




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Conference break

16:45 – 18:45 (Agadir/Paris) / 10:45 – 12:45 (Montréal)

Regular session RS-10 "Circular Economy / Sustainable Development"

Chaired by Samir Lamouri, Maria Di Mascolo

-  ID25 "Portrait conceptuel de la gestion de l'énergie dans les systèmes de production"
by Thomas Hernández, Nadia Lehoux, Louis Gosselin
-  ID86 "Study of symbiotic flows with economic approach"
by Mayssa Chebbi, Daniel Roy, Sophie Hennequin, Nahla Chabbah SekmaKihel
-  ID115 "Simulation d'une chaîne de valeur circulaire dans le balayage de rue printanier : étude préliminaire"
by Florence Blouin, Jean-François Audy, Amina Lamghari
-  ID161 "Performance evaluation of centralized maintenance workshop in the circular economy context"
by Rony Arsène Djeunang Mezafack, Maria Di Mascolo, Zineb Simeu-Abazi, Sina Akbari Haghighi

16:45 – 18:45 (Agadir/Paris) / 10:45 – 12:45 (Montréal)

Special session SP-12 "Challenges for the Design of Cyber Physical Production Systems"





Chaired by Olivier Cardin, Virginie Goepp and Néjib Moalla

-  ID110 "Recursive hybrid control architecture to deal with reactivity in the context of Industry 4.0"
by Tsegay Tesfay Mezgébé, Hind Bril El Haouzi
-  ID85 "Function analysis of Manufacturing Execution Systems (MES) in Cyber Physical Production Systems (CPPS)"
by Xuan Wu, Virginie Goepp, Ali Siadat
-  ID174 "Predictive maintenance based on decentralized CPS and convolution's neural network"
by Baudoin Dafflon, Mohand-Lounes Bentaha, Nejib Moalla, Alexandre Benbouriche
-  ID134 "Revue des méthodes d'évaluation des contraintes ergonomiques des opérations de production et de leur intégration dans un système de production cyber-physique"
by Nicolas Murcia, Olivier Cardin, Abdelmoula Mohafid

16:45 – 18:45 (Agadir/Paris) / 10:45 – 12:45 (Montréal)

Special session SP-13.1 "Smart Manufacturing and Sustainable Development"




Chaired by Hafida Bouloiz and Maryam Gallab

-  ID11 "Proposed overall performance indicators for sustainable manufacturing management in mining industry"
by Aicha Lamjahdi, Hafida Bouloiz, Maryam Gallab
-  ID12 "Gestion de l'énergie et de la demande de pointe en puissance dans l'industrie :
Revue de littérature"
by Imen Chaabouni, Nadia Lehoux, Louis Gosselin, Hugues Fortin
-  ID19 "Lean 4.0 serving the industry of the future"
by Rachida Abbou, Zineb Mouhib, Lina Naciri, Mohssine Nali, Abdourahmane Sekoun Kébé, Maryam Gallab
-  ID27 "CO2 emission's study of the hydrocarbon supply chain aiming for resources pooling strategy"
by Youness El Bouazzaoui, Mourad Abouelala, Abdourahmane Sekoun Kébé, Fayçal Mimouni

16:45 – 18:15 (Agadir/Paris) / 10:45 – 12:15 (Montréal)

Special session SP-14.2 "Human in the Factory of the Future"

Chaired by Rémy Houssin and Patrick Martin

-  ID139 "Robotique collaborative en milieu industriel, apports de l'ergonomie dans la transformation du travail : étude en industrie sidérurgique"
Chaired by Aurélien Adam, Tahar-Hakim Benchekroun
-  ID83 "Vers un cadre méthodologique de conception des systèmes humains-robots"
by Mouad Bounouar, Richard Béarée, Ali Siadat, Tahar-Hakim Benchekroun
-  ID73 "L'intégration des facteurs humains dans la première phase de conception : Application sur la pénibilité"
by Rémy Houssin, Oussama Lemouchi

18:45 – 20:45 (Agadir/Paris) / 12:45 – 14:45 (Montréal)

Regular session RS-11 "Supply Chain Design and Management"

Chaired by Zied Hajej and Adnène Hajji

-  ID22 "A finance driven supply chain network design model"
by Hamidreza Rezaei, Nathalie Bostel, Vincent Hovelaque
-  ID37 "Development of a tool for tracking organic wheat grain movements at the supply chain level"
by Loïc Parrenin, Christophe Danjou, Bruno Agard
-  ID77 "Mixed integer linear programming formulation for a multi-echelon integrated supply chain within mass customization strategy"
by Mouad Benbouja, Achraf Touil, Abdelwahed Echchatbi, Abdelkadir Charkaoui
-  ID157 "Understanding the determinants of blockchain technology adoption stages and supply chain performance using the technology-organization-environment framework"
by Manal Hader, Abderrahman El Mhamedi, Abdellah Abouabdellah

Day 3: 14 November 2020

18:45 – 20:45 (Agadir/Paris) / 12:45 – 14:45 (Montréal)

Special session SP-13.2 "Smart Manufacturing and Sustainable Development"





Chaired by Hafida Bouloiz, Myriam Gallab and Abdourahamane Sekoun Kébé

-  ID88 "Partage de gains en mutualisation logistique : état de l'art et perspectives de recherche"
by Nassim Mrabti, Nadia Hamani, Ridha Derrouiche, Dorsaf Khammassi, Laurent Delahoche
-  ID65 "End of life management of complex products in an Industry 4.0 driven and customer-centric paradigm: A research agenda"
by Samira Keivanpour
-  ID76 "L'étude de l'impact des innovations technologiques digitales sur la performance durable d'une chaîne logistique : cas du secteur halio-industriel"
by Jalila Bennouri, Ouafae Zerouali Ouariti
-  ID62 "Aeronautics in the Factory 4.0 era"
by Mohssine Nali, Lina Naciri, Zineb Mouhib, Rachida Abbou, Abdourahamane Sekoun Kébé

18:45 – 20:45 (Agadir/Paris) / 12:45 – 14:45 (Montréal)

Special session SP-15 "Scheduling and Forecasting for Resilient Supply Chains"

Chaired by El Hassan Laaziz and Hafida Bouloiz

-  ID69 "Optimisation multi-sites de l'ordonnancement des commandes et de leurs mélanges à partir de minerais extraits"
by Hajar Hilali, Vincent Hovelaque, Vincent Giard
-  ID84 "Exploration des données de planification pour la modélisation des incertitudes dues à l'horizon glissant"
by Walid Khellaf, Jacques Lamothe, Romain Guillaume
-  ID98 "Supply chain routing scheduling sub-model design: Case of export bulk ports"
by Sara Mallah, Afaf Aloullal, Oualid Kamach, Maled Masmoudi, Najib Najid, Khalid Kouiss, Laurent Deshayes
-  ID145 "AI in supply chain performance and resilience: A literature review"
by Mariam Atwani, El Hassan Laaziz, Mustapha Hlyal, Jamila El Alami

20:45 – 21:00 (Agadir/Paris) / 14:45 – 15:00 (Montréal)

Closing ceremony

-  Thank and farewell words from the Scientific and Organization Committees