

4th European STAMP Workshop

Safety and Security in Complex Socio-Technical Systems

Accident, Incident and Hazard Analysis based on Systems Theory (CAST and STPA)

13th September 2016

Introduction and Tutorials

14th - 15th September 2016

Talks and Presentations

Keynote speakers:

Dr. Nancy Leveson

Dr. Ortwin Renn

Zürich, Switzerland

ESW 
European STAMP Workshop

Zürich University
of Applied Sciences
zhaw School of
Engineering
IAMP Institute of Applied
Mathematics and Physics

www.zhaw.ch/iamp/stamp

The Zurich University of Applied Sciences ZHAW will be hosting the 4th European STAMP Workshop 2016 in Zürich, Switzerland, in collaboration with the MIT Partnership for a Systems Approach to Safety.

The first day of the workshop will allow participants to become familiar with STAMP, STPA and CAST through an introductory talk and tutorials.

New developments, applications and case-studies will be presented during the following two days by experts from industry and academia.

We are particularly thankful to Dr. Nancy Leveson and to Dr. Ortwin Renn for having accepted our invitation to open the presentation sessions as keynote speakers.

Safety and Security

in Complex Socio-Technical Systems

STAMP (Systems-Theoretic Accident Model and Processes) is an accident causality model based on systems theory and systems thinking and was originally developed by Prof. Dr. Nancy Leveson at MIT. STAMP integrates into engineering analysis causal factors such as software, human decision-making and human factors, new technology, social and organizational design, and safety culture, which are becoming ever more threatening in our increasingly complex systems.

STPA (Systems-Theoretic Process Analysis) is a powerful hazard analysis technique based on STAMP, while CAST (Causal Analysis based on STAMP) is the equivalent for accident and incident analysis. These tools are increasingly used across diverse industry sectors. Application areas have included aviation, air traffic control, space, defense, the automotive industry, railways, chemicals, oil and gas, medical devices, health-care, and workplace safety, with a growing interest coming from new areas such as the pharmaceutical industry and the finance and insurance sectors. Ongoing developments aim at extending the application field of STPA to include security.

Keynote speakers

Dr. Nancy Leveson



is Professor of Aeronautics and Astronautics and also Professor of Engineering Systems at MIT. Nancy Leveson conducts research on the topics of system safety, software safety, software and system engineering, and human-computer interaction and developed STAMP, STPA and CAST as described in her book "Engineering a Safer World".

Nancy Leveson is an elected member of the National Academy of Engineering (NAE). In 1999, she received the ACM Allen Newell Award for outstanding computer science research and in 1995 the AIAA Information Systems Award for "developing the field of software safety and for promoting responsible software and system engineering practices where life and property are at stake." In 2005 she received the ACM Sigsoft Outstanding Research Award.

Leveson has published over 200 research papers and is author of two books, "Safeware: System Safety and Computers" published in 1995 by Addison-Wesley and "Engineering a Safer World" published in 2012 by MIT Press. She consults extensively in many industries on the ways to prevent accidents.

Dr. Ortwin Renn



is scientific director at the International Institute for Advanced Sustainability Studies (IASS) in Potsdam (Germany) since February, 1, 2016. He continues to serve as acting chair of the Stuttgart Research Center for Interdisciplinary Risk and Innovation Studies at the University of Stuttgart (ZIRIUS) and as scientific director of the non-profit company DIALOGIK, a research institute for the investigation of communication and participation processes. Renn is Adjunct Professor for "Integrated Risk Analysis" at Stavanger University (Norway) and Affiliate Professor for "Risk Governance" at Beijing Normal University.

Ortwin Renn has a doctoral degree in social psychology from the University of Cologne. His career included teaching and research positions at Clark University (Worcester, USA), the Swiss Institute of Technology (Zurich) and the Center of Technology Assessment (Stuttgart). His honours include the National Cross of Merit Order, an honorary doctorate from the Swiss Institute of Technology, an honorary professorship at the Technical University Munich and the "Distinguished Achievement Award" of the Society for Risk Analysis (SRA)

Program Committee

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Secretary and Event Manager

Teresa D'Onghia	Zurich University of Applied Sciences ZHAW
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Dates

