

### Tuesday, 13<sup>th</sup> September 2016

Due to the high number of registrations we offer the introduction and STPA tutorials session twice. The two sessions are identical.

Please check the registration confirmation e-mail or your invoice to see for which of the sessions you have registered.

#### Introduction and Tutorials Morning Session

Room: LAA-L020

| 08:00 - 10:10 | Part 1 |
|---------------|--------|
| 10:10 - 10:30 | Break  |
| 10:30 - 12:10 | Part 2 |

#### Introduction and Tutorials Afternoon Session

Room: LAA-L020

| 13:30 - 15:10 | Part 1 |
|---------------|--------|
| 15:10 - 15:30 | Break  |
| 15:30 - 17:10 | Part 2 |



# Workshop Program



## Wednesday, 14<sup>th</sup> September 2016

### Room: **LAA-G001**

| 00.20 00.00   |              |  |                                       |  |  |  |
|---------------|--------------|--|---------------------------------------|--|--|--|
| 08:30 - 09:00 |              | Registration                               |                                       |  |  |  |
| 09:00 - 09:05 | Welcome      | Martin Rejzek,                             |                                       |  |  |  |
|               |              | Zurich University of Applied Sciences ZHAW |                                       |  |  |  |
| 09:05 - 09:45 | Keynote      | Dr. Nancy Leveson                          |                                       |  |  |  |
|               |              | Massachusetts Institute of Technology      |                                       |  |  |  |
| 09:45 - 10:15 | Coffee brea  | k + poster setup                           |                                       |  |  |  |
| 10:15 - 11:15 | Session 1    | 10:15 - 10:45                              | Asim Abdulkhaleq                      | A Systematic Approach Based on STPA for Developing a Dependable                |  |  |
|               |              |  | University of Stuttgart               | Architecture for Fully Automated Driving                                       |  |  |
|               |              | 10:45 - 11:15                              | John Thomas                           | STPA Applied to Automotive Automated Parking Assist                            |  |  |
|               |              |  | Massachusetts Institute of Technology |  |  |  |
| 11:15 - 11:30 | Short bio br | hort bio break                             |                                       |  |  |  |
| 11:30 - 12:30 | Session 2    | 11:30 - 12:00                              | Stephanie Alvarez                     | Safety of automated vehicles' demonstrations and experiments: an STPA          |  |  |
|               |              |  | Renault SAS - MINES ParisTech         | Application  |  |  |
|               |              | 12:00 - 12:30                              | Børge Rokseth                         | Verification of Maritime Engineering Systems                                   |  |  |
|               |              |  | NTNU                                  |  |  |  |
| 12:30 - 13:30 | Lunch break  |  |                                       |  |  |  |
| 13:30 - 14:30 | Session 3    | 13:30 - 14:00                              | Maria Mikela Chatzimichailidou        | Application of STPA on Small Drone Operations: A Benchmarking Approach         |  |  |
|               |              |  | University of Cambridge               | for Drone Classification   |  |  |
|               |              | 14:00 - 14:30                              | Kanarit Baktare                       | System Theoretic Safety Analysis of Israeli Air Force (IAF) CH-53 1977 and CH- |  |  |
|               |              |  | Ben Gurion University                 | 53 1997 Aviation Disasters   |  |  |
| 14:30 - 14:45 | Short bio br | Short bio break                            |                                       |  |  |  |
| 14:45 - 15:45 | Session 4    | 14:45 - 15:15                              | Gus Larard                            | A STAMP-based Hazard Log for Use during Development and Operations             |  |  |
|               |              |  | Cathay Pacific                        |  |  |  |
|               |              | 15:15 - 15:45                              | Frank Verschueren                     | Use of STAMP and related methods in Audits, Assessments and Inspections        |  |  |
|               |              |  | FVORG                                 |  |  |  |
| 15:45 - 16:15 | Coffee break |  |                                       |  |  |  |
| 16:15 - 17:15 | Session 5    | 16:15 - 16:45                              | Jamie Elliott                         | CAST Analysis of the Buncefield Incident                                       |  |  |
|               |              |  | DNV GL                                |  |  |  |
|               |              | 16:45 - 17:15                              | John Thomas                           | Analyzing security and safety in automated automotive systems                  |  |  |
|               |              |  | Massachusetts Institute of Technology |  |  |  |
| 17:15 - 17:20 | Day closing  |  |                                       |  |  |  |
|               |              |  |                                       |  |  |  |



