Proceeding of the Trends in Forensic Sciences Conference (TIFS) -2018

Friday, April 6th, University of Windsor, Ontario, Canada

By Munir Jamali
## Program at a Glance

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<th>Time</th>
<th>Activity</th>
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<tr>
<td>8:30-9:30</td>
<td>Arrival Period – Conference Sign-in and Registration</td>
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<td>Networking opportunity provided</td>
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<tr>
<td>9:30-10:00</td>
<td>Welcome and Opening Ceremony</td>
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<td>10:00-10:30</td>
<td>Keynote Address: Dr. Gary Berman</td>
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<td>10:30-10:50</td>
<td>Health Break with Raffle Prizes</td>
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<td>10:50-11:20</td>
<td>Forensic Science Guest Speakers:</td>
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<td>Emerson Camisso</td>
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<td>Brooke Fox</td>
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<td>Philip Beckman</td>
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<tr>
<td>11:30-12:30</td>
<td>CSI-Windsor (Forensics Hands-On Workshops Session A)</td>
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<td>12:30-1:00</td>
<td>Outdoor Mock Crime Scene Investigation</td>
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<td><strong>ALL DAY!</strong></td>
<td>Forensic Sciences Research Showcase and Careers Information</td>
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<td>Trivia Game Station</td>
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<td>Faro-Reality Station</td>
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<td>1:00-1:30</td>
<td>Lunch</td>
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<td>1:30-2:30</td>
<td>Forensic Science Guest Speakers:</td>
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<td>Andrea Djolovic</td>
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<td>Meagan Beaton</td>
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<td>Munira Jamali</td>
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<td>Jessie Boycott</td>
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<td>2:30-3:15</td>
<td>CSI-Windsor: (Forensics Hands-On Workshops Session B)</td>
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<td>3:15-3:30</td>
<td>Health Break with Raffle Prizes</td>
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<td>3:30-4:30</td>
<td>Awards, Prizes and Closing Ceremony</td>
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Acknowledgements

Conference Founders/Convenors:
Dr. Shashi Jasra
Dr. Pardeep Jasra

Conference Student Coordinators:
Regan Pardo
Munira Jamali

Guest Presenters:
Dr. Gary Berman
Philip Beckman
Brooke Fox
Emerson Camisso
Andrea Djolovic
Jaclyn Slaney

Student Presenters:
Emilee Mancini
Lyara Kiel and Margue McGregor
Olivia Wuerch
Meagan Beaton
Munira Jamali
Jessie Boycott
The Annual Trends in Forensic Sciences Conference was pioneered by Forensics Program Chair – Dr. Shashi Jasra five years ago with an aim of gathering experts in the forensics world and students with a vested interest in it at the same conference to showcase the opportunities and growth in the field. Every year the conference is an educational and interactive day-long event full of multidisciplinary presentations, hands-on forensics workshops and a research showcase for new UWindsor Forensics graduates to exhibit their thesis projects. The 5th Annual Trends in Forensics Conference 2018 was an event like no other, with an opportunity to experience first hand Forensic Dentist Dr. Gary Berman’s keynote address, participate in exciting interactive workshop stations such as Blood Spatter Analysis and 3D Footwear Impressions, and network with a few of University of Windsor’s alumni practicing in the law enforcement and forensics fields today. With a chance to win one of many raffle prizes offered at the conference and play trivia games in the CAW Commons, TIFS 2018 offered an enriching day at the University of Windsor.

Dr Shashi Jasra
Forensic Sciences Programs Chair,
University of Windsor

“The world has recognized Forensic Sciences as the key to our happiness... the key to public safety.”

Windsor Police Chief – Al Frederick
Welcome and Opening Ceremony

The opening ceremony of the conference began with Dr. Shashi Jasra – Convenor of the TIFS Conference at the University of Windsor welcoming everyone to the 5th Annual Trends in Forensic Sciences Conference. She invited Dr. Douglas Kneale, Provost and Vice President, Academic, University of Windsor up on stage for the opening ceremony. Dr. Chris Houser, Dean Faculty of Science, University of Windsor, Windsor Police Chief Al Frederick, Dr. Peter Frade of Wayne State University and Dr. Shashi Jasra were next to speak during the ceremony.

During the opening ceremony, Dr. Douglas Kneale said motivating words as always and the importance of Forensics to commemorate the conference and its impact on the University of Windsor. Windsor Police Chief – Al Frederick started off the opening ceremony by saying that “The world has recognized Forensic Sciences as the key to our happiness… the key to public safety.” He emphasized the collaboration between the police agency and the academic world.

Following the Windsor Police Chief, Dr. Peter Frade stressed the proposal of the collaboration of a graduate program between Wayne State University and the University of Windsor – promising an exciting start to the day. The presentations were then underway, with a series of guest speakers introduced by Master of Ceremonies Munira Jamali and Regan Pardo.