September 2016

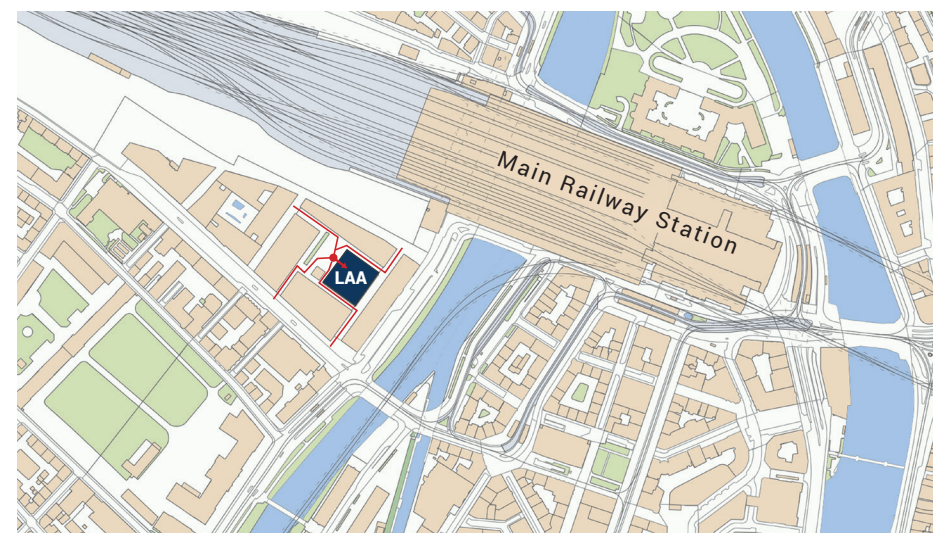
Tue. 13th Introduction and Tutorials

Wed. 14th & Thu. 15th Keynotes
Talks and Presentations
Social evening

Venue

In the center of Zürich, next to the main railway station

Zurich University of
Teacher Education
(PHZH)
Building LAA
Lagerstrasse 2
8090 Zürich
Switzerland



Introduction and STPA Tutorial

We will host an introductory talk and a tutorial session on the first day of the workshop. The talk will present the fundamentals of the System-Theoretic Accident Modeling and Processes framework (STAMP) and the two analysis techniques STPA and CAST. After this introduction, you will have an opportunity to apply STPA hands-on to a case-study during the subsequent tutorial session.

Tuesday 13th September

Morning

08:30 am - 11:30 am
Room LAA-L020

Introduction and Tutorial

Tuesday 13th September

Afternoon

01:30 pm - 04:30 pm
Room LAA-L020

Introduction and Tutorial

*The afternoon session is fully booked.
Please register for the morning session!*

Keynotes, Talks and Presentations

The two workshop days following the introduction to STAMP and STPA will feature talks from industry and academia, presenting new developments from the field as well as results from applications and case studies. The presentation sessions will be opened by keynote speeches by Dr. Nancy Leveson and Dr. Ortwin Renn.

Wednesday 14th September

09:15 am - 12:10 pm
Room LAA-G001

Welcome
Keynote Dr. Nancy Leveson
Session 1

12:10 pm - 01:20 pm
Room LAA-G000

Lunch break and poster viewing

01:20 pm - 04:30 pm
Room LAA-G001

Session 2
Session 3

Thursday 15th September

09:15 am - 12:10 pm
Room LAA-G001

Keynote Dr. Ortwin Renn
Session 4

12:10 pm - 01:20 pm
Room LAA-G000

Lunch break and poster viewing

01:20 pm - 04:30 pm
Room LAA-G001

Session 5
Session 6

Registration for the Introduction and Tutorials session is free of charge. The number of participants is limited.

The fee is € 180.- for regular participants for both days and includes lunch and refreshment during breaks. Students may register for a reduced fee of € 80.-. For logistical reasons, we cannot provide registration for a single day. Participants registering at the same time for the Swiss Systems Engineering Day 2016 benefit from a special offer.

Social Evening

Wednesday 14th September 2016

We will be delighted to welcome you!

Lindenhof



Refreshments + View

We will walk from the venue location to the public square known as "Lindenhof" (courtyard of lime trees) in the historic center of Zürich where we will have refreshments served and the chance to have a chat while enjoying a wonderful view.

Zürich



City walk

From there we will start out on a city walk through the center of Zürich and discover not only the city's current appearance but also gain a brief impression of its past and development.

Guild House



Dinner

After approximately 45 minutes, we will retire for a dinner featuring local specialties to the historic "Zunfthaus zur Waag" guild house which dates back to 1315.

www.zunfthaus-zur-waag.ch

You may optionally register for the social evening at a flat rate of € 80.- which covers refreshments and dinner. The number of participants for the social evening is limited. In case of bad weather we may relocate refreshments to a location protected from weather. The city walk will take place in any case.

Swiss Systems Engineering Day

The Swiss Systems Engineering Day is the annual symposium of the Swiss Systems Engineering Society (SSSE), also acting as the Swiss Chapter of the International Council on Systems Engineering (INCOSE).

