

# SDS2018



## SWISS CONFERENCE ON DATA SCIENCE

**June 7th, 2018**

**SDS|2018 – Inspire. Interact. Innovate.**

The Swiss Conference on Data Science is the day and place where science, innovation and business unite. The conference offers an in-depth exploration of new insights, techniques and methods, relevant for Switzerland and its market players.

Get inspired by excellent keynotes, participate in interactive sessions, and network with professionals to plan your next Data Science based innovations.



Swiss Alliance for  
Data-Intensive Services

Welcome to SDS|2018 organized by the Swiss Alliance for Data-Intensive Services (Data+Service).

It's the 5th time this conference takes place and it keeps growing. The second time in a professional venue - Kursaal Bern - and it continues to expand content-wise: there are 35 speaker slots - 40% more than last year.

Not only has the conference grown, in the past years, we have seen a continuous and fast increase in public awareness for the importance of digital transformation - to business, politics and society at large. With data-driven value creation at the very core of it, this conference is an important contribution to shape the way Switzerland develops in this space.

We wish you a rewarding conference, interesting encounters, exciting insights and great inspirations at SDS|2018. We hope it will have a positive impact on your personal and professional development as we are convinced: data-driven value creation is the key to success in the 21st century.

Dr. Simon Hefti  
Chairman & Co-Founder  
D ONE

Hans Peter Gränicher  
CEO & Co-Founder  
D ONE

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Swiss Alliance for  
Data-Intensive Services

# **Taavi Kotka**

Former CIO of Estonian Government

## **7 Principles of Creating a Digital Society**

### **Abstract.**

Taavi will provide a clear and comprehensive roadmap for governments and cities about what needs to be put in place technologically and institutionally to become a digital society. This talk is designed for audiences who already know that the change is needed and is looking for practical guide to the steps that need to be taken to achieve that change.

### **Biography.**

Taavi became Estonia's first ever Chief Information Officer in 2013 to oversee the country's development as an advanced digital nation. He previously worked in the private sector, starting his career as a programmer before rising to be the CEO of the region's largest software development company, Webmedia (now Nortal). During this time, Taavi was named Ernst & Young's Entrepreneur of the Year.

As Estonia's CIO, Taavi introduced a number of new ideas that have come to define the concept of 'e-Estonia' as a digital nation and these best practises are now being copied and implemented by other governments around the world. This includes the e-Residency programme, which has placed Estonia at the epicentre of the global tech community, as well as innovations such as data embassies, country-as-a-service (CAAS), the no-legacy policy, VAT fraud detection, and others. As a result of his work in the public sector, Taavi was named European CIO of the Year 2014 and received Estonia's prestigious White Star III Class Order in 2016. Taavi is now back in the private sector, helping startups develop and consulting large enterprises and governments on digital transformation. He is also a very popular and visionary speaker at large conferences around the world. Taavi is also now a special advisor to European Commission vice-president Andrus Ansip on European Digital Single Market.

# **Naftali Tishby**

Hebrew University of Jerusalem

## **The Deep Learning Revolution: What Does It Tell Us about Our Understanding of Intelligence?**

### **Abstract.**

The surprising success of learning with deep neural networks poses two fundamental challenges: understanding why these networks work so well and what this success tells us about the nature of intelligence and our biological brain. Our recent Information Theory of Deep Learning shows that large deep networks achieve the optimal tradeoff between training size and accuracy, and that this optimality is achieved through the noise in the learning process. In this talk, I will mainly address the relevance of these findings to the nature of intelligence and the human brain.

### **Biography.**

Naftali Tishby is a professor of Computer Science, and the incumbent of the Ruth and Stan Flinkman Chair for Brain Research at the Edmond and Lily Safra Center for Brain Science (ELSC) at the Hebrew University of Jerusalem. He is one of the leaders in machine learning research and computational neuroscience in Israel, and his numerous former students serve in key academic and industrial research positions all over the world. Tishby was the founding chair of the new computer-engineering program, and a director of the Leibnitz Center for Research in Computer Science at Hebrew University. Tishby received his PhD in theoretical physics from Hebrew University in 1985, and was a research staff member at MIT and Bell Labs from 1985 to 1991. Tishby has been a visiting professor at Princeton NECI, the University of Pennsylvania, UCSB, and IBM Research.

# **Lisa Amini**

IBM Research Cambridge

## **Why AI Needs Even More Data Science, and Vice Versa**

### **Abstract.**

Recent advances in AI and deep learning are capturing headlines, and yet suffer from a variety of short-comings, including catastrophic forgetting, inability to generalize robustly, susceptibility to bias, and inadequate techniques for introspection and explanation. Many of these are challenges where an even greater influence from the expertise and rigorous approaches of data science could have profound effects. For example, AI has an urgent and critical need for learning causal models, an area requiring a sound grasp of statistical analysis, principles of identification and other mainstays of data science. Conversely, differentiable (deep learning) techniques for learning causal structure could bring powerful new tools to data scientists. In another example, information theoretic approaches to understanding information flow in deep neural networks could enable more robust, efficient, and predictable AI. AI for ethical decision making is yet another area with a deep need for complementary data science and AI expertise. This talk will cover these, and other examples of projects we are undertaking in the new MIT-IBM Watson AI Lab, and the necessary interplay of data science and AI. I will also highlight a novel academic+industry approach we are taking to AI research, and why it is both unique and compelling.

### **Biography.**

Dr. Lisa Amini is the Director of IBM Research Cambridge, which includes the newly announced MIT-IBM Watson AI Lab (<http://mitibmwatsonai-lab.mit.edu>). The MIT-IBM Watson AI Lab is dedicated to fundamental artificial intelligence (AI) research with the goal of propelling scientific breakthroughs in four research pillars: AI Algorithm, the Physics of AI, the Application of AI to industries, and Advancing shared prosperity through AI; all of which leverage and pioneer machine learning, deep learning, and machine reasoning algorithms. Lisa was previously Director of Knowledge & Reasoning Research in the Cognitive Computing group at IBM's TJ Watson Research Center in New York, and she is also an IBM Distinguished Engineer. Lisa was the founding Director of IBM Research Ireland, and the first woman Lab Director of any IBM Research Global (i.e., non-US) Lab (2010-2013). As Senior Manager of the Exploratory Stream Processing Research Group, Lisa was the founding Chief Architect for IBM's InfoSphere Streams product and Research predecessor. She earned her PhD in Computer Science from Columbia University, in New York.

## Panel Discussion

### The Impact We Want AI to Have on Society

#### **Matthias Kaiserswerth - Moderator**

Matthias Kaiserswerth is the managing director of the Hasler Stiftung in Berne since May 2015. Dr. Kaiserswerth is president of Economic Development Association Zimmerberg-Sihltal, member of the Board of Governors for the Zurich University of Applied Sciences, member of the Board of the Federal Institute for Metrology METAS and serves on various company boards.

#### **Abraham Bernstein - Panelist**

Abraham Bernstein is a Full Professor and Chair of the Department of Informatics as well as director of the Digital Society Initiative at the University of Zurich (UZH), Switzerland. His current research focuses on various aspects of the semantic web, AI, knowledge discovery, crowd computing, and the interplay between human and machine intelligence.

#### **Joachim Buhmann - Panelist**

Joachim M. Buhmann is full Professor for Computer Science at ETH Zurich since October 2003. He heads the Institute for Machine Learning at the Department of Computer Science. Buhmann's research interests cover theory and applications of machine learning and artificial intelligence, as well as a wide range of subjects related to information processing in the life sciences.

#### **Min Li Marti - Panelist**

Min Li Marti is a Member of Parliament and Publisher / Editor of a weekly newspaper. Min Li Marti was elected to the national parliament in October 2015. She represents the canton of Zurich and is a member of the Social Democratic Party. She is a member of the committee for education, science and culture.

#### **Rudolf Minsch - Panelist**

Rudolf Minsch is chief economist of economiesuisse, the top business organization in Switzerland. He is Deputy Chairman of the Executive Board and leads the department of economic policy and education. He is still associated with the University of St. Gallen where he is lecturer at the Executive School and is a visiting professor at the University of Applied Sciences in Chur.

