**BELL MTS December IoT Event Program**

Rm 219 Animal Science Building, 12 Dafoe Rd  
University of Manitoba

**Tuesday, December 10, 2019**

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|  | **Greetings and introductions** |
| 9:00 am | Welcome and introductory remarks - Dr. Martin Scanlon, Dean |
| 9:10 am | Overview of IoT activities and description of the day’s activities - Dr. Jitendra Paliwal, Associate Dean (Grad Program & Acting Academic) |
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|  | **Presentations by graduate students** |
| 9:15 am | *3D Printed Wearable Wireless Sensors for Ammonia Gas Detection* Helen Hsu/Dr. Wen Zhong (Biosystems Engineering) |
| 9:35 am | *Measurement of latency during transmission of real-time video for remote supervision of agricultural machines* Mitch Green/Dr. Danny Mann (Biosystems Engineering) |
| 9:55 am | *Development of a smart crop disease monitoring system based on IoT*  Maryam Ghavami/Dr. Chyngyz Erkinbaev(Biosystems Engineering) |
| 10:15 am | *Market Microstructure Dynamics in Agricultural Futures Markets* Zheting Zhu/Dr. Julieta Frank (Agribusiness and Agricultural Economics) |
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| 10:35-10:45 AM | **Break** |
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|  | **Presentations by undergraduate students** |
| 10:45 am | *Real-time monitoring of soil water content via the cellular network using capacitance sensors*  Amadeus Lackmanec & Baiyan Zhou/Dr. Ranjan Sri Ranjan (Biosystems Engineering) |
| 11:05 am | *Development of calibration equations for capacitance sensors to enable accurate measurement of soil water content using IoT-based network* Prabhakaran Santhanam/Dr. Ranjan Sri Ranjan (Biosystems Engineering) |
| 11:25 am | *Opportunities for the use of IoT-based technologies in beef cattle production systems -* Hannah Keenes/Dr. Kim Ominski (Animal Science)  *Precision technology to improve performance in beef cattle production systems -* Kara Fulawka/Dr. Kim Ominski (Animal Science) |
| 11:45 am | *Using 2D images and algorithms to predict carcass fat-free lean in pigs* Harold Malabuyoc/Dr. Charles Grant (Agribusiness & Agricultural Economics)/Dr. Claudia Narvaez (FHNS)/Dr. Argenis Rodas-Gonzalez (Animal Science) |
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