The Swiss Systems Engineering Day brings together first-class presenters and practitioners from across Europe to share knowledge and experiences on how to plan, develop and manage systems in an efficient and successful way.

ESW 2016 will be held in conjunction with the Swiss Systems Engineering Day 2016 (Monday, September 12, 2016). Both events take place in Zürich. Participants registering for both events benefit from special offer.



Monday 12th September 2016

Subjects

Systems Thinking
Decision Management and Concurrent Engineering
Requirements Management
Verification and Validation and Systems Architecting
Model-Based Systems Engineering

Benefit from

International keynote speakers
Presentations
Workshops
Tutorials
Networking and knowledge sharing opportunities

www.ssse.ch

Registration

Registration for the first day (Introduction and Tutorials) and the following two days (Talks and Presentations) is possible individually. Optionally you may register for the social evening and in combination with registration for the STAMP Workshop for the Swiss Systems Engineering Day 2016. Please note that the number of participants for the Introduction and Tutorials session and the social evening is limited.

	Regular	Students
Introduction and STPA Tutorial <small>Limited number of participants</small>	free of charge	free of charge
Talks and Presentations	€ 180. -	€ 80. -
Social Evening <small>Limited number of participants</small>	€ 80. -	€ 80. -
STAMP Workshop and Swiss Systems Engineering Day	€ 260. -	€ 120. -

[Please register using the online form](#)

Substitution: If, after registering you are unable to attend, you are welcome to nominate someone else to attend in your place at no additional cost. Please advise substitutions via email so a correct name tag will be available at the registration. Note that we cannot modify billing information. The invoice will be received by the original registered participant.

Cancellation more than 30 days before the event: 80% refund. Cancellation less than 30 days before the event: no refund. Cancellation must be in writing via email or letter.

Contributions

People from academia and industry are invited to participate in the 4th European STAMP Workshop by contributing with a talk or poster. Optionally a full paper may be published along with the talk or poster. The papers will be published in a dedicated volume of Procedia Engineering (open access journal, publication will be similar to the volume of ESW 2015).

We kindly ask you to submit only contributions which have a strong link to STAMP, STPA, respectively CAST, otherwise the topics are open and may cover for example:

- Presentation of case-studies using STPA and CAST
- Safety-guided design using STPA
- Accident and incident analysis using CAST
- Certification and regulatory issues in the context of STAMP, STPA and CAST

- ...

Submission

If you would like to present a talk, we kindly ask you to submit an extended abstract. If you would like to present a poster, please submit either an abstract or a preliminary version of the poster.

Please submit directly via EasyChair no later than 2016-06-19. If you have completed your submission in advance and submit before the deadline this would be much appreciated. Further information is provided directly on EasyChair. (Click on new submission and read the ESW 2016 submission instructions at the top of the page or download them as PDF. Please read the instructions before you start preparing your contribution.)

URL for submission and further information on contributions:

<https://easychair.org/conferences/?conf=esw2016>

[Download submission instructions as PDF](#)

Acceptance

The program committee will review the submissions and take the final decisions regarding acceptance. Notification regarding acceptance and a detailed program will be provided on 2016-08-01.

Accommodations

Participants must take care of their accommodation in Zürich themselves. Below is some information about hotels close to the venue location for which we have a limited contingent of rooms at fixed rates. The city tax of 2.50 CHF/person and night is not included in the offers.

Hotel Adler

Single room, breakfast included: 160.- CHF/night
Bookable until 2016.07.31. To book rooms contact the hotel directly by email (info@hotel-adler.ch) referencing "4th European STAMP Workshop".
Address: Rosengasse 10, 8001 Zürich
<http://www.hotel-adler.ch/index.php/en/>

Hotel Bristol

Single room, breakfast included: 150.- CHF/night
Bookable until 2016.08.13. To book rooms contact the hotel directly by email (info@hotelbristol.ch) referencing "4th European STAMP Workshop".
Address: Stampfenbacherstrasse 34, 8006 Zürich
http://www.bristolhotel-zurich.com/index_en.htm

Hotel Leoneck

(Crazy Cow)
Single room, breakfast included: 160.- CHF/night
Bookable until 2016.08.08. If you book online please reference "4th European STAMP Workshop" as remark in the online form. Alternatively you may book by email (info@leoneck.ch).
Address: Leonhardstrasse 1, 8001 Zürich
http://www.leoneck.ch/index_web.php

Hotel Marta

Single room, breakfast included: 150.- CHF/night
Bookable until 2016.08.10. To book rooms contact the hotel directly by email (info@hotelmarta.ch) referencing "4th European STAMP Workshop".
Address: Zähringerstrasse 36, 8001 Zürich
<http://www.hotelmarta.ch/>

design dirk nordt