# Workshop Program



## Thursday, 15<sup>th</sup> September 2016

Room: **LAA-G001** 

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|--|-----------|------------------|---|---------------------------------------|--|--|--|
| Original Institute for Advanced Sustainability Studies09:45 - 10:15Coffee break10:15 - 11:15Session 610:15 - 10:45Michael Findler<br>University of HoustonTeaching STAMP: High Level Communication Design Concerns for a<br>Robot10:15 - 11:15Session 610:45 - 11:15Robert Aps<br>University of TartuSystems-Theoretic Process Analysis of maritime traffic safety manage<br>the Gulf of Finland (Baltic Sea)11:15 - 11:30Short bio breakInternational Institute for Advanced SustainabilitySTPA for Linac availability requirements11:30 - 12:30Session 711:30 - 12:00Rüdiger Schmidt<br>CERNSTPA for Linac availability requirements12:30 - 13:30Lunch breakInternational Institute Advanced Ltd.Safety and Security Analysis in Automated Urban Guided Transport<br>using STPA13:30 - 14:30Session 813:30 - 14:00Ajibade Adesina<br>F. Hoffmann-La Roche Ltd.Application of Systems Theoretic Process Analysis to a Safety Signal<br>Management process in Pharmacovigilance14:30 - 14:45Short bio breakGeert Roelf Kleve<br>University Medical Centre GroningenAssessing the safety of a nurse call system using STPA14:45 - 15:45Session 914:45 - 15:15Svana Helen Björnsdóttir<br>Stiki / Reykjavik UniversityRisk Analysis in Design and Construction of a Hydropower Station<br>Modeling15:45 - 16:15Coffee breakInternational Institute of TechnologyModeling the Drift to Unsafe State: Combining STPA with System D<br>Modeling   | 09:00 Re  | Registration     |   |                                       |  |  |  |
| 09:45 - 10:15     Coffee break       10:15 - 11:15     Session 6     10:15 - 10:45     Michael Findler     Teaching STAMP: High Level Communication Design Concerns for a Robot       11:15 - 11:15     Session 6     10:45 - 11:15     Robert Aps     Systems-Theoretic Process Analysis of maritime traffic safety manage the Gulf of Finland (Baltic Sea)       11:15 - 11:30     Short bio break     I1:30 - 12:30     Session 7     I1:30 - 12:00     Rüdiger Schmidt CERN     STPA for Linac availability requirements       12:30 - 12:30     Session 8     13:30 - 12:30     Rüdiger Schmidt CERN     Safety and Security Analysis in Automated Urban Guided Transport using STPA       12:30 - 13:30     Lunch break      Fei Yan Security Medical Centre Groningen     Application of Systems Theoretic Process Analysis to a Safety Signal Management process in Pharmacovigilance       13:30 - 14:30     Session 8     13:30 - 14:00     Ajibade Adesina F. Hoffmann-La Roche Ltd.     Assessing the safety of a nurse call system using STPA       14:30 - 14:45     Short bio break     Geert Roelf Kleve     Assessing the safety of a nurse call system using STPA       14:45 - 15:45     Short bio break     It is the Bijörnsdóttir     Risk Analysis in Design and Construction of a Hydropower Station Stik / Reykjavik University       14:45 - 15:45     Session 9     14:45 - 15:15     Sv  | 09:45 Key | eynote           | Dr. Ortwin Renn   |                                       |  |  |  |
| 10:15 - 11:15     Session 6     10:15 - 10:45     Michael Findler     Teaching STAMP: High Level Communication Design Concerns for a Robot       11:15 - 11:15     Robert Aps     Systems-Theoretic Process Analysis of maritime traffic safety manage the Gulf of Finland (Baltic Sea)       11:15 - 11:30     Short bio break     Short bio break       11:30 - 12:30     Session 7     11:30 - 12:30     Rüdiger Schmidt     STPA for Linac availability requirements       12:30 - 12:30     Session 7     11:30 - 12:30     Fei Yan Beijing Jiaotong University     Safety and Security Analysis in Automated Urban Guided Transport Using STPA       12:30 - 13:30     Lunch break     Ajibade Adesina F. Hoffmann-La Roche Ltd.     