#### **Sabine Susstrunk - Panelist**

Sabine Süssstrunk is full professor in the School of Computer and Communication Sciences (IC) at the Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland, where she leads the Images and Visual Representation Lab (IVRL) since 1999 and the Digital Humanities Institute and teaching section since 2015. Her research areas are in computational photography, computer vision and machine learning, and image processing.

## Roundtable Session 1

### **Roundtable 1: Rajesh K Parthasarathy** **Bringing Efficiency, Consistency and Assurance in Creation of anonymized Production Datasets for Analytical Application Development, Testing and Machine Learning**

How can you assure that all sensitive information in incoming source feeds is captured and validated for anonymization? How to maintain referential integrity with out losing functional quality in anonymized data sets?

### **Roundtable 2: Mark Cieliebak** **How Can We Run a Successful Artificial Intelligence Project?**

Established methods for software engineering projects are doomed to fail for AI/Machine Learning projects. New questions and challenges arise: How can we provide the customers early-on with reliable predictions of the results? How can we maintain a certain level of quality when the underlying data changes? At this roundtable, we will share experiences and best practices with running AI projects.

### **Roundtable 3: Manuel Manuel** **Deep Reinforcement Learning Doesn't Work Yet!?**

How do you deal with the fact that small changes lead to nothing working anymore? Is Reinforcement Learning ready for industrial use? If so, who is dealing with? If not, what else is missing? The problem of overfitting, or the weird patterns in the environment.

### **Roundtable 4: Martin J. Eppler** **Visualizing and Communicating Research Results Interactively**

Data science often involves the process of visualizing and presenting unstructured and structured data in order to answer questions of social or business importance. How can we better convey this data to groups by involving our audience interactively? How can we democratize data interpretation efficiently?

## Roundtable Session 2

### **Roundtable 1: Jan Freccè** **Token-based Management of Personal Data**

Protect individual data privacy by empowering the data-subjects to easily and securely manage their personal data, and make it available to data consumers without having to actually disclose personal data. How does it work for you?

### **Roundtable 2: Sotiris Dimopoulos** **Is It Possible for SMEs to Keep Up with the Advances in Data Science and AI?**

What type of data science & AI applications can be successful within SMEs? Can SMEs afford the computing infrastructure for data science & AI applications? Do SMEs need to hire in-house data scientists? How can we successfully run and operationalize a Data Science solution in an SME?

### **Roundtable 3: Stanislav Bohm** **Lowering the Barrier to Efficient Large-scale Distributed Computing**

Large-scale distributed environments have enabled rapid acceleration of many scientific applications. Nonetheless, for many domain specialists, it is still difficult to adapt their tools and existing software stacks to work efficiently in these environments. How can we make the use of large-scale systems easier and more intuitive while not sacrificing application performance or resource usage efficiency?

### **Roundtable 4: Seyed Saeid Ashraf Vaghefi** **Using Big Data Sets to Combat Climate Change Effects**

Although there are enough evidences that climate change is one of the major 21st century environmental problem, there is still a need to make scientific researches' results accessible to the public and bridge the gap between scientific community's achievements and social awareness. We How important is to improve the public awareness about the climate change impacts on the extreme weather events?



## **Roundtable Session 3**

### **Roundtable 1: Michael Probst**

#### **Embedding Machine Learning in Business Processes**

You've identified a good machine learning use case. Now how do you implement it in a business process? What do you expect from software vendors to help embed machine learning into business applications? As the world's largest business application provider, we discuss SAP's approach, give guidance on which cases to focus your resources, and look forward to hearing your experiences.

### **Roundtable 2: Matthias Brändle**

#### **The Case for a Data & Analytics Strategy**

All companies have „Digital Transformation“ with high priorities on their agenda, and current trends in Big Data, BI and Artificial Intelligence create high expectations. Many struggle on their way to become data-driven companies and deliver value from innovative use-cases. Consequently confidence in the own doings in this area can be low and goals and focus are unclear. To deal with these pain points, is there a case for a data & analytics strategy?

### **Roundtable 3: Anys Boukli**

#### **Case Studies**

The objective of this session would be to present scenarios of using Big Data and Analytics in different Industries and public sector.

### **Roundtable 4: Michael Utiger**

#### **Electricity Smart Meter Data**

According to the „Energienstrategie 2050“ the electrical power consumption in almost every Swiss household has to be measured by a Smart Meter as soon as 2028 with a 15 minute data resolution. This additional data harbors create many opportunities and potential for innovative services even outside of the power industry.

# Deep Learning – Hype or Hope

## **Asif Jan - Moderator**

Asif Jan is Head of Data Science at Roche Diagnostics, based in Pleasanton California, USA. He and his team use machine learning and advanced analytics methods to analyze large healthcare databases to quantify impact of diagnostics tests in enabling right treatment decisions and measure clinical and cost outcomes thereof.

## **Michael Dahlweid - Panelist**

Michael Dahlweid is the Chief Technology and Innovation Officer for the Insel Group, the largest Swiss healthcare organization. Previously, Michael was the global chief medical officer for GE Healthcare, CSC Healthcare, and global chief medical officer and head of the Enterprise IT business unit for AGFA.

## **Joachim Buhmann - Panelist**

Joachim M. Buhmann is full Professor for Computer Science at ETH Zurich since October 2003. He heads the Institute for Machine Learning at the Department of Computer Science. Buhmann's research interests cover theory and applications of machine learning and artificial intelligence, as well as a wide range of subjects related to information processing in the life sciences.

## **Hanna Viertio-Oja - Panelist**

Hanna Viertio-Oja is a PhD in technology, theoretical ultra-low-temperature physics, from the Aalto University Helsinki. Her interests and experience involves in the field of innovations in physiological measurements and algorithms. In the recent years her work is focused on data science and artificial intelligence.

## **Matthew Prime - Panelist**

Matthew Prime is a doctor, entrepreneur & academic passionate about the potential for technology and data to transform the delivery of healthcare for the benefit of patients. Previously he worked as a Trauma & Orthopedic Surgeon for 12 years in London at, St Mary's Hospital, the regional trauma centre. Currently he is the Medical Director for Roche Diagnostics Information Solutions (DIS).

## Track 1

15:00 - 15:30

# Stories and Careers

## Stories and Careers of Data Scientists

At this session there will be interviews with three Data Scientists, shedding light from different angles and providing individual insights on one of the coolest profession.

This sub-event focuses on the individuals who, despite picking different career and life paths, are connected by the common denominator Data Science.

This sub-event will mainly serve the audience by providing an entertaining way to inspire the listeners and showcasing the diverse bouquet of career options available in the field of Data Science.

It could complement the conference's technical contributions with a more personal touch and motivate the audience to reflect.

The interviewer / host focusses on the personal level.

**Christian Laux**  
LAUX LAWYERS**Jürgen Schwärzler**  
D ONE Solutions**Internet of Things: A Concept for the Future****Abstract.**

This presentation will focus on Internet of Things (IoT) and what it is that makes IoT a core theme for the future. Digitization and automation of workflows implies that things, devices and processes will be tagged by a variety of means to track them. The result is that data are being generated, extracted from the sphere of those who own the devices or the instruments used in those processes, and then conveyed to central storage facilities of the system operators. There, processing takes place (Big Data, Analytics), and the results of the analytics processes can be reused in further projects. – The workflows that are being outlined during the presentation trigger a number of legal issues. The legal issues can be properly addressed, but should be, too. The presentation will cover the aspects relevant under the GDPR, and ePrivacy regulations.

**Biography.**

Christian Laux, LL.M., is attorney-at-law and partner at LAUX LAWYERS AG. He has extensive experience with technology and its legal implications, and advises on all aspects of IT law. Contracts, outsourcings, and Data related issues are at the core of his practice. Christian combines his experience both as inside counsel as well as his practice as outside counsel with a passion for technology. Christian is board member of several organizations operating at the cutting edge of data, policy and the law.

