

Sunday - October 4th

8:00 am - 6:00 pm

[EXPLORE BANFF TOURS](#)

Meet at Motor Coach Entrance in front of Fairmont Banff Springs @ 8:00 am Sharp

Monday - October 5th

8:00 am - 6:00 pm

[EXPLORE BANFF TOURS](#)

Meet at Motor Coach Entrance in front of Fairmont Banff Springs @ 8:00 am Sharp

3:00 pm

Conference Registration Mt. Stephens Hall

7:00 pm

Ice Breaker Welcome Reception Mt. Stephens Hall

Tuesday - October 6th

7:00 am - 4:00 pm

Conference Registration Riverview Lounge

7:00 am - 7:45 am

Delegate Breakfast Alberta Room

Sponsored by Graham Group

7:45 am - 8:00 am

Welcome & Opening Remarks New Brunswick Room

Dr. Yasser Mohamed - Organizing Committee Chair

Hole School of Construction Engineering

8:00 am - 8:40 am

Keynote Address

Realizing Value from Technology and Innovative Practices in Capital Projects Industry

Raymond E. Topping, Fiatch

8:45 am - 9:45 am

NEW BRUNSWICK ROOM	
SESSION 1A: BIM	
Chaired by: <i>Ming Lu</i>	
<input checked="" type="checkbox"/>	Adaptive Visualisation System for Construction Building Information Models Using Saliency <i>Hugo Martin, Sylvain Chevallier and Eric Monacelli</i>
<input checked="" type="checkbox"/>	BIM-enabled Boarding Design Optimization for Residential Buildings <i>Hexu Liu, Gurjeet Singh, Ming Lu and Mohamed Al-Hussein</i>
<input checked="" type="checkbox"/>	Exploitation Visualization Techniques in Construction Projects Using BIM <i>Mohamed Marzouk, Mohamed Zaher, Mahmoud Metawie, Ahmed Aboumosallm and Ibrahim Abdelbasset</i>

IVOR PETRAK ROOM	
SESSION 1B: ENVIRONMENTAL ANALYSIS	
Chaired by: <i>SangUk Han</i>	
<input checked="" type="checkbox"/>	Enhancing the Environmental Impact Analysis Process in KSA Through Augmented Reality <i>Eid M. Algarni, Nashwan N. Dawood and Tracey Crosbie</i>
<input checked="" type="checkbox"/>	A Road Traffic Noise Evaluation System Using Virtual Reality Technology <i>Kazuo Kashiyama, Toru Yoshimachi, Anri Ishida, Masaki Tanigawa and Masayuki Shimura</i>
<input checked="" type="checkbox"/>	Simulation of Road Traffic Noise Based on Acoustic Wave Theory and its Application to the Auralization Using Virtual Reality Technology <i>Toru Yoshimachi, Masaki Tanigawa and Kazuo Kashiyama</i>

9:45 am - 10:15 am

Refreshment Break Riverview Lounge

10:15 am - 11:45 am

NEW BRUNSWICK ROOM	
SESSION 1C: BIM	
Chaired by: <i>Shih-Chung Kang</i>	
<input checked="" type="checkbox"/>	A Multi-Information Display Method for Building Information Modeling Coordination <i>Cheng-Han Yeh, Chan-Wei Hsu, Tzong-Hann Wu and Shih-Chung Kang</i>
<input checked="" type="checkbox"/>	The Influence of Building Information Modeling on the Communication Management of Construction Projects <i>Jürgen Melzner</i>
<input checked="" type="checkbox"/>	Development of a Prototype for Optimizing Cut/Fill Underpinned by BIM in Landscape Site Realisation Process <i>Huda Dawood, Nashwan Dawood, Henry Fenby-Taylor and Yi-Wen Chen</i>
<input checked="" type="checkbox"/>	BIM Adoption in Qatar: Capturing High Level Requirements for Lifecycle Information Flow <i>Vladimir Vukovic, Mian Atif Hafeez, Mohamad Kassem, Racha Chahrour and Nashwan Dawood</i>

IVOR PETRAK ROOM	
SESSION 1D: DESIGN AND CONSTRUCTION VISUALIZATION	
Chaired by: <i>Steven Ayer</i>	
<input checked="" type="checkbox"/>	Discrepancies Between Human Virtual and Physical Space Perception: Impact on Design Visualization <i>Noha Saleeb</i>
<input checked="" type="checkbox"/>	Mobile Virtual Design and Construction Adoption in the Architecture, Engineering, Construction and Operation Fields <i>Suleiman Alsafouri, Steven Ayer and Pingbo Tang</i>
<input checked="" type="checkbox"/>	Using Soft Systems to Explore the Complexity of Space Beyond its Digital Representations <i>Mohammad Mayouf, Sharon Cox and David Boyd</i>
<input checked="" type="checkbox"/>	Virtual Building Information Modeling Reviewer <i>Feng Wu, Tzong-Hann Wu, Chan-Wei Hsu and Shih-Chung Kang</i>