Application of Systems Theoretic Process Analysis to a Safety Signal Management process in Pharmacovigilance       14:30 - 14:45     Short bio break     Geert Roelf Kleve     Assessing the safety of a nurse call system using STPA       14:30 - 14:45     Short bio break     Svana Helen Björnsdóttir     Risk Analysis in Design and Construction of a Hydropower Station       14:45 - 15:45     Session 9     14:45 - 15:15     Svana Helen Björnsdóttir     Modeling the Drift to Unsafe State: Combining STPA with System D Modeling       15:45 - 16:15     Coffee break     Stiki / Reykjavik University     Modeling the Drift to Unsafe State: Combining STPA with System D Modeling <td></td> <td></td> <td colspan="5">International Institute for Advanced Sustainability Studies</td>   |           |                  | International Institute for Advanced Sustainability Studies |                                       |  |  |  |
| University of HoustonRobot10:45 - 11:15Robert Aps<br>University of TartuSystems-Theoretic Process Analysis of maritime traffic safety manage<br>the Gulf of Finland (Baltic Sea)11:15 - 11:30Short bio break11:30 - 12:30Session 711:30 - 12:00Rüdiger Schmidt<br>CERN12:30 - 12:30Session 711:30 - 12:00Rüdiger Schmidt<br>CERN12:30 - 13:30Lunch breakSafety and Security Analysis in Automated Urban Guided Transport<br>using STPA12:30 - 14:30Session 813:30 - 14:00Ajibade Adesina<br>F. Hoffmann-La Roche Ltd.Application of Systems Theoretic Process Analysis to a Safety Signal<br>Management process in Pharmacovigilance14:30 - 14:45Short bio breakGeert Roelf Kleve<br>University Medical Centre GroningenAssessing the safety of a nurse call system using STPA14:45 - 15:45Session 914:45 - 15:15Svana Helen Björnsdóttir<br>Stiki / Reykjavik UniversityRisk Analysis in Design and Construction of a Hydropower Station<br>Modeling15:45 - 16:15Coffee breakStati the Giffee breakModeling the Drift to Unsafe State: Combining STPA with System D<br>Modeling   | 10:15 Cot | offee breal      | k   |                                       |  |  |  |
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| Initial construction of a Hydropower StationUniversity of Tartuthe Gulf of Finland (Baltic Sea)11:15 - 11:30Short bio break11:30 - 12:30Session 711:30 - 12:00Rüdiger Schmidt<br>CERNSTPA for Linac availability requirements12:30 - 12:30Fei Yan<br>Beijing Jiaotong UniversitySafety and Security Analysis in Automated Urban Guided Transport<br>using STPA12:30 - 13:30Lunch break   |           |                  |   | University of Houston                 | Robot  |  |  |
| 11:15 - 11:30     Short bio break       11:30 - 12:30     Session 7     11:30 - 12:00     Rüdiger Schmidt<br>CERN     STPA for Linac availability requirements       12:00 - 12:30     Fei Yan<br>Beijing Jiaotong University     Safety and Security Analysis in Automated Urban Guided Transport<br>using STPA       12:30 - 13:30     Lunch break        13:30 - 14:30     Session 8     13:30 - 14:00     Ajibade Adesina<br>F. Hoffmann-La Roche Ltd.     Application of Systems Theoretic Process Analysis to a Safety Signal<br>Management process in Pharmacovigilance       14:30 - 14:45     Short bio break     Geert Roelf Kleve<br>University Medical Centre Groningen     Assessing the safety of a nurse call system using STPA       14:30 - 14:45     Short bio break     14:45 - 15:15     Svana Helen Björnsdóttir<br>Stiki / Reykjavik University     Risk Analysis in Design and Construction of a Hydropower Station<br>Modeling the Drift to Unsafe State: Combining STPA with System D<br>Modeling       15:45 - 16:15     Coffee break     Interferich<br>Massachusetts Institute of Technology     Modeling the Drift to Unsafe State: Combining STPA with System D  |           |                  | 10:45 - 11:15   | Robert Aps                            | Systems-Theoretic Process Analysis of maritime traffic safety management in  |  |  |
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| Image: style s |           |                  |   | CERN                                  |  |  |  |
