

## COLLOQUE REPARTI WORKSHOP 2018

Regroupement stratégique pour l'étude des environnements partagés intelligents répartis



**Pavillon Alphonse-Desjardins Building**  
**2325, rue de l'Université**  
**Université Laval**  
**Québec, Québec, G1V 0A6**

**17 mai 2018 – May 17, 2018**

La session du matin aura lieu dans le Grand Salon. La session d'affiches aura lieu dans l'Atrium Jean-Guy Paquet.

The morning session will take place in the Grand Salon. The poster session will take place in the Atrium Jean-Guy Paquet.

- 10h30 – 10h45**      **Inscription / Registration** (Grand Salon : 2<sup>e</sup> étage / 2<sup>nd</sup> floor)
- 10h45 – 10h55**      **Mot de bienvenue / Word of welcome** (Grand Salon)  
 Denis Laurendeau (Directeur de REPARTI / REPARTI Director)
- 11h00 – 12h00**      **Présentation invitée / Invited Talk** (Grand Salon)  
***Teleoperation, Force Sensing and Haptics for Medical Applications***  
 Rajni Patel  
 Electrical and Computer Engineering, Western University  
[https://www.eng.uwo.ca/electrical/faculty/patel\\_r/index.html](https://www.eng.uwo.ca/electrical/faculty/patel_r/index.html)

**Bio:** Rajni Patel received the PhD degree in Electrical Engineering from the University of Cambridge, England, in 1973 and currently holds the position of Distinguished University Professor and Tier-1 Canada Research Chair in the Department of Electrical and Computer Engineering with cross appointments in the Department of Surgery and the Department of Clinical Neurological Sciences at Western University, London, Ontario. Dr. Patel also serves as Director of Engineering for Canadian Surgical Technologies & Advanced Robotics (CSTAR), a research initiative of the London Health Sciences Centre that is located at University Hospital in London, where his research focuses on the development and implementation of robotic and other mechatronic systems for minimally invasive surgery and therapy. Dr. Patel has carried out leading-edge research on a wide range of theoretical and practical issues in robotics, haptics, teleoperation and control for applications ranging from aerospace to medical interventions, neurological movement disorders and rehabilitation. He is a Life Fellow of IEEE, and a Fellow of ASME, the Royal Society of Canada and the Canadian Academy of Engineering. He has served on the editorial boards of the IEEE Transactions on Robotics, the IEEE/ASME Transactions on Mechatronics, the IEEE Transactions on Automatic Control, and Automatica, and is currently on the editorial boards of the International Journal of Medical Robotics and Computer Assisted Surgery and the Journal of Medical Robotics Research.

- 12h00 – 13h30**      **Repas de midi / Lunch**  
**boîtes à lunch / lunch boxes** (Grand Salon)
- 13h30 – 16h30**      **Session d'affiches / Poster Session** (Atrium Jean-Guy Paquet)

## Colloque REPARTI Workshop 2018 Affiches / Posters

### REPARTI : Perception

1. **A Perceptual Measure for Deep Single Image Camera Calibration**  
Yannick Hold-Geoffroy, Kalyan Sunkavalli, Jonathan Eisenmann, Matt Fischer, Emiliano Gambaretto, Sunil Hadap et Jean-François Lalonde
2. **Fast Unsynchronized Unstructured Light**  
Chaima El Asmi et Sébastien Roy

### REPARTI : Modélisation / Raisonnement / Apprentissage

### REPARTI : Modelling / Reasoning / Learning

3. **Learning to Predict Indoor Illumination from a Single Image**  
Marc-André Gardner, Kalyan Sunkavalli, Ersin Yumer, Xiaohui Shen, Emiliano Gambaretto, Christian Gagné et Jean-François Lalonde
4. **Reconnaissance d'objets 3D**  
Mohammed Ayoub Alaoui Mhamdi et Djemel Ziou
5. **Improving the Robustness of Registration Algorithm in Complex Environments**  
Philippe Babin, François Pomerleau et Philippe Giguère
6. **Visual Object Tracking based on Siamese Networks**  
Zhenxi Li, Guillaume-Alexandre Bilodeau et Wassim Bouachir
7. **Classification of neurodegenerative diseases with gait features**  
Imanne El Maâchi, Guillaume-Alexandre Bilodeau et Wassim Bouachir
8. **Semi-supervised learning for intervertebral disk segmentation**  
Nassim Guerroumi, Catherine Laporte et Farida Cheriet
9. **Indoor Lighting Estimation from 3D Objects**  
Henrique Weber, Donald Prévost et Jean-François Lalonde
10. **Learning Features for Offline Handwritten Signature Verification using Deep Convolutional Neural Networks**  
Luiz G Hafemann, Robert Sabourin et Luiz S. Oliveira
11. **Diffusion Orientation Histograms (DOH) for Diffusion Weighted Image Analysis,**  
Laurent Chauvin, Kuldeep Kumar, Christian Desrosiers, Jacques de Guise et Matthew Toews
12. **Towards Operational Marker-Free Registration of Terrestrial Lidar Data in Forests**  
Jean-François Tremblay et Martin Béland

**13. Comparison of object detection methods on traffic surveillance images**  
Hughes Perreault, Guillaume-Alexandre Bilodeau et Nicolas Saunier

**14. Multiple Object Tracking with Object Labels for Urban Traffic Scenes**  
Hui-Lee Ooi, Guillaume-Alexandre Bilodeau et Nicolas Saunier

**15. Alignment of Point Clouds for comparison of Infrastructure**  
Hadi Khaksari Haddad and Denis Laurendeau

### **REPARTI : Interaction**

**16. Robot swarm protecting a group of migrants in militarized zone**  
Maxime Vaidis et Martin Otis

**17. Reconfigurable cable-driven parallel mechanism dedicated to human-robot collaboration**  
Khaled Mohamed Youssef et Martin Otis

**18. Safe trajectories generation using neural networks for human-robot collaboration**  
Ramy Meziane et Martin Otis

**19. Underactuated Tendon-Driven Robotic/Prosthetic Hands: Design Issues**  
Annick Mottard, Thierry Laliberté et Clément Gosselin  
Présentateur : Jean-Michel Boisclair

**20. Accuracy Assessment of a Teleoperated Cable Robot**  
Nicolas Tremblay, Guofan Yin, Philippe Cardou, Jeremy Cooperstock et Martin Otis