12 Noon - 1:45 pm **Luncheon with Keynote Address** *Alberta Room*
Mixed Reality for AEC
 Aviad Almagor, Trimble

NEW BRUNSWICK ROOM	
SESSION 1E: VISUAL SIMULATION <i>Chaired by: Carol C. Menassa</i>	
<input checked="" type="checkbox"/>	Capitalizing on Visualizing Complex Systems Using Distributed Simulation Approach <i>Muaz Fagiar, Mostafa Ali and Yasser Mohamed</i>
<input checked="" type="checkbox"/>	Coupled Simulation Framework to Assess Life-Cycle Energy Requirements in Buildings <i>Albert Thomas, Carol C. Menassa and Vineet R. Kamat</i>
<input checked="" type="checkbox"/>	Utilization of AR System by Three-Dimensional Models to Construction Planning <i>Takashi Tahara</i>

IVOR PETRAK ROOM	
SESSION 1F: VISUAL DATA SENSING AND ANALYSIS <i>Chaired by: TBA</i>	
<input checked="" type="checkbox"/>	Deflection Computation of Pipeline Surface Based on 3D Point Cloud <i>Hiroki Inoue, Yoshihiro Yasumuro, Hiroshige Dan and Akira Kobayashi</i>
<input checked="" type="checkbox"/>	3D Modeling of Building Indoor Environments with Handheld Camera and Unmanned Aerial Vehicle - A Case Study <i>Wael Hassan, Zhenhua Zhu, Pooyan Sinaei Nejad and Farbod Daliri</i>
<input checked="" type="checkbox"/>	Pipe Radius Detection Capability Study of Low Cost Range Camera <i>Thomas Czerniawski, Mohammad Nahangi, Carl Haas and Scott Walbridge</i>

3:00 pm - 3:30 pm **Refreshment Break** *Riverview Lounge*

NEW BRUNSWICK ROOM	
SESSION 1G: COLLABORATIVE VISUAL AND AUGMENTED ENVIRONMENTS <i>Chaired by: Ming Lu</i>	
<input checked="" type="checkbox"/>	A Multi Modal Collaboration System for Construction Workers and Remote Experts <i>Stephane Cote and Antoine Girard-Vallee</i>
<input checked="" type="checkbox"/>	IFChub: An Innovative Collaboration Platform for Architecture, Engineering and Construction <i>Vitaly Semenov and Stephan Jones</i>
<input checked="" type="checkbox"/>	One Mile House Interchange VR Documentation: A Case-Study of Process and Interface Improvements <i>D. Cody Bradley, James Hoyt, Ferzon Aziz, Sara Rankohi and Lloyd Waugh</i>
<input checked="" type="checkbox"/>	A Framework to Support Owner's Asset Information Requirements Throughout the Life Cycle of Buildings <i>Joao Patacas, Nashwan Dawood and Mohamad Kassem</i>

IVOR PETRAK ROOM	
SESSION 1H: VISUAL DATA SENSING AND ANALYSIS <i>Chaired by: SangUk Han</i>	
<input checked="" type="checkbox"/>	Generation of Waypoints for UAV-Assisted Progress Monitoring and Acceptance of Construction Work <i>Henk Freimuth and Markus König</i>
<input checked="" type="checkbox"/>	Vision-Base Posture Classification Using Virtual Training Datasets for Automated Postural Ergonomic Evaluation <i>Joonoh Seo, Meiyin Liu and Sanghyun Lee</i>
<input checked="" type="checkbox"/>	AR Presentation of Image-Based Pipeline Inspection <i>Takuma Yorimitsu, Hiroki Inoue, Hiroshige Dan and Yoshihiro Yasumuro</i>
<input checked="" type="checkbox"/>	Optimization Scenario for 3D-Scanning Plans of Outdoor Constructions Based on SFM <i>Yuhei Kitada, Hiroshige Dan and Yoshihiro Yasumuro</i>

6:30 pm **No-Host Reception & Banquet** *Alberta Room*
 8:15 pm *Blackfoot Medicine Speaks Presentation*

Wednesday - October 7th

7:00 am - 7:45 am **Delegate Breakfast** *Alberta Room*

7:45 am - 8:00 am **Welcome & Opening Remarks** *New Brunswick Room*
Dr. Simaan AbouRizk - Organizing Committee
Hole School of Construction Engineering

8:00 am - 8:40 am **Keynote Address**
Playing Nice Across Time and Space
Michael Conroy, NASA, Kennedy Space Center

NEW BRUNSWICK ROOM	
SESSION 2A: VIRTUAL REALITY IN EDUCATION AND TRAINING APPLICATIONS <i>Chaired by: Vineet Kamat</i>	
<input checked="" type="checkbox"/>	Video Tutorials for Construction Tasks <i>Abdur Rehman Nasir and Hans-Joachim Bargstaedt</i>
<input checked="" type="checkbox"/>	Evaluation of Human Robot Collaboration in Masonry Work Using Immersive Virtual Environments <i>Jeonghwan Kim, Sangseok You, Vineet Kamat, Sanghyun Lee and Lionel Robert</i>
<input checked="" type="checkbox"/>	Enabling Bio-Inspired Design and Analysis in Global Project Networks Using a 3D Virtual Environment <i>Anne Anderson, Semra Comu, Nadia Frye and John E. Taylor</i>