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| 14:00 - 14:30     Geert Roelf Kleve<br>University Medical Centre Groningen     Assessing the safety of a nurse call system using STPA       14:30 - 14:45     Short bio break     Identify a nurse call system using STPA       14:45 - 15:45     Session 9     14:45 - 15:15     Svana Helen Björnsdóttir<br>Stiki / Reykjavik University     Risk Analysis in Design and Construction of a Hydropower Station       15:45 - 16:15     Coffee break     John Helferich<br>Massachusetts Institute of Technology     Modeling the Drift to Unsafe State: Combining STPA with System D<br>Modeling  | 14:30 Ses | ession 8         | 13:30 - 14:00   | Ajibade Adesina                       | Application of Systems Theoretic Process Analysis to a Safety Signal         |  |  |
| 14:30 - 14:45     Short bio break       14:45 - 15:45     Session 9       14:45 - 15:45     Session 9       14:45 - 15:45     Session 9       14:45 - 15:45     Solution of a Hydropower Station       Stiki / Reykjavik University     Risk Analysis in Design and Construction of a Hydropower Station       15:15 - 15:45     John Helferich       Massachusetts Institute of Technology     Modeling the Drift to Unsafe State: Combining STPA with System D       15:45 - 16:15     Coffee break  |           |                  |   | F. Hoffmann-La Roche Ltd.             | Management process in Pharmacovigilance                                      |  |  |
| 14:30 - 14:45     Short bio break       14:45 - 15:45     Session 9     14:45 - 15:15     Svana Helen Björnsdóttir<br>Stiki / Reykjavik University     Risk Analysis in Design and Construction of a Hydropower Station       15:15 - 15:45     John Helferich<br>Massachusetts Institute of Technology     Modeling the Drift to Unsafe State: Combining STPA with System D<br>Modeling   |           |                  | 14:00 - 14:30   | Geert Roelf Kleve                     | Assessing the safety of a nurse call system using STPA                       |  |  |
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| Stiki / Reykjavik University   Stiki / Reykjavik University     15:15 - 15:45   John Helferich<br>Massachusetts Institute of Technology   Modeling the Drift to Unsafe State: Combining STPA with System D<br>Modeling     15:45 - 16:15   Coffee break  | 14:45 Sho | Short bio break  |   |                                       |  |  |  |
| 15:15 - 15:45   John Helferich<br>Massachusetts Institute of Technology   Modeling the Drift to Unsafe State: Combining STPA with System D<br>Modeling     15:45 - 16:15   Coffee break  | 15:45 Ses | ession 9         | 14:45 - 15:15   | Svana Helen Björnsdóttir              | Risk Analysis in Design and Construction of a Hydropower Station             |  |  |
| Massachusetts Institute of Technology   Modeling     15:45 - 16:15   Coffee break  |           |                  |   | Stiki / Reykjavik University          |  |  |  |
| 15:45 - 16:15 Coffee break   |           |                  | 15:15 - 15:45   | John Helferich                        | Modeling the Drift to Unsafe State: Combining STPA with System Dynamic       |  |  |
|  |           |                  |   | Massachusetts Institute of Technology | Modeling   |  |  |
| 16:15 - 17:00 Session 10 16:15 - 16:45 Daniel Hartmann A Meta-analysis of CAST Investigations of Three Accidents Related t   | 16:15 Co  | Coffee break     |   |                                       |  |  |  |
|  | 17:00 Ses | ession 10        | 16:15 - 16:45   | Daniel Hartmann                       | A Meta-analysis of CAST Investigations of Three Accidents Related to Diverse |  |  |
| Ben Gurion University Sociotechnical Systems (STSs)  |           |                  |   | Ben Gurion University                 | Sociotechnical Systems (STSs)  |  |  |
| 16:45 - 17:00 Announcements  |           |                  | 16:45 - 17:00   | Announcements                         |  |  |  |
| 17:00 - 17:15 Closing ESW 2016   | 17:15 Clo | Closing ESW 2016 |   |                                       |  |  |  |