Crowd gathered in Ambassador Auditorium at University of Windsor for 5th Annual Trends in Forensic Sciences Conference
Pictured from left: Dr. Pardeep Jasra, Provost and Vice President, Academic Dr. Douglas Kneale, Forensics Program Chair Dr. Shashi Jasra and Dean of Science Dr. Chris Houser

Dr. Shashi Jasra with Provost Dr. Douglas Kneale
Master of Ceremonies: Regan Pardo (left) and Munira Jamali

Dr. Peter Frade and Karen Frade, guests from Wayne State
Chief of Windsor Police Al Frederick, presenting an opening

Provost and Vice President, Academic: Dr. Douglas Kneale during the opening ceremony

Dean of Science Dr. Chris Houser during the opening ceremony
The Keynote speaker for the TIFS Conference 2018 was Dr. Gary Berman, a Board-Certified Forensic Dentist at the Wayne County Michigan Medical Examiner’s office, and a Forensic Dental consultant to Washtenaw County Medical Examiner, Genesee County Medical Examiner, Oakland County Medical Examiner, and the Sparrow Forensic Pathology Service (Lansing).

Dr. Berman is also a member of the U.S Federal Disaster Team DMORT and was deployed to both the World Trade Centre Disaster and the Katrina Disaster. Dr. Berman serves as the Morgue operations leader for the MIMORT (Michigan Mortuary Operations Response Team) and is the assistant team leader for the Michigan Dental Association’s Forensic Dental Identification Team.

The keynote presentation he delivered demonstrated the field of forensic odontology in detail, outlining his personal experiences throughout his career and some of the most interesting cases he had encountered.
Health Break, Raffle Prizes and Mentorship Award

Following Dr. Berman’s intriguing account of Forensic Dentistry and its applications, the audience was provided a short health break with refreshments to allow for mingling and introductions within the crowd. Exciting raffle prizes were drawn and given to a few lucky high school students visiting the conference and then Dr. Shashi Jasra was invited up on stage to award the annual mentorship program prize.

The Forensic Sciences Mentorship program was started by Dr. Jasra a few years ago with the initiative of helping first year students through the transition process of university by pairing them up with a 3rd or 4th year forensics mentor. This year the most dedicated students in the mentorship program, and the winners were Ms. Ophelia Wong and her mentee Ms. Raven Bickford. Dr. Jasra invited them up on stage to present them their awards and pause for pictures.
Guest Speakers

The next session of the conference was a round of guest speakers, many of which were University of Windsor alumni students.

Emerson Camisso

The opening talk of this round was delivered by Emerson Camisso – a University of Windsor Alumni who graduated in 2015 with an Honours Bachelor of Forensic Science and is currently working at a private relationship testing company which specializes in Human DNA Analysis.

After completing his degree at the University of Windsor, Emerson continued his studies at the University of Strathclyde in Glasgow, UK where he can undertake his dissertation research at the Institut fur Rechtsmedizin, University of Munster, Germany. He subsequently graduated in 2016 with a Master of Science in Forensic Science. Mr. Camisso delivered a presentation about Kinship Analysis and the importance of multiplexing – emphasizing the importance of paternity testing and familial searching within forensics. He stressed that Familial searching is a powerful investigative tool in forensics as well as a means of identifying a violation of personal privacy. Emerson’s presentation was of interest to genetics experts and aficionados in the audience.
Brooke Fox was the next guest speaker – who holds a Bachelor of Arts in Forensic Sciences from the University of Windsor as well as a Master of Arts in Legal Studies. Brooke was the Conference Coordinator for the TIFS Conference in the 2014 year when it first started, so having her back four years later was an honour. She currently practices as an Information Management (IM) Officer for the Correctional Services of Canada (CSC). During Brooke’s academic career at the University of Windsor, Brooke published two articles in Identification Canada pertaining to the development of latent friction ridge detail on spent cartridge casings and produce surfaces.

Brooke’s presentation focussed on her research regarding lack of fingerprint evidence which resulted in acquittals. Her experiment involved applying fingerprints onto the surfaces of produce such as Bananas, potatoes, onions and lettuce and analyzing it using the Bandey Method. The conclusions of her experiment stated that it was possible to recover latent friction ridge detail off produce surfaces and the results are admissible in a court of law. This fingerprint produce may be involved in contraband, and the questioned package must be matched – thus proving the Bandey Method is vital in the recovery of fingerprints in this process.
The next speaker, Philip Beckman, is the Canadian Account Manager, Public Safety Forensics Division for FARO Technologies INC. Philip has over 20 years of experience with advanced, emerging and disruptive 3D technologies and professional services. These include GPS/GNSS for GIS and Land Survey, 3D laser scanning, Mobile LiDAR and Unmanned Aerial Vehicles (UAVs). Philip has marketed and sold these solutions to clients from many markets across North America, including all levels of government, law enforcement and engineering.

Philip’s presentation introduced laser scanners and hand scanners, as well as the method for capturing an entire crime scene in 3D. He presented an exciting new agenda of applications of 3D visualization in law enforcement, private investigation, fire service professionals, federal and forensic labs. First and second year university students were fascinated by his application of the blood spatter and bullet trajectory analysis methods they had learned in class to contemporary advances in forensic technology.

