

Proceedings of the Trends in Forensic Sciences
(TIFS) Conference 2017

Friday April 7th, 2017 University of Windsor

Ontario, Canada

Proceedings by Alicia DiCarlo

Opening Ceremony and Welcome Addresses

Dr. Douglas Kneale, Provost and Vice-President, Academic, University of Windsor



Dr. Douglas Kneale welcomed all the students to the university of Windsor from himself and Dr. Alan Wildeman. After giving a very heartfelt description of the forensic science program at the university, Dr. Kneale gave credit to Dr. Shashi Jasra for the Conference. Finally, he wished that all the students will enjoy the conference.

Dr. Chris Houser, Dean, Faculty of Science, University of Windsor



Dr. Chris Houser started by showing his excitement over forensic sciences. Where he shared that this was not his area of study, he does get to aid in forensic science investigations. Moreover, he shows his pride of having forensic sciences finally in the science department. Finally, he encouraged students to enjoy their time at the University of Windsor.

Mr. Vincent Power, Deputy Chief, Windsor Police Services



Mr. Vincent Power thanked the University of Windsor for another invite to speak at this conference. He discussed the interactions between Windsor Police Services and the university as there are many students that do many practicum hours there. Mr. Power also gave a good insight on how important forensics is to the police.

Dr. Peter Frade, Associate Dean, Health Sciences, Wayne State University



It was again a pleasure to listen to Dr. Peter Frade, our international academic partner. He again emphasized the importance of the initiatives the two Universities share and stated we are in the process for more future collaborations.

Dr. Shashi Jasra, Programs Chair, Forensic Sciences, University of Windsor



Dr. Shashi Jasra welcomed all to the University of Windsor. She enthusiastically stated that University of Windsor Forensic Science Program is kind of leader in Canada as of now. She mentioned that forensics is not a study on its own but truly multidisciplinary field with applications of diverse areas of sciences and social sciences.

The TIFS Conference





Masters of Ceremony



Nadia Stephaniuk (left), President of the Forensic Association and Ourania Kourelas (right), Vice-President of the Forensic Association

Keynote Address

Dr. Francisco J. Diaz, MD FCAP, Wayne County Office of the Medical Examiner, Detroit, Michigan

Current Trends in Drug Related Deaths

Dr. Diaz's Keynote address was an insightful look on current trends in deaths related to drug usage. To start, he gave relevant definitions and an overview of basic concepts including dosages and routes of exposure. Dr. Diaz then gave statistics showing that nearly one third of the deaths that Wayne County deals with are drug related. Nearing the end of the presentation, Dr. Diaz focused on a drug that is causing many accidental drug deaths, Fentanyl, and its analogs. Finally, the duties of on scene investigators were outlined and Dr. Francisco Diaz explained why no onsite testing is completed to test or identify powders.



Guest Presentations

Mark T. Evely, Mortuary Science Program Director, Wayne State University, B.S., J.D.

Expert Witness Testimony Skills in Court



Mr. Mark T. Evely in a very interesting manner discussed the expert witness testimony skills in court by using parts of the real-time videos. He shared an insightful look on body language, tone, and attitude as they relate to one's testimony.

Lou Kramer, Pathologists' Assistant Program Director, Wayne State University, B.A., B.S., M.A.

Overview of Neonaticides and Infanticides



Ms. Lou Kramer discussed the important topic of neonaticides and infanticides. She talked about the cases in news recently as well as the steps in the investigative processes.

Dr. Edward Rohn, Professor, Wayne State University, PhD
Trends in Forensic Anthropology



Dr. Edward Rohn discussed about the importance of bones in Forensic investigations. He also mentioned about the different tasks of Forensic Anthropology.

**Dr. Ashwyn Rajagopalan, Professor, University of Toronto, M.D.,
F.R.C.P.C. (A.P./F.P.)**
Forensic Pathology in Ontario



Dr. Ashwyn Rajagopalan discussed the multitude of hats that are worn by a forensic pathologist. This includes public health officer, radiographer, grief counsellor, medical expert, genetic counsellor, academic, or the typical pathologist given on TV programs. Dr. Rajagopalan went into detail about what is done on a day-to-day basis in this field.

Stephanie Grabowski, Forensic Scientist, Michigan State Police
Forensic Science Division in Policing



Mrs. Stephanie Grabowski discussed her role in the Michigan State Police, as a Forensic Scientist. Mrs. Grabowski then discussed the divisions in Forensic Science, including fingerprinting, trace evidence, DNA, questioned documents, body fluid identification, fire arms and tool marks, controlled substances, crime scene investigation. She encouraged students to look at the possible internships in America.