IVOR PETRAK ROOM	
SESSION 2B: 3D MODELING AND INFORMATION SYSTEMS <i>Chaired by: Ming Lu</i>	
<input checked="" type="checkbox"/>	Visualization and Automatic Verification of a Schedule-Driven 4D Model <i>Jiarui Lin, Jianping Zhang, Tianfeng He, and Zhenzhong Hu</i>
<input checked="" type="checkbox"/>	Improving the Tender Quality for Retrofit Projects <i>Fedor Titov and Axel Friedewald</i>
<input checked="" type="checkbox"/>	A Methodology to Evaluate the Impact of Using an Immersive Virtual Mock-up (IVM) for Design Reviews <i>Yifan Liu, John Messner and Robert Leicht</i>

9:45 am - 10:15 am **Refreshment Break** *Riverview Lounge*

10:15 am - 11:45 am

NEW BRUNSWICK ROOM	
SESSION 2C: VIRTUAL REALITY IN EDUCATION AND TRAINING APPLICATIONS <i>Chaired by: Amir Behzadan</i>	
<input checked="" type="checkbox"/>	An Immersive Hybrid Reality System for Construction Training <i>Ludovico Carozza, Frederic Bosche and Mohamed Abdel-Wahab</i>
<input checked="" type="checkbox"/>	Construction Engineering Classroom Projects: On-Demand Augmented Reality Information Delivery, and Georeferenced Campus Mapping <i>Amir Behzadan</i>
<input checked="" type="checkbox"/>	Using 3D Simulation to Improve Construction Management Education: A Pilot Study to Teach the NFPA70-National Electrical Code <i>Joseph Burgett</i>
<input checked="" type="checkbox"/>	Graphical User Interface in Interactive Education: An Implementation in the Construction Industry <i>Hamzah Shanbari and Raja R.A. Issa</i>

IVOR PETRAK ROOM	
SESSION 2D: 3D MODELING AND INFORMATION SYSTEMS <i>Chaired by: TBA</i>	
<input checked="" type="checkbox"/>	Analytical Comparison of Distance Based and Angle Based Kinematic Models for Positioning Backhoe Excavators <i>Sheng Mao, Duanshun Li & Ming Lu</i>
<input checked="" type="checkbox"/>	4D Based Automation of Heavy Lift Planning in Industrial Construction Projects <i>Zhen Lei, Sanghyeok Han, Ulrich Hermann, Ahmed Bouferguene and Mohamed Al-Hussein</i>
<input checked="" type="checkbox"/>	4D Site Installation Planning in Virtual Reality <i>Sebastian Hollermann</i>
<input checked="" type="checkbox"/>	A Conceptual Framework for 3D Visualization for Productive and Ergonomic Workplace Design <i>Alireza Golabchi, Sanguk Han and Simaan AbouRizk</i>

12 Noon - 1:45 pm

Luncheon with Keynote Address *Alberta Room*
Digitizing the Construction Sector: The Role of ICT in Prompting Construction Efficiency and Effectiveness
Nashwan Dawood, Teesside University

2:00 pm - 3:00 pm

NEW BRUNSWICK ROOM	
SESSION 2E: INFORMATION MODELING FOR VISUALIZATION <i>Chaired by: Yasser Mohamed</i>	
<input checked="" type="checkbox"/>	Collaborative Bim-Based Mixed Reality Approach to Support Large-Scale Facilities Inspection Tasks <i>Khaled El Ammari, Amin Hammad</i>
<input checked="" type="checkbox"/>	Real-Time Visualization Applications for Energy Awareness and Demand Response in Built Environment <i>Muneeb Dawood, Micheal Short and Nashwan Dawood</i>
<input checked="" type="checkbox"/>	Mirror-Based Scanning System for Side Surface Dimension Inspection of Precast Concrete Slab <i>Min-Koo Kim, Qian Wang, Mingyan Luo, Seongheum Yoon, Hoon Sohn and Jack C.P. Cheng</i>

IVOR PETRAK ROOM	
SESSION 2F: SIMULATION IN CONSTRUCTION <i>Chaired by: SangUk Han</i>	
<input checked="" type="checkbox"/>	Simulative Route Planning for Pedestrian Evacuation in Metro Stations <i>Limao Zhang, Simaan M. AbouRizk and Xianguo Wu</i>
<input checked="" type="checkbox"/>	Simulation Modeling of Industrial Module Erection in Assembly Yards <i>Nassim Sedaghat, Mahmoud Farajmandi and Simaan AbouRizk</i>
<input checked="" type="checkbox"/>	Framework for Improving Construction Hazard Identification Process by Using Knowledge-Based Integrated Support System <i>Shadi Altawil, Yasser Mohamed and Rod Wales</i>

Thank You for Participating in CONVR 2015 and Safe Travels Home to All Our Colleagues and Friends!

Thursday - October 8th

8:00 am - 6:00 pm

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Meet at Motor Coach Entrance in front of Fairmont Banff Springs @ 8:00 am Sharp