Mr. Beckman also set up a booth outside the CAW commons for the remainder of the day for anyone who was interested in testing out his virtual reality software in visualizing a sample crime scene.
Dr. Gary Berman delivering the keynote address

Mr. Philip Beckman doing a presentation on FARO
Conclusion of Morning Session

Mr. Beckman’s presentation concluded the morning session of presentations, and the conference paused for another round of raffles awarded to more guests and students. The crowd was then allowed to break off for an interactive workshop session held in Essex Hall and CAW commons.

Forensics Research Showcase in the CAW Student Centre
Dr. Shashi Jasra presenting a token of thanks to alumni students: Jaclyn Slaney, Emerson Camisso, Andrea Djolovic and Brooke Frisby
CSI-Windsor Workshop Session A 2018

Trace Evidence and Microscopy – Station Leader: Peter Truong

Speech Pro Software – Station Leader: Jessie Boycott and Sara Akhdar

Biometrics – Station Leader: Emilee Mancini

3D Footwear Impressions – Station Leader: McKenna Turner

Forensic Entomology – Station Leader: Theresa Tran and Vanessa Owen

Blood Spatter Patterns – Station Leader: Lyara Kielt and Amber Armstrong

Mr. Philip Beckman presenting FARO Reality Software
High School student at Blood Stain Pattern Analysis Station

High School student at Forensic Microscopy Station
Outdoor Mock Crime Scene

An outdoor mock crime scene station was set up for analysis by visiting conference guests.

Students analyzing mock crime scene
Lunch and Raffles

The audience returned to the Ambassador Auditorium at 1:00pm for lunch and there was constant mingling in the crowd as alumnus caught up with each other, high school students discussed the morning session and the workshops and Dr. Jasra thanked her colleagues for coming out to the conference.
Afternoon Session

The conference resumed for another round of guest presentations, this time by University of Windsor Forensics Alumni and research presentations by current fourth year students. Between presentations, more raffles and prizes were given out and refreshments were offered at the side of the hall.

Andrea Djolovic

Andrea Djolovic graduated from the University of Windsor in 2013 with an Honours Bachelor of Forensic Science degree with a specialization in Biochemistry. She went on to complete a Masters in Genetic Counseling overseas and has been working as a General Genetic Counsellor since 2016. Andrea’s main interests are in general, pediatric and prenatal genetics.
Jaclyn Slaney has a bachelor of Biological Sciences as well as a Bachelor of Forensic Science with a Chemistry Specialization from the University of Windsor. Jaclyn is currently working as a laboratory specialist for a Forensic Identification Unit of a large police service as of October 2015. The focus of her work is the development and comparison of fingerprints, but her duties also include the collection of DNA and other trace evidence from items that are submitted from crime scenes for processing through the Lab. Jaclyn also attends court regularly as required for her involvement in processing evidence as well as fingerprint identifications.
Student Research Presentations

Emilee Mancini

Topic: The Forensic Biometric Analysis of changes in heart rate and skin conductance provoked by emotional arousal during initial exposure and subsequent recollection of stimuli.

Olivia Wuerch

Topic: Creation and verification of bacterial clones using digestion enzymes
Lyara Kielt and Margue McGregor

Topic: The Forensic Biometric Analysis of changes in facial response provoked by emotional arousal during initial and subsequent exposure to stimuli

Meagan Beaton

Topic: Determination of the brand of cigarettes based on metal contents estimated by ICP-OES
Munira Jamali

Topic: Non-invasive early detection of cerebral aneurysms using volume rendering in In vivo 5

Jessie Boycott

Topic: Differentiation between real and imitation voices using Speech Pro SIS II Software for Voice Biometric Analysis
CSI-Windsor Workshop Session B 2018

Trivia Game Station – Station Leaders: Ahmed Abdallah and Aya-El-Sabbagh

Fingerprint Analysis – Station Leaders: Josilyn Busi and Amber Armstrong

Firearms and Ballistics – Station Leaders: Theresa Tran and

Document Examination – Station Leaders: Peter Truong and Olivia Wuerch
Career Information Station

Trivia Game Station

Awards and Closing Ceremony
Research Poster Judges:

- Dr. Dan Mennill, Associate Professor of Biology Associate Dean of Science, Graduate Studies and Research, Faculty of Science
- Dr. Sirinart Ananvoranich. Professor, Associate Professor, Chemistry and Biochemistry Department, Faculty of Science

- First Prize - Felipe Da Silva
- Second Prize - Conner Mackinnon
- Third Prize Meagan Beaton.
Acknowledgements

We would like to give a very special thanks to all of those who made this event possible, including everyone who made generous donations to the event, the Faculty of Science at the University of Windsor, Dr. Peter Frade, Windsor Police Chief Al Frederick, the Dean of Science Dr. Chris Houser and the Provost Dr. Douglas Kneale. We would especially like to thank all the volunteers who helped with the planning and preparation of the conference as well as those who were key members of the organization team on the day of. We also would like to thank the alumni for re-joining us for TIFS 2018 and sharing their own success stories they have created with their education in Forensic Science. As well, we would like to thank all our guest speakers, our very own University of Windsor students for discussing with us all their research, Philip Beckman for talking to us about FARO technologies and Dr. Berman for his wonderful keynote address.