



## IVDS 2022 Workshop Program and Rules of Engagement

Chuck Weinstock Principal Researcher, Software Engineering Institute

June 24, 2022





| Friday, June                    | Friday, June 24   |  |  |
|---------------------------------|---|--|--|
| 08:00-08:25                     | Welcome to IFIP IVDS 2022 Workshop Marco Vieira, Universidade de Coimbra Chris Walter, WW Technology Group          |  |  |
| 08:25-08:50                     | Workshop Introduction and Objectives  Jay Lala, Raytheon Technologies   |  |  |
| 08:50-09:00                     | Workshop Program and Rules of Engagement Chuck Weinstock, Software Engineering Institute                            |  |  |
| <b>Session 1</b> Session Chair: | Paulo Verissimo, King Abdullah University of Science and Technology, Rapporteur: John Meyer, University of Michigan |  |  |
| 09:00-09:45                     | <u>Automotive Cyber-Security – from standards to regulations</u> Christoph Schmittner, Austrian Ins of Tech (ATI)   |  |  |
| 09:45-10:30                     | <u>Cyber-Attacks against Al Stack in Autonomous Driving and Intelligent Transportation</u> Alfred Chen, UC Irvine   |  |  |
| 10:30-11:00                     | Discussion  |  |  |
| 11:00-11:30                     | Break   |  |  |



| Session 2: Panel: Cyber Attacks on Safety-Critical AV Functions: Technology & Policy Session Chair: T. Basil Smith, Rapporteur: Wilfried Steiner, TTTech Group |  |  |
|--|--|--|
| 11:30-11:40  | Panel Introduction   |  |
| 11:40-11:50  | Title TBD  Kristie Pfosi, Director, Cybersecurity, Aptiv   |  |
| 11:50-12:00  | Managing Legal Consequences from Cyber Attacks on Safety-Critical Functions of Intelligent Vehicles William Widen, Professor of Law, Univ of Miami School of Law   |  |
| 12:00-12:20  | <u>Cross-Collaborating to Secure Autonomous Ground Vehicles and Other Emerging Technologies Against the Threats of Tomorrow</u> Benjamin Gilbert, Cybersecurity Advisor (CSA) in US Department of Homeland Security. |  |
| 12:20-12:45  | Panel Discussion   |  |
| 12:45-15:30  | Lunch/Break  |  |
| 15:30-16:00  | Coffee   |  |





| Session 3 Session Chair: Lisa Spainhower, Rapporteur: Carl Landwehr, University of Michigan |   |  |
|---|---|--|
| 16:00-16:45   | Security for Software-defined Vehicle Robert Kaster, Bosch  |  |
| 16:45-17:30   | <u>CyberShield - An Approach to Defeat Malware in Edge Computers using Hardware Diversity</u> Brock LaMeres, Montana State Univ |  |
| 17:30-18:00   | Discussion  |  |
| 18:00   | Adjourn for the day   |  |





| Saturday, Ju  | Saturday, June 25  |  |  |
|---|--|--|--|
| <b>Session 4</b> Session Chair: Andrea Ceccarelli, University of Florence, Rapporteur: Homa Alemzadeh, University of Virginia |  |  |  |
| 08:00-08:45   | How to defend connected intelligent vehicles: Transferring established Information Security best practices to the vehicular world  Miriam Gruber and Jan Lange, Volkswagen |  |  |
| 08:45-09:30   | Detection is not enough: Low-cost Attack Recovery for Autonomous Robotic Vehicles Karthik Pattabiraman, Univ of British Columbia   |  |  |
| 09:30-09:45   | (Short) Coffee Break   |  |  |
| 09:45-10:30   | <u>Design and Assessment of Safe Autonomous Vehicles</u> Saurabh Jha, IBM Research   |  |  |
| 10:30-11:00   | Discussion   |  |  |
| 11:00-11:15   | (Short) Coffee Break   |  |  |
| Workshop Wrap-up Workshop Chair & Rapporteurs   |  |  |  |
| 11:15-12:15   | Session Outbriefs by Rapporteurs and Discussion  |  |  |
| 12:15-12:30   | Concluding Remarks Jay Lala, Raytheon Technologies   |  |  |
| 12:30   | Adjourn for Lunch  |  |  |





- Over 45 active attendees IN PERSON: great to see you all after three years!
- If you have not attended a WG10.4 meeting before: we have long discussion periods after each session. We encourage an active dialog between the speakers and all attendees. Here are the ground rules.
  - During talks please limit questions to only those of clarification without follow up
  - During the discussion period please raise your hand when you want to comment. The session chair will be the arbiter of who gets to talk and in what order
  - Please wait for the microphone before making your comments
  - Please do not monopolize the conversation. Again there are over 45 of us here!
  - Try not to go off-topic: "Discuss design solutions, quantitative cyber-survivability measures, and verification and validation with regard to impact on AV safety"
  - If necessary, organizers and session chairs will move the discussion along
- Speakers: Please email your slides to Chuck Weinstock
  - <weinstock@conjelco.com > and Jay Lala@raytheon.com