VIScon 2019
Program
Welcome to VIScon 2019

After a very successful first VIScon we decided to go even bigger this year. This year’s Symposium consists of 33 amazing talks and 7 fascinating workshops. Besides that, we brought a completely new thing to this year’s VIScon: For all those who don’t want to stop at the theoretic knowledge about computer science, we created an exhibition.

The exhibition will take place in the afternoon of VIScon, starting at 3 pm and taking place in the big tent in front of CAB. With more than 10 exhibitants that show you what can be done by implementing computer science in projects and gadgets, you have the chance to get a glimpse on the front line of innovation.

We also want to emphasize our focus on the interdisciplinarity of computer science even more. Besides the last year’s tracks called “Technical Computer Science Track” and “Entrepreneurship Track”, we introduced our new “Computer Science in Engineering Track”. With 8 talks and 2 workshops in this track, there are plenty of ways to explore the bridges between computer science and other disciplines.

You will get an amazing opportunity to hear first-hand how companies make use of the technologies you learn about in lectures. Meanwhile, the workshops enable you to build or learn new topics you might not encounter until after graduating.

In that means, go and experience, browse, soak in as much new information as possible, and enjoy the realm of computer science in a whole new way!

At the end of the day, we want you to walk out of the building filled with motivation, inspiration and a fire within to build and mold the IT world of the coming decades - by making new discoveries and possibly even by founding a startup.

Get inspired, network, learn and most importantly: Have fun!

Celina Rhonheimer
Head of Symposium
Welcome
You can sign-in, grab your goodie bag and a coffee starting from 8:30 am. By 9:30, you should be ready for the opening ceremony and a talk by our rector.

Opening Ceremony

10:00
Keynote
Sarah Springman

11:00
Advanced Analytics for Power Grids
BKW
All Code Sucks
Beekeeper
Pricing Climate Change for Investors
Carbon Delta
A Guide to Mobile Location Data
FAIRTIQ

12:00
Lunch

13:00
Hello World! with HoloLens 2
Microsoft
The Good, the Bad and the Cyber
Ergon
Automatic Slide Layout
think-cell
Thriving in CS as an „outsider”... and Staying Happy!
EBP

14:00
Enzian: a Research Computer
Prof. T. Roscoe
Machine Learning in Web App Security
Airlock
How the Cloud Evolves
Swisscom
Graph-Based ML for Health Care
Oracle

15:00
Millennials are rewriting the Swiss IT Landscape
Ipt
When Shit Hits the Fan
Oneconsult
From Research Code to Industry Grade
Anapaya Systems
Talos, the Deep Learning Solution of Credit Suisse

16:00
From Zero to Singularity - Designing the AI That Humans Need
IBM
Defending against Wi-Fi Hacks
Zühlke
Implementing Privacy-Compliant Software Solution
Starmind
Experiencing Web of Things
Siemens

17:00
Site Reliability Engineering at Google
Google
Why you should care about your internet connected toaster
Redguard
Vision & AI for Sports Broadcasting
Vizrt
Visual Inertial System for 3D Laser Scanners
Leica Geosystems

18:00
Closing Ceremony

Lightning Talks
Esri
Collaboration Between Architects and Software Engineers
Scewo
From Scalevo to Scewo Bro
SysSec
Do You Need a Blockchain?
unit8
From a Startup Diary: Dealing With Uncertainty
ESA BIC
Launch Your Startup In Space
What started as a research project is now trying to take over the world!

At Anapaya Systems, we are leveraging the SCION Internet architecture to offer next-generation Internet services to our customers. This entails further developing and transforming the researchy codebase, and building a product that can survive in the real world. In this talk we will go over the patterns that have helped us reduce the inherited pain points and improve the developer experience. We will show some steps that need to be taken to deploy networking software into the wild, and also discuss what tooling and processes have shown to be effective and where the future might take us.
Juan A. Garcia Pardo

Juan was born in Valencia, Spain many years ago. He studied at the Universitat Politècnica de València and obtained his MSc in computer science, starting his Ph.D. in machine learning right after. During his studies he managed to teach at two (other) universities in the same city, and worked to help in a variety of projects for different swiss companies, such as Swisscom and Lindt. That is when he discovered a bit of Switzerland, and decided he would not finish his Ph.D. studies but move to work in R&D for Leica Geosystems in Sankt Gallen. He discovered and read about SCION in 2017 and joined the Network Security group at ETH in 2018, to help with this fascinating project. He co-operates SCIONLab.

Giacomo Giulari

Giacomo is an Electrical Engineer by training with a fascination for all things CS. He is currently a PhD student at the Network Security group at ETH, which he joined after finishing his Master Thesis on next-generation satellite Internet routing. An enthusiast for modeling and simulations, he likes to use these tools both for research and scientific dissemination. His recent interests include satellite networks, quality of service systems for the Internet and medical imaging.
In our VISCon workshop, students not only learn about state-of-the-art research about Path-aware Networks, but get the chance to experience this technology hands-on.

The two hour session starts with a quick overview of SCION, a next-generation Internet architecture developed at ETHZ. We highlight on some of the problems and shortcomings of the current Internet, while showing at the same time how SCION can solve them.

The remaining hour and a half is devoted to a practical, fun competition. Students have to code a client application (python) to communicate with servers deployed in our testing infrastructure. The goal is to solve networking problems such as unavailable routers, extremely low bandwidth, heavy packet loss at the links etc., by leveraging the cutting-edge features of SCION. The more content students are able to get across the network and the fastest, the higher their final score. This game is repeated multiple times, so that they can learn from their mistakes and improve the performance of their application.

To ease the bootstrapping and speed up development, we provide some basic examples of clients. Students can then readily start with the fun problem-solving tasks, while becoming acquainted with the simplified SCION API. In parallel, we set up a simple infrastructure to keep track of the game score, so students can get feedback on how many points they scored in every scenario in real-time.

To participate, Students will have to bring their own laptop, capable of running VirtualBox virtual machines or Docker containers, and the ability to connect to wifi.

The winner (highest score) of the competition will get a SCION-themed prize!! (to be determined). We will reserve around 10 minutes at the end to discuss interesting implementation strategies that emerged during the competition.