Forensic Science Students Presentations

Stephanie Ringrose

Defining Exposure Time Using Burn Severity of Skin Tissue Under the Scanning Electron Microscope



To commence explaining her research, Ms. Ringrose talked about the types of burns and burn degrees. She then explained that this research is relevant to all aspects of forensic science (for individuals that are living and deceased). After completing this research, she could determine the relative length of exposure of the tissue to different temperatures.

Jing Lei and Johannan Sala

Identifying a Correlation Between Facial Expression, Heart Rate, and Skin Conductance with iMotions Biometric Platform



Ms. Lei and Ms. Sala presented their joint research first starting with an explanation of how stimuli result in both voluntary and involuntary responses. They stated that the iMotions Biometric platform would allow the analysis of facial expressions, heart rate, and galvanic skin response effectively and is an promising tool in the Forensic fields in near future.

Georgina Abrego

The Effectiveness of Using 3-D Volume Render from the Software Invivo5.4 to Detect Anomalies in CT Scans of the Human Body



In the presentation completed by Georgina, she first started with an explanation of what Invivo5 is and what it can do. From CT scans, she could use the software to isolate the target area, in this case it was an anomaly in the scan, and determine the volume.

Alex Kajtar

Detection of Environmental DNA (eDNA) Over Time from Decaying Chinook Salmon



Mr. Alex Kajtar was clearly very passionate about his research project. He effectively detailed information about how the presence of a species affects the environmental DNA (eDNA). From this, he went farther to discuss how eDNA is detected after death and the affects of death on the integrity of DNA.

Forensic Sciences Research Showcase

Stephanie Ringrose, Dr. Shashi Jasra, Dr. Pardeep Jasra and Tom Drake	Defining Exposure Time Using Burn Severity of Skin Tissue Under the Scanning Electron Microscope
Aya Chukr and Dr. Shashi Jasra	Voice Biometric Distinction Between English and Arabic using Sound Cleaner Filtering and SpeechPro SIS II Analysis
Michael Macphee and Dr. Pardeep Jasra	Evaluation of capabilities and limitations of the FARO Freestyle Scanner
Rachel Athoe and Dr. John Albanese	Analyses of various plasticine bite-mark impressions correlating to their respective dentition.
Dillon Foster and Dr. Shashi Jasra	Plant oils effect on false positives of the Duquenois-Levive Reagent
Shanelle Dalley and Dr. Pardeep Jasra	Visualization of Latent Fingerprints on Fruits and Vegetables Using Different powders
Rachel Lacoursiere and Dr. Sherah VanLaerhoven	Oviposition of <i>Lucilia sericata</i> because of changes to size of available medium
Michelle Dao and Dr. Pardeep Jasra	Trace Metal Analysis on Imported Spices
Georgina Abrego and Dr. Shashi Jasra	The effectiveness of using Invivo5 software to detect anomalies in CT scans of the human body
Alex Kajtar, Felicia Vincelli and Dr. Daniel Heath	Detection of Environmental DNA (eDNA) overtime from decaying Chinook Salmon
Marisa Willms, Sgt David DeLuca and Dr. Pardeep Jasra	X-Ray Powder Diffraction of Soil for Forensic Investigations

Forensic Sciences Research Showcase

Peter Truong and Dr. Pardeep Jasra	Latent Fingerprint Recovery from Canadian Polymer Banknote Submerged in Water.
Forrest Turner and Dr. Sherah Van Laerhoven	All Bundled Up: Testing Oviposition Delay of <i>Phormia regina</i> based on restriction methods
Brandon Fox, Sgt. David DeLuca, and Dr. Pardeep Jasra	The Effectiveness of Using Mini-Crime Scope® 400 and Chemical Treatment to Enhance the Quality of Fingerprint Impressions Deposited on Different Surfaces
Erin Pretli and Dr. Shashi Jasra	Analysis of Abnormal CT Scans Using Medical Imaging Software ‘Invivo5.4 Medical Design Suite’ by Anatomage
Ourania Kourelis and Dr. Pardeep Jasra	Visualization of Latent Fingerprints from Various Surfaces Submerged Underwater for Different Time Periods
Conner Mackinnon, Mark Lancaster, and Dr. Pardeep Jasra	Assessing differentiable microscopic characteristics between transfer and spatter bloodstain patterns on fabrics
Tania Mills, Dr. Pardeep Jasra and Dr. Shashi Jasra	Degradative Characteristics of Hair in Water Samples with Altered pH
Lindsay Nedelko and Dr. John Albanese	Are the physical anthropologists still using outdated concepts of race in research?
Nicole DesRosiers and Dr. Pardeep Jasra	Testing for Metals in Lipstick Samples Using ICP OES
Jing Lei and Johannan Sala	Identifying a Correlation Between Facial Expression and Skin Conductance and Heart Rate Using iMotions Biometric Software

Forensic Sciences Research Showcase



Mock Crime Scene Investigation



CSI-Windsor Workshops

Crime Scene #1

- 3D Footwear Impressions
- Forensic Entomology
- Trace Evidence and Microscopy
- Forensic Anthropology
- Firearms and Ballistics
- Forensic Photography

Crime Scene #2

- Forensic Document Analysis
- Bloodstain Pattern Analysis & Forensic Serology
- 2D Footwear Impressions
- Latent Fingerprint Analysis
- Forensics Emotions Biometric Analysis
- Forensic DNA Analysis

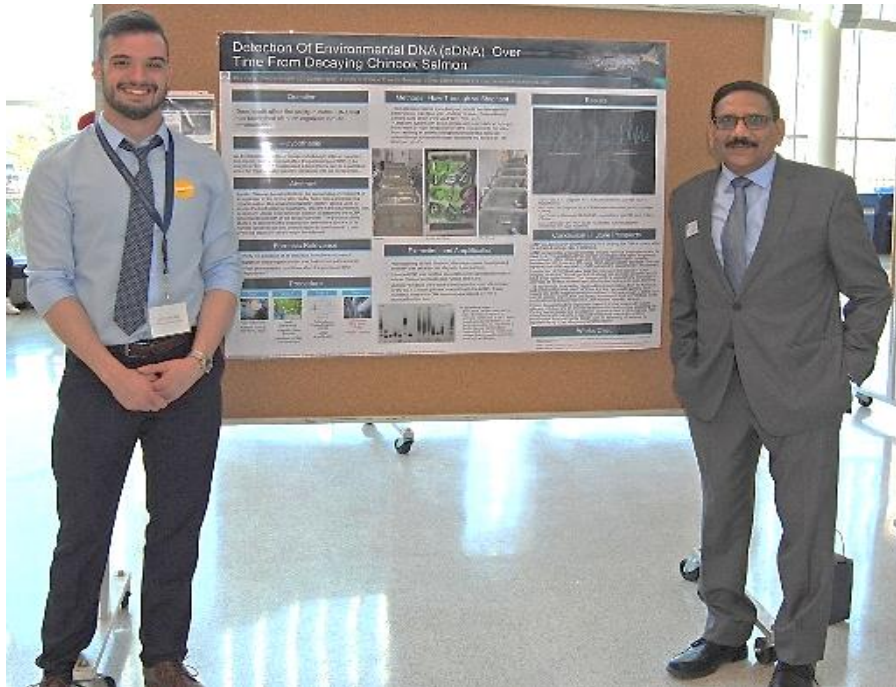
CSI-Windsor Workshops



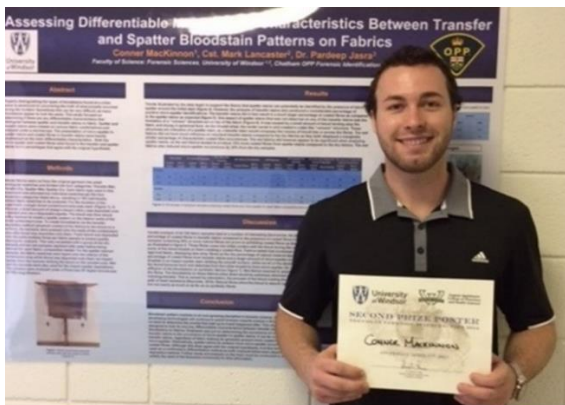
Awards Ceremony

Research Poster Award Recipients:

1. **First Prize: Alex Kajtar**
2. **Second Prize: Conner MacKinnon**
3. **Third Prize: Stephanie Ringrose**



Dr. Pardeep Jasra, Forensic Faculty (Right) and Alex Kajtar (Left)



Conner MacKinnon



Stephanie Ringrose

Best Mentor-Mentee Pair Award 2017 Recipients:

**Aya El-Sabbagh -Mentor
Zara Vahidy-Mentee**



(Left to right): Michelle Dao, Nicole DesRosiers, Aya El-Sabbagh,
Dr. Shashi Jasra