**The Scientific Method in Tech - A/B Testing as the Driver of Data Driven Product Development****Abstract.**

Every time we conduct a Google Search, browse the Netflix catalog, check our Facebook feeds or call an Uber we are part of multiple experiments. Our interactions with these services shape the decisions on how these services evolve and thanks to large and ever growing user bases experimentation becomes easier for these companies over time, therefore accelerating the product development cycle. In this talk we will look behind the scenes of data driven cultures, explore why Google does not (exclusively) rely on user click data for evaluating search ranking experiments and why Netflix optimizes for a single northstar metric. A/B testing is a simple but effective tool for establishing a causal relationship between product changes and the impact on business metrics, but there is a minefield of errors that can easily invalidate the outcomes.

**Biography.**

Dr. Jürgen Schwärzler worked for the last 10 years as a Data Scientist for three well known Silicon Valley companies supporting software development teams with decision support thorough performance measurement and A/B testing. He holds a PhD in Applied Statistics from University of Vienna and recently relocated from California to Switzerland and has joined D ONE as Senior Consultant.

## Track 4

10:15 - 10:45

**Anna Maria Nowakowska**  
InCube

## Track 5

10:15 - 10:45

**Andreas Gutweniger**  
Detecon

### **Recommender Systems for Mass Customization of Financial Advice**

#### **Abstract.**

Recommender systems suggest new items to users based on their characteristics and previous behavior. Despite the support that they can bring to financial decision making, their application to banking data is an underexplored field. We build recommenders for private and retail banking use cases. The vision is to enhance the quality of financial advice and make it accessible to a wider client base. In the private banking use case, where clients typically invest in multiple securities, we found the Collaborative Filtering approach, based on user-product interactions, to be particularly suitable. In the retail banking use case, where clients typically hold few products, we obtained most promising results with Demographic Recommender Systems using client features. Alongside our findings, we will present a small demo of a retail banking recommender.

#### **Biography.**

Anna Maria Nowakowska leads the Data Analytics team at InCube, focusing on delivering data consulting services within the Swiss financial sector. She holds a Master of Engineering degree in Electronics and Electrical Engineering from the University of Edinburgh and the Chartered Financial Analyst® designation from the CFA Institute. She has gained over 7 years of experience in the software and financial services industries in the UK, US and Switzerland.

### **Will We Arrive on Time? Forecasting Train Delays by Using Data Rather than Assumptions**

#### **Abstract.**

Train punctuality is usually high in Switzerland. When delays happen, railway staff and customers should be informed as soon as possible. Traditionally, delay forecasts are based on theoretical models and various assumptions - stemming back to an era when empirical data was hard to obtain.

puenktlichkeit.ch has started to challenge this approach: by looking for similarities with past situations, it predicts train delays using empirical data that is publicly available. All results are published in real time and can be compared to the official forecasts. The "open data" that is used has many restrictions: level of details and completeness are lower than what the companies possess internally. Nevertheless, in most cases, the empirical approach can predict delays earlier than the elaborated systems of the railway operators. Is data outperforming theory?

#### **Biography.**

Andreas Gutweniger is Senior IT Consultant at Detecon (Switzerland). He holds a master's degree in information systems and a PhD in economics. Andreas has been working in Swiss public transport for 12 years. He had a key role in designing the timetabling applications of SBB. His non-profit web site [www.puenktlichkeit.ch](http://www.puenktlichkeit.ch) is the only public source to compare punctuality across companies. It is regularly used by many experts from the industry.

## Track 2

10:45 - 11:15

### Christian Westermann

PwC

## Track 3

10:45 - 11:15

### Daniel Müller

ETH Zurich

#### Responsible and Trusted Artificial Intelligence

##### Abstract.

Artificial Intelligence represents one of the most significant business opportunity in the coming years. Many companies are investing heavily in AI technologies. But new risks associated with AI become relevant, e.g. the risk of a bias, the risk of explainability or the risk of an AI going rogue. Governments and regulators around the world are beginning to think about the extent with which these risks need to be formally addressed, e.g. the EU or the Financial Stability Board (report on AI and Machine Learning). PwC is involved in many of those discussions.

We will provide an in-depth overview of AI-specific risks, the regulators perspective, show how these risks can be addressed, from a framework and solution point of view, and what companies need to do to be prepared.

##### Biography.

Christian Westermann is leading the Data & Analytics practice for PwC Switzerland – a team of 80 people with hands-on experience in AI, machine learning, deep learning, robotics, NLP, process intelligence and simulation & modelling. In his career he has managed many large-scaled projects in various industries. Prior to working for PwC, Christian was specializing in Space Research, and has been part of teams that built satellite-based instruments for ESA and NASA space missions.

#### Predicting Future Business Performance of Hotels and Restaurants with the Help of Online Ratings

##### Abstract.

Tourism companies such as restaurants and hotels are a crucial part of the economy of many countries, including Switzerland. Therefore, the investigation of factors indicating success or failure of tourism companies is of interest for many stakeholders. In this study, we research the role of online ratings to predict business performance. Applying a random forest model to a large sample of hotels and restaurants, we find a high feature importance of attributes such as number of rooms, occupancy and online rating. We show that information extracted from online reviews, which are publicly available, have a high prediction power in estimating revenue and revenue growth of small and medium sized tourism companies.

##### Biography.

Daniel is a PhD candidate at ETH Zürich and currently works at the Mobiliar Lab for Analytics. He holds a Master degree in Banking and Finance and one in International Management, both from the University of St. Gallen. Daniel has previously worked in investment banking and got interested in data science while investigating data from his own webshop ([www.gesundeprodukte.ch](http://www.gesundeprodukte.ch))

#### Track 4

10:45 - 11:15

**Silvia Quarteroni**  
ELCA

#### Track 5

10:45 - 11:15

**Erik Nygren**  
SBB

### AI-powered Customer Care

#### Abstract.

In this talk, the speaker will describe how conversational agency models defined during the last few decades have been gradually integrated within industrial „chatbot“ solutions. Indeed, while first-generation chatbots (e.g. ELIZA in 1968) were designed with the sole purpose of maintaining a conversation and therefore simply reacted to patterns in the user's utterances, today's virtual assistants are task-oriented and cooperate with users to achieve an information-seeking or transaction goal. Their natural language understanding is achieved through machine learning models that recognize entities in context or analyze utterance syntax. The talk will focus on customer care and related use cases in several Swiss market domains to explain how natural language understanding and dialogue management are approached in industrial solutions. The speaker will also point out some challenges that remain open for this technology.

#### Biography.

Silvia Quarteroni is a senior manager at ELCA. She holds a Ph.D. in Computer Science from the University of York and an M.Sc. in Computer Science from EPFL. Silvia is a specialist in Natural Language Processing and is in charge of ELCA's R&D activities in AI. Previously, she was a senior research fellow working on projects funded by European Commission grants. Her academic background resulted in over 50 peer-reviewed publications.

### The Future of Swiss Railway Dispatching: Deep Learning on a Digital Twin

#### Abstract.

In this session, we will highlight the benefits of using GPU accelerated high performance simulations in combination with deep reinforcement learning.

Deep reinforcement learning has gained a lot of momentum lately with its success in solving various computer games and control problems. Based on these promising results we pursue the approach of optimizing train schedules and train dispatching with deep reinforcement learning. We implemented GPU accelerated high performance train network simulations to allow us to train multiple realizations of the dispatching agent in parallel at super real-time speed and react to the ever-changing topology and traffic situation. The result is that we are able to perform training in a feasible time span and explore novel dispatching and scheduling strategies for current and future railway traffic.

#### Biography.

Erik Nygren holds a M.Sc. in Theoretical Particle Physics and a Ph.D. in Computational Neuroscience. His research focus was on lattice simulations during my physics studies and switched towards neural networks and machine learning during my Ph.D. He worked on learning in with recurrent neural network and currently investigate the possibilities of deep reinforcement learning. His main research focus are applications of deep learning and artificial intelligence. He currently works at the Research and Innovation Lab at Swiss Federal Railways SBB.

## Track 2

11:15 - 11:45

**Asli Yaman**  
**Philipp Thomann**  
D ONE Solutions

## Track 3

11:15 - 11:45

**Fabio Sigrist,**  
**Christoph Hirnschall**  
HSLU, Advanon

### **Automating Insurance Claim Processing: Using NLP Methods to Learn Sparse Spaces**

#### **Abstract.**

The industry standard in insurance to automate claim adjudication is to use Rule Engines with many expert-written. This approach is limited by the increasing complexity of rules and still fails to classify a significant portion of incoming claims. In this talk we describe a new automation process for complex incoming claims using machine learning methods. We discuss the journey we took together with our client: the initial proof of concept, the demonstration of the business case and its value, and the operationalization using R. We show how we used NLP methods, such as word2vec, to learn a sparse space of more than 100'000 features and to define a similarity measure on it. Additionally, we describe our intuitive validation framework for business users to build trust in ML.

#### **Biography.**

Asli received her PhD in theoretical mathematics from University of Southampton in 2003. Afterwards, she worked as a researcher at the Max Planck Institute and Rheinische Friedrich-Wilhelms-Universität in Bonn, Germany, followed by IHES in Paris, France and CRM in Barcelona, Spain. She had been working since 2008 as an associate professor at the University of Marseille, France before she joined D ONE in 2013. Her area of expertise is data science and machine learning.

Philipp received his PhD in Mathematics from the University of Zurich in 2013. Afterwards he served as a postdoctoral researcher at the University of Stuttgart, Germany. As part of his research he worked on scalable machine learning packages and built liquidSVM, a Fast and Versatile SVM Package. His areas of expertise are machine learning, statistics and data mining. Philipp joined D ONE team in 2017.

### **SME Default Prediction Using Novel Data Sources and Machine Learning Techniques**

#### **Abstract.**

In this talk, we show how both novel data sources and a new machine learning technique can be used for predicting defaults of loans made to Swiss small and medium-sized enterprises (SMEs). Advanon is a Swiss fintech startup that operates a platform on which SMEs can obtain loans by pre-financing open invoices. We highlight some of the practical challenges when applying machine learning to the task of default prediction and present possible solutions. In particular, we introduce a novel model, called the Grabit model, which is obtained by applying gradient tree boosting to the so-called Tobit model. We obtain a large improvement in predictive performance compared to other state-of-the-art approaches. See Sigrist and Hirnschall (2017), <https://arxiv.org/abs/1711.08695>, for more information.

#### **Biography.**

Fabio Sigrist is a lecturer at the Lucerne University of Applied Science and Arts (HSLU) and at ETH Zurich. His research and project interests include data science and applied statistics. After obtaining a PhD in statistics from ETH, he has worked as risk management consultant in the financial sector. He has lead several data science projects with Swiss and European companies.

Christoph Hirnschall is Lead Credit Analytics at Advanon. Before joining Advanon, he was a research assistant in machine learning at ETH Zurich, where he also obtained an MSc in Management, Technology and Economics. He has experience in applying machine learning at the Bosch Research and Technology Center and has worked as a consultant at Contrast Management Consulting.



## Track 4

11:15 - 11:45

# General Assembly SGAICO

## The Official General Assembly of the Swiss Group for Artificial Intelligence and Cognitive Science

Members of the Swiss Group on Artificial Intelligence and Cognitive Science of the Swiss Informatics Society gather to discuss options on how to further grow and strengthen the AI community in Switzerland.

In 2012, SGAICO has been successfully revitalized. Since then, a lively community around AI and Cognitive Science has been built that maintains an informative web page ([sgaico.swissinformatics.org](http://sgaico.swissinformatics.org)) and organizes many interesting events in Switzerland. Highlights last year were the AI in Industry track at SDS 2017, the very successful cognitive services roundtable series and the international AI in Finance summit at the Baur Au Lac. The community is financially very stable and reaches nearly 300 interested parties with its newsletters.

In this annual meeting, we will discuss potential options on the future of SGAICO and possible cooperation models.

## Track 5

11:15 - 11:45

# Gabriel Krummenacher, Beat Wettstein Zühlke

## When Will My Train Run? Predicting the Duration of Disruptions in the SBB Railway Network with Recurrent Neural Networks

### Abstract.

There occur 300 – 400 disruptions per day in the SBB railway network. Many of these disruptions lead to train delays.

SBB uses an application to coordinate the resolution of a disruption to the network, where various stakeholders involved in resolving the disruption communicate with text messages about the state of the disruption and send teams of workers on site to fix the issue.

We developed and trained different Machine Learning models that can forecast the disruption duration based on the un-structured text messages obtained during the resolution of a disruption.

We leverage LSTMs in combination with word level features to encode the stream of text messages in the model. This allows us to train an end-to-end predictor that can estimate the disruption duration each time a new message arrives.

### Biography.

Dr. Gabriel Krummenacher is a Lead Data Scientist at Zühlke Engineering AG. He holds a PhD from the Institute for Machine Learning at ETH and a M.Sc. in computer science from ETH.

Beat Wettstein, lic.phil.nat Senior Architect at SBB is working as a data scientist and Software Architect at SBB since 2001.

## Track 2

14:00 - 14:30

**Ryan Krebs**  
**Matt von Rohr**  
Teradata

## Track 3

14:00 - 14:30

**Philipp Schütz**  
HSLU

### AnalyticsOps - DevOps for Data Science

#### Abstract.

Machine Learning and statistical models should be considered their own pieces of software, where the source code is largely unknown and limited debugging capabilities exist. Despite these restrictions, however, these models are finding themselves as standard elements in the data scientist's toolkit and with greater emphasis on taking a more dominant role in production systems. But how do we scale and operationalize these models into a production environment after a successful proof of concept was conducted?

#### Biography.

Ryan is the Data Science Practice Area Director for the UK, Ireland, Germany and Switzerland. After receiving his clinical doctorate in optometry, Ryan practiced for five years as a clinical optometrist in the military. Shortly after, he returned to school to earn an MBA and Masters in Biomedical Engineering. His research focused on biomedical imaging technologies, laser optics, and digital signal processing. Before joining Teradata, Ryan worked for Hospital Corporation of America in the US health care industry both as an individual contributor and analytics manager for business intelligence and data science projects.

Matt is a software engineer at heart with a strong passion and interest in machine learning and data science. He used to be ranked amongst the top 100 data scientists on Kaggle.com, the world's largest data science community with over 70'000 members. He has a great interest and pleasure in building intelligent software solutions, that solve real business problems. Matt currently works as a Principal Consultant at Teradata.

### Valorisation of Smart Grid Monitoring Data

#### Abstract.

Smart grids monitor connected appliances continuously mostly for accounting. A promising application is the pooling of heat pumps to provide ancillary services. The save operation necessitates the remote detection of the heat pump's operation state from the power time series. In our contribution, two classification approaches are presented and validated against real-world data: First, a support vector machines algorithm attributes states to individual segments of heat pump activity and achieves accuracies above 98% for real-world data with a training set of only 50 segments. Second, a deep neural network algorithm classifies short sequences within individual segments of heat pump activity and achieves classification accuracies above 90%. Eventually, an outlook towards remote diagnosis of a heat pump, future services in energy efficiency consulting and predictive maintenance is provided.

#### Biography.

Trained as a theoretical physicist at ETH, Philipp Schütz started working in data science during his PhD Thesis in theoretical biophysics at the University of Zurich working on the interpretation of single-molecule experiments. In his postdoctoral stay at EMPA, he switched the field towards the analysis of computed tomography images. In 2014, Philipp became a lecturer at HSLU and switched to the application of data science in the Energy context.

**Naftali Tishby**

Hebrew University of Jerusalem

**Pantelis Vlachas**

ETH Zurich

**Information Theory of Deep Learning: What Do the Layers of Deep Neural Networks Represent?****Abstract.**

I will present a novel comprehensive theory of large scale learning with Deep Neural Networks, based on the correspondence between Deep Learning and the Information Bottleneck framework. The new theory has the following components: (1) rethinking Learning theory; I will prove a new generalization bound, the input-compression bound, which shows that compression of the representation of input variable is far more important for good generalization than the dimension of the network hypothesis class, an ill defined notion for deep learning. (2) I will prove that for large scale Deep Neural Networks the mutual information on the input and the output variables, for the last hidden layer, provide a complete characterization of the sample complexity and accuracy of the network. This makes the information Bottleneck bound for the problem as the optimal trade-off between sample complexity and accuracy with ANY learning algorithm. (3) I will show how Stochastic Gradient Descent, as used in Deep Learning, achieves this optimal bound. In that sense, Deep Learning is a method for solving the Information Bottleneck problem for large scale supervised learning problems. The theory provide a new computational understating of the benefit of the hidden layers, and gives concrete predictions for the structure of the layers of Deep Neural Networks and their design principles. These turn out to depend solely on the joint distribution of the input and output and on the sample size.

**Biography.**

Naftali Tishby is a professor of Computer Science, and the incumbent of the Ruth and Stan Flinkman Chair for Brain Research at the Edmond and Lily Safra Center for Brain Science at the Hebrew University of Jerusalem.

**Data-Driven Forecasting of High-Dimensional Time Series with Long-Short Term Memory Networks****Abstract.**

We introduce a data-driven forecasting method for high dimensional, chaotic systems coupling Long-Short Term Memory (LSTM) recurrent neural networks (RNNs) with a mean stochastic model (MSM). The method exploits the LSTM as a non-linear attractor approximator that learns the local reduced space dynamics and performs accurate short-term predictions and employs the MSM to ensure that statistics of the attractor are captured in the long term. We benchmark the proposed method against Gaussian processes (GPs) in time series obtained from the Lorenz 96 system, the Kuramoto-Sivashinsky equation and a prototype climate model. The proposed method outperforms GPs in short-term forecasting accuracy in all applications considered. This novel hybrid method is fully data-driven and extends the forecasting capabilities of LSTM networks for chaotic dynamical systems.

**Biography.**

Pantelis Vlachas is a PhD student in computational science lab (CSE-lab) at ETH Zurich under the supervision of Prof. Petros Koumoutsakos. He holds a M.Sc. and a Bachelor's degree in electrical engineering from the Technical University in Munich (TUM). His main research focus is on machine learning and uncertainty quantification as applied to high dimensional dynamical systems.

## Track 2

14:30 - 15:00

### Marc Schöni

Microsoft

## Track 3

14:30 - 15:00

### Christian Dietz

KNIME

## 10 Learnings from the Trenches

### Abstract.

In this talk we will share the 10 key findings we have distilled over the last years of executing machine learning & data science projects to help the audience in avoiding some of the common pitfalls. The session will be divided into the lessons learned before, during and after the actual project implementation. Among other topics, we will cover the importance of minimizing risks for a company's first ever data science project and why operationalization is key to sustainable project success.

### Biography.

Marc Schöni is a Technical Solution Professional for Advanced Analytics & Artificial Intelligence at Microsoft in Switzerland – and also a hopeless data aficionado. Working with large and medium sized customers across the country, he supports them in strategic evaluations of AI & ML platforms and applications, helps translate business problems into data science projects and delivers POC/MVP type of projects for these customers on a daily basis.

## Automated AI/ML: What Can (and Can't) Be Automated in Data Science

### Abstract.

I will take a closer look at what's new (and what's not so new) in automated machine learning or driverless AI and how this affects the Data Science process. I will then dive deeper into some of the underlying techniques such as active learning and parameter optimization and how modern computational abilities put automation of some - but definitely not all - aspects of Data Science within reach.

### Biography.

Christian holds a Diploma in Business Informatics from the Verwaltungs- und Wirtschaftsakademie Stuttgart and received a Master degree in Computer Science from the University of Konstanz. After working as a research programmer at the University of Konstanz, where he developed frameworks and libraries in the fields of bioimage analysis and machine learning, Christian started working as a software engineer at KNIME.

He's now focussing on the development of new functionalities and extensions for KNIME Analytics Platform. Some of his recent projects include KNIME Deep Learning, KNIME H2O Machine Learning and KNIME Image Processing.

**Naftali Tishby**

Hebrew University of Jerusalem

**Pierre Mandrin**

IMSD

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**Goodness of Fit Assessment by Chi-square Decomposition and Its Application for Critical Decision Making****Abstract.**

Selecting the correct model to fit data, especially with impact on critical decisions, requires careful control of the goodness of fit assessment to guarantee a high reliability. One example is the modelling of radioactive contamination as a function of geographic location, which is relevant for radiation protection decisions and missions of mobile incident monitoring. IMSD has developed such a tool recently on behalf of the German radiation protection service.

In this talk, we present the goodness of fit assessment technique of our tool, allowing a) to visualize and assess the chi-squared via its decomposition by degrees of freedom and b) to resolve any weaknesses of chi-squared terms via model deformations, linear-logarithmic transformations and other techniques in compatibility with theoretical constraints. We demonstrate our technique for the example of radioactive contamination.

**Biography.**

Pierre A. Mandrin (Ph.D. in 1999 in physics) is a senior data scientist at IMSD (IMSD is a young service provider active in data analytics, statistics, Smart Data and predictive maintenance). P. Mandrin has initiated, conducted and published numerous projects in the fields of experimental, numerical and theoretical physics. In his current projects, he is developing tools for automatic reports of surveys, automated data pre-analysis, and optimisations for radiation protection.

## Track 2

15:00 - 15:30

### Daniel Fasel

Scigility

## Track 3

15:00 - 15:30

### Valérie Ameal

SAS

#### Modern Information Platforms – How Digitalization Can Be Managed in Enterprises

##### Abstract.

Big data, AI and machine learning are becoming part of business as usual for many organisations in the public and private sectors. This is driven by the continued growth and availability of data, including data from new sources such as the Internet of Things (IoT), the development of tools to manage and analyse it, and growing awareness of the opportunities it creates for business benefits and insights.

This talk, will talk how we approach Big Data project in order to address the following anti-patterns:

- Data Governance and Compliance to new Extraterritorial regulations (GDPR)
- Dark Data (Data stored and Never Used)
- Ever growing need of Computing Power and Storage
- Technology Replacement
- Architect for On-Premise and Cloud
- Adoption of Continuous Integration and Continuous Delivery
- Control Costs of Data growth and computing

The presentation will introduce this modern information platform concept, explain the layering of technologies, the process from a data lab to an industrialized application and what are the key benefits of having automatized platform operations.

##### Biography.

Dr. Daniel Fasel is founder and CEO of Scigility. Scigility provides solutions for large-scale information systems and Big Data technologies for large Swiss and European companies. Its expert team has strong academic and practical knowledge on Big Data technologies with experience of more than 10 years.

#### Data Science in Action - 2 Use Cases

##### Abstract.

Data Science is now widely used in the business world to predict customer churn, identify fraudsters, provide product recommendations or forecast product demand.

However, with the right data and the right methodology, less traditional use cases can be addressed in the enterprise.

Two examples will be presented in this paper.

- Using Survival Analysis to understand employee retention and assess how long my employees will stay in my company
- Understand why Forecast quality differs over time and the impact of judgmental corrections of statistical forecasts

##### Biography.

Valérie Ameal has been working for 14 years in the analytic software industry and is a committee member of the Swiss Association for Analytics. She joined SAS Switzerland in 2013 as a sale support consultant where she focuses on the banking industry and is involved in Fraud and Anti-Money Laundering projects.

Valérie graduated from the Catholic University of Lille (France) as a Computer Science Engineer and holds a M.B.A. from the University of Ottawa (Canada).

**Naftali Tishby**

Hebrew University of Jerusalem

**Diego Kuonen**

Statoo Consulting &amp; University of Geneva

**Information Theory of Deep Learning: What Do the Layers of Deep Neural Networks Represent?****Abstract.**

I will present a novel comprehensive theory of large scale learning with Deep Neural Networks, based on the correspondence between Deep Learning and the Information Bottleneck framework. The new theory has the following components: (1) rethinking Learning theory; I will prove a new generalization bound, the input-compression bound, which shows that compression of the representation of input variable is far more important for good generalization than the dimension of the network hypothesis class, an ill defined notion for deep learning. (2) I will prove that for large scale Deep Neural Networks the mutual information on the input and the output variables, for the last hidden layer, provide a complete characterization of the sample complexity and accuracy of the network. This makes the information Bottleneck bound for the problem as the optimal trade-off between sample complexity and accuracy with ANY learning algorithm. (3) I will show how Stochastic Gradient Descent, as used in Deep Learning, achieves this optimal bound. In that sense, Deep Learning is a method for solving the Information Bottleneck problem for large scale supervised learning problems. The theory provide a new computational understating of the benefit of the hidden layers, and gives concrete predictions for the structure of the layers of Deep Neural Networks and their design principles. These turn out to depend solely on the joint distribution of the input and output and on the sample size.

**Biography.**

Naftali Tishby is a professor of Computer Science, and the incumbent of the Ruth and Stan Flinkman Chair for Brain Research at the Edmond and Lily Safra Center for Brain Science at the Hebrew University of Jerusalem.

**Data as the Fuel and Analytics as the Engine of the Digital Transformation****Abstract.**

The digital revolution is truly underway: terms such as big data, cloud, internet of things, internet of everything, the fourth industrial revolution, smart cities and data economy are no longer just concepts - they are changing our lives in new and exciting ways. The digital transformation started with a first wave of digitalisation, which resulted in the (big) data revolution. But now a second wave of digitalisation is needed to enable learning from (big) data and to generate increased value for both business and society as a whole.

This presentation discusses how analytics, the science of „learning from data“ or of „making sense out of data“, becomes the engine of a new wave of the digital transformation, and illustrates that the biggest challenge therein is the veracity of the „data pedigree“, the trustworthiness of the data, including the reliability, capability, validity, and related quality of the data. This presentation looks at demystifying concepts and terms, illustrates the connection between data science and statistics, and highlights some challenges, opportunities and principles for success.

**Biography.**

Prof. Dr. Diego Kuonen, CStat PStat CSci, founded Statoo Consulting in 2001 and regularly consults on applying statistical thinking to big data analytics for businesses and government bodies across Europe.

In addition, he is currently Professor of Data Science at the Geneva School of Economics and Management (GSEM) at the University of Geneva, Founding Director of GSEM's Master of Science in Business Analytics program, and Principal Scientific and Strategic Big Data Analytics Advisor and Consultant for the Directorate and the Board of Management of the Swiss Federal Statistical Office in Neuchâtel.

## DATA DRIVEN VALUE CREATION

**INSIGHTS FROM DATA: ALWAYS NEEDED.**

SOMETIMES SWEET. SOMETIMES BITTER.  
A BIT LIKE CHOCOLATE.

Business Science: the process of gaining insights from data

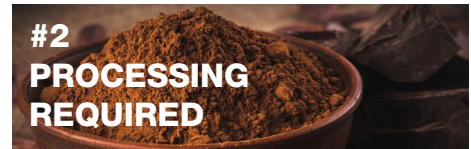


### #1 QUALITY MATTERS.

Just like chocolate, business science is all about carefully selecting your raw materials. But how do you do that with data?



The 6C framework is tried and tested:  
**Clean – Complete – Current – Consistent – Collaborative – Compliant**



### #2 PROCESSING REQUIRED

Success lies not in technology, but in well-conceived and consistent data processing.

What data needs to be processed? How are the important elements defined? What calculations are required?



**A Kingdom for a Big Data Idea** is a tried-and-tested framework. It suggests three possible ways to answer these questions:

1. Through processes
2. Through pain points
3. Through interactive, data-based brainstorming sessions





### #3 EXPERTISE IS THE KEY TO SUCCESS

Just as with chocolate, business science offers a variety of pathways to success. 80% of managers say that data is important, but most don't know how to implement these kinds of projects successfully.



**Value & Impact – Organisation & Culture – Data – Technology** is a tried-and- tested framework.

Of course, it puts data front and centre. Quality is important and this can only be guaranteed with processes.

Stumbling blocks

1. No clear idea of what value needs to be derived from the data.
2. Failure to understand that both workplace culture and tasks change through working with data. Change provokes fear and resistance, both of which need to be managed.

In the end, you need technology. High-powered technology.

### #4 FROM INSIGHT TO ACTION

Appetite grows when food looks nice. And it is exactly the same with data.

Knowledge only works when it is understood. And it is only understood when there is clarity and transparency.

When we see a beautiful praline in front of us we know just what to do with it! Likewise, when we possess clearly-defined knowledge, we know exactly what action to take.

**The Key Success Factors for Business Science on one page. Experience at work:**

**D ONE**  
WE MAKE SENSE.

DATA SCIENCE & ANALYTICS | DATA MANAGEMENT  
VISUALIZATION & DATA EXPERIENCE

D ONE Solutions AG, Sihlfeldstrasse 58, 8003 Zürich  
d1-solutions.com

08:15	Welcome		
	Unified		
08:45	Welco Swiss Alliance for		
09:00	Keynote: „7 Principles of Crea		
09:45	Coff		
	Track 1 - Interactive (Sopra Grande)	Track 2 - Applications & Ethics (Sopra 1)	Tr (
10:15	<b>Roundtable Discussion Session 1</b> <ul style="list-style-type: none"> <li>Bringing Efficiency, Consistency and Assurance in Creation of anonymized Production Datasets</li> <li>How Can We Run a Successful Artificial Intelligence Project?</li> <li>Deep Reinforcement Learning Doesn't Work Yet!?</li> <li>Visualizing and Communicating Research Results Interactively</li> </ul>	Invited talk: „Internet of Things: A Concept for the Future“, Christian Laux	„The Scientific Testing as the ven Product Schwärzler
10:45	<b>Roundtable Discussion Session 2</b> <ul style="list-style-type: none"> <li>Token-based Management of Personal Data</li> <li>Is It Possible for SMEs to Keep Up with the Advances in Data Science and AI?</li> <li>Lowering the Barrier to Efficient Large-scale Distributed Computing</li> <li>Using Big Data Sets to Combat Climate Change Effects</li> </ul>	„Responsible and Trusted Artificial Intelligence“, Christian Westermann	„Predicting F ce of Hotels Help of Onlin
11:15	<b>Roundtable Discussion Session 3</b> <ul style="list-style-type: none"> <li>Embedding Machine Learning in Business Processes</li> <li>The Case for a Data &amp; Analytics Strategy</li> <li>Case Studies</li> <li>Electricity Smart Meter Data</li> </ul>	„Automating Insurance Claim Processing: Using NLP Methods to Learn Sparse Spaces“, Asli Yaman & Philipp Thomann	„SME Default Data Sources Techniques“, Hirnschall
11:45	Keynote: „The Deep Learning Revolution: What Does It Te		
12:30	Lun		
14:00	„Panel Discussion (healthcare) - Deep Learning- Hype or Hope“, Asif Jan, Matthew Prime, Michael Dahlweid, Joachim Buhmann & Hanna Viertio-Oja	„AnalyticsOps - DevOps for Data Science“, Ryan Krebs & Matt von Rohr	„Valorisation Data“, Philipp
14:30		„10 Learnings from the Trenches“, Marc Schöni	„Automated A Can't) be Aut Christian Die
15:00	Stories and Careers of Data Scientists	„Modern Information Platforms – How Digitalization Can Be Managed in Enterprises“, Daniel Fasel	„Data Science Valérie Amee
15:30	Coff		
	Unified		
16:00	Keynote: „Why AI Needs Even More		
16:45	Panel Discussion: „The Impact We Want AI to Have on Society“, Matthias Kaiserswert		
17:30	Closing		

Welcome Reception		
Featured Track (Arena)		
Welcome Address for Data-Intensive Services		
Creating a Digital Society“, Taavi Kotka		
Coffee Break		
Track 3 - Analytics (Bellavista 2)	Track 4 - AI in Industry (Bellavista 5)	Track 5 - Statistics (Arena)
Scientific Method in Tech - AIB as the Driver of Data Driven Product Development“, Jürgen Breda	„Recommender Systems for Mass Customization of Financial Advice“, Anna Maria Nowakowska	„Will We Arrive on Time? Forecasting Train Delays by Using Data Rather than Assumptions“, Andreas Gutweniger
Improving Future Business Performance of Hotels and Restaurants with the Help of Online Ratings“, Daniel Müller	„AI-powered Customer Care“, Silvia Quarteroni	„The Future of Swiss Railway Dispatching: Deep Learning on a Digital Twin“, Erik Nygren
Default Prediction Using Novel Features and Machine Learning Algorithms“, Fabio Sigrist & Christoph Breda	General Assembly of SGAICO	„When Will My Train Run? Predicting the Duration of Disruptions in the SBB Railway Network with Recurrent Neural Networks“, Gabriel Krummenacher & Beat Wettstein
Tell Us About Our Understanding of Intelligence?“, Naftali Tishby		
Lunch Break		
Application of Smart Grid Monitoring Systems“, Philipp Schütz	Invited talk: „Information Theory of Deep Learning: What Do the Layers of Deep Neural Networks Represent?“, Naftali Tishby	„Data-Driven Forecasting of High-Dimensional Time Series with Long-Short Term Memory Networks“, Pantelis Vlachas
Deep AI/ML: What Can (and Cannot) be Automated in Data Science“, Ralf Dietz		„Goodness of Fit Assessment by Chi-square Decomposition and Its Application for Critical Decision Making“, Pierre Mandrin
Intelligence in Action - 2 Use Cases“, Michael Neel		Invited talk: „Data as the Fuel and Analytics as the Engine of the Digital Transformation: Demystification, Challenges, Opportunities and Principles for Success“, Diego Kuonen
Coffee Break		
Featured Track (Arena)		
From Data Science, and Vice Versa“, Lisa Amini		
Summary, Abraham Bernstein, Joachim Buhmann, Min Li Marti, Rudolf Minsch & Sabine Susstrunk		
Closing and Apéro		



Microsoft Switzerland is a subsidiary of Microsoft Corporation (Redmond USA). Since its establishment in 1989, the subsidiary has developed into a typical Swiss SMB with 620 employees. Microsoft Switzerland is closely networked with the country's economic and political institutions and maintains an active social dialogue on the topics of innovation, security and education. The partner network comprises 6,000 local business partners and 14,000 certified product and solution specialists nationwide. Microsoft Switzerland has its headquarters in Wallisellen near Zurich. Further offices are located in Wollishofen, Berne and Geneva. The management is held by Marianne Janik, Country Manager of Microsoft Switzerland.

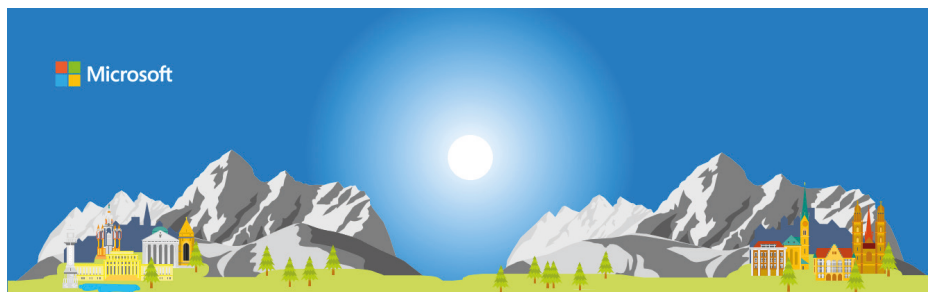
Microsoft is the world's leading manufacturer of standard software, services and solutions. We help people and companies from all industries and of all sizes to fully realize their potential. Security, reliability, innovation and integration, as well as openness and interoperability, are the main focus when developing all Microsoft products and business solutions. Though our own platform as well as our ecosystems of partners and start-ups we democratize access to advanced technology ranging from leading business productivity solutions, artificial intelligence, blockchain as well as augmented & virtual reality to quantum computing.

**Microsoft's mission is to empower every person and every organization on the planet to achieve more.**

We build agile platforms and services so others can innovate, build their own technology, and create new solutions that make things happen. This platform approach has always been the cornerstone of Microsoft's strategy to deliver technology in ways that help our customers succeed with the help of our partners.

Digital transformation represents the application of Microsoft's three ambitions – create more personal computing, reinvent productivity and business processes, and build the intelligent cloud platform – for organizations around the world. Our ambitions guide both our product innovation and our unique approach to helping you along your transformation journey—ultimately changing the way you engage with customers, empower employees, optimize operations and transform your products to create better customer outcomes.

We are convinced that the center of knowledge in Switzerland can only ensure and expand upon its success for the long-term if more modern technologies are used efficiently and intelligently to enable companies of all sizes to shape their very own "digital transformation". Microsoft Switzerland and its partner network are working on enabling and supporting Swiss entities to embrace their digital future.

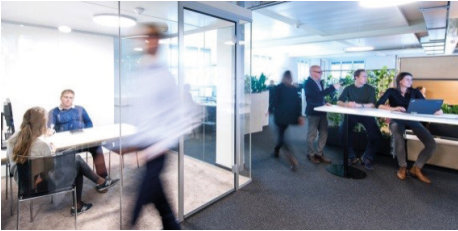


### Microsoft Cloud Services in **Swiss Datacenters!**

Microsoft plans to offer enterprise cloud services for businesses, government, and NGOs from datacenter locations in the cantons of **Geneva and Zurich**. Microsoft can thereby provide data residency in Switzerland to support Swiss companies and institutions, including the financial services industry, in the next steps of their digital transformation. The Microsoft Cloud – comprising Microsoft Azure, Office 365 and Dynamics 365 – from Swiss datacenters is expected to be initially **available in 2019**.

Microsoft's global cloud services are based on the principles of security, compliance, protection of privacy, as well as transparency. The option to store data across cloud regions located in the cantons of Geneva and Zurich adds a new layer of control and will help companies and institutions comply with regulatory requirements. The cloud services including Azure, Office 365 and Dynamics 365 delivered from Switzerland are therefore especially interesting for Swiss companies and organizations handling sensitive data, such as the finance or health sector, the public sector, and the robust NGO sector in Switzerland. The new services offered from Switzerland will provide the same high standards regarding security, service and quality that apply to all of Microsoft's cloud services.

**Learn more** <https://aka.ms/SwissDC>



**MBI**  
Ein **M** analytischer.

## Migros Business Intelligence (MBI)

Our performance mandate is to connect and process various internal and external data sources (transaction data, customer data, market data, online data ...) and generate insights to support all business divisions of the Migros group in strategic, tactical and operational questions.

To fulfill this mandate, we develop automated and scalable analytics solutions based on machine learning to take advantage of all the opportunities coming along with the continuing digitisation of Migros businesses.

## Data Science

As specialists within MBI, data scientists take a wide variety of roles, depending on the project setup and the challenge at hand. From acting as a consultant or sparring partner in analytical projects to implementing and operating prototypes of new machine learning pipelines – we cover the whole range. In our daily work, we collaborate with other teams within MBI (such as Web-Analytics) as well as colleagues from other departments at Migros (such as Marketing or Logistics). In addition, we connect with external partners in the private sector and academia to always remain on par with state of the art solutions.

## Technologies

In addition to powerful commercially available infrastructure and software we make use of the vast possibilities of open source projects such as Apache Hadoop and Spark and the many data science libraries available in Python and R. Thanks to the many technologies available, we can choose the tech-stack best suited to tackle the challenge.



# MIGROS

## Overview

With sales of CHF 28.0 billion (2017), the Migros Group is Switzerland's largest retailer, and with over 100 000 employees, it is also Switzerland's largest private employer. Migros is owned by its more than 2 million cooperative members, organised into ten regional cooperatives. These cooperatives operate the core business of Migros, retailing. Migros also owns 30 industrial companies, various commercial, travel and logistics enterprises, as well as Migros Bank. Migros is committed, willingly and with conviction, to social and cultural issues. Its primary goal is to improve the quality of life of all of its customers.

## Migros as employer

The success of the Migros Group is based on the knowledge and skills of its employees. Women and men from 155 nations are committed every day to offering our customers products and services providing the best price-performance ratio. As the largest private employer in Switzerland, Migros also bears a special social responsibility which it fulfils with above average social benefits, secure workplaces and a working environment that is fair and characterised by respect.

## Opportunities

Find out more about the hundreds of open positions in more than 60 businesses of the Migros Group!

<https://migros-gruppe.jobs>





Data are the currency of the digital economy – capital just waiting to be put to work. Smart organisations are realising that they could be putting this capital to much more profitable use. At PwC, data are at the heart of everything we do. We have a wealth of experience in all data-related disciplines from collection, cleansing and management to building analytical algorithms and visualisation tools. We draw on this expertise to help you harness

the real power of data by creating actionable insight: information you can act upon to transform your organisation.

### How do we approach data and analytics?

At PwC, we believe that there are three key components to effective data and analytics:

- **Innovation Lab:** helping organisations accelerate their data analytics innovation
- **Business Solutions:** helping organisations solve business problems with our data analytics applications
- **Strategy through Execution:** helping organisations develop and implement the right data analytics strategy

All three components of our approach are underpinned by PwC's own industry expertise and experience. We develop, try, test and implement various business solutions for our clients and for PwC, as well as delivering end-to-end data analytics transformation, from developing the right strategy through to its implementation. In Switzerland we're PwC's centre of excellence for machine learning, artificial intelligence, optimisation, simulation and modelling. We have alliances with Google, the Fraunhofer Institute and other universities, and also work with a number of strategic delivery partners. We offer complex descriptive, predictive and prescriptive analytics, and build applications used by PwC territories globally. And we leverage secure, scalable data analytics managed services from our solution centres across the world.

Reach out to our team of analytics experts:

Christian Westermann, Partner and Leader Data & Analytics, +41 58 792 27 97  
christian.westermann@ch.pwc.com

Jörg Gerigk, AI Innovation, +41 58 792 27 19  
joerg.gerigk@ch.pwc.com

Christian Spindler, IoT & Robotics, +41 58 792 23 11  
christian.spindler@ch.pwc.com



At PwC, our purpose is to build trust in society and solve important problems. We're a network of firms in 158 countries with more than 236,000 people who are committed to delivering quality in assurance, advisory, tax & legal and Digital Services. Within PwC Switzerland more than 3,200 employees and partners in 14 locations in Switzerland and one in the Principality of Liechtenstein help to create the value organisations and individuals are looking for.

PwC Digital Services in Switzerland is part of the worldwide community of experts dedicated to helping you face digital disruption and also to thrive on it. Our integrated digital solutions span innovation and strategy through to execution and include trust at every step along the way. We combine multi-disciplinary capabilities in digital strategy, transformation, user experience and design, cybersecurity as well as advanced analytics to help clients with all aspects of their digital transformation.

PwC's analytics capability is built on a foundation of smart people, a smart approach and smart technology.





SAP plays a central role in the current technical revolution. As the market leader in enterprise software, SAP helps organizations minimize the harmful effects of complexity, create new opportunities for innovation and growth, and succeed in competition.

SAP Switzerland, headquartered in Biel, was founded in 1984 as a legally independent subsidiary of SAP SE. SAP Switzerland's business focus is on sales, consulting, training, and marketing for SAP SE's product portfolio in Switzerland.

Our mission: to help companies of all sizes and industries achieve more. Our vision: to improve global processes in the economy.

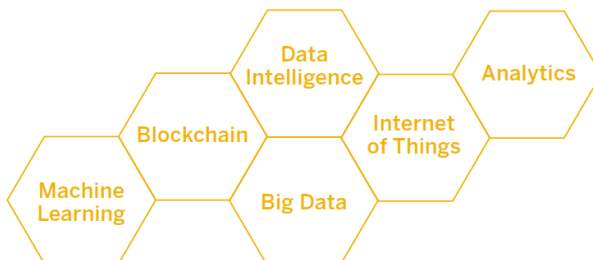
## Introducing the SAP Leonardo Digital Innovation System

Never before have there been so many promising breakthrough technologies available — and so many businesses ready to capitalize on them. From Machine Learning to Blockchain, from Cloud to the Internet of Things (IoT), smart devices, Analytics, and more, companies are eager to run smarter and take advantage of the new business possibilities they offer. Already a leader in enterprise applications, we have now developed the world's only digital innovation system that integrates today's transformational technologies — so you can innovate at scale to confidently redefine your business. Meet SAP Leonardo.

## What is SAP Leonardo?

SAP Leonardo is a holistic digital innovation system that seamlessly integrates future-facing technologies and capabilities into the SAP Cloud Platform, using our Design Thinking Services. This powerful portfolio enables you to rapidly innovate, scale new models, and continually redefine your business.

**Design Thinking Services: SAP Leonardo Technologies**



**SAP Cloud Platform:**

Microservices | Open APIs | Flexible Runtimes | Integration

### Machine Learning:

Machine learning uses sophisticated algorithms to “learn” from massive volumes of Big Data. The more data the algorithms can access, the more they can learn. Real-world machine learning examples are everywhere. Think of personalized product recommendations on Amazon, facial recognition on Facebook, or fastest route suggestions in Google Maps.

### The benefits of machine learning in business

**Faster decisions:** Machine learning algorithms can prioritize and automate decision making. They can also flag opportunities and smart actions that should be taken immediately – so you can achieve the best results.

**Adaptability:** Artificial intelligence doesn’t just look at historical data. It can process real-time inputs – so you can adjust on the fly. Think of cars that can automatically stop before rear-ending another vehicle.

**Algorithmic business:** An “algorithmic business” uses advanced machine learning algorithms to achieve a high level of automation. Making the shift can pave the way for innovative new business models, products, and services.

**Deeper insights:** Machine learning can analyze big, complex, and streaming data, and find insights – including predictive insights – that are beyond human capabilities. It can then trigger actions based on those insights.

**Efficiency:** With smart, machine learning-supported business processes, you can dramatically improve efficiency. Plan and forecast accurately, automate tasks, reduce costs, and even eliminate human error.

**Better outcomes:** From triggering smart actions based on new opportunities and risks, to accurately predicting the results of a decision before it is made – machine learning can help you drive better business outcomes.

### SAP Leonardo Machine Learning Foundation

Create, run, consume, and maintain machine self-learning apps with ease by using algorithms that require no data-science skills. The foundation connects developers, partners, and customers to machine learning technology through SAP Cloud Platform. With our latest release, we’ve expanded the set of capabilities – making it even simpler, and giving you more flexibility, to integrate AI into your business.

- Cloud deployment
- Ready to use services
- Ability to train out-of-the-box algorithms with your data
- Integration with Google TensorFlow models

**Learn more:** <https://www.sap.com/products/leonardo/machine-learning.html>



Since its founding in 1968, ELCA has continually grown. Today, it is one of the biggest independent Swiss full-service providers for business and technology solutions, and a leader in the fields of IT business consulting, software development and maintenance, and IT systems integration. The privately owned company, with more than 900 experts, has branches in Lausanne, Zurich, Geneva, Berne, Basel, Paris, Madrid, London, Granada (nearshore development) and Ho Chi Minh City (offshore development), all operating according to a common process framework.

ELCA develops innovative, custom-designed and high-performing business and technology solutions for a broad number of industries and customers. The solutions reduce complexity and costs, simplify the organization, and increase innovation cycles, improve business outcome and customer satisfaction. ELCA can develop individual software solutions as well as implement standard and open source technologies. 50 years of experience and a proven agile project and software development methodology enable ELCA to deliver projects successfully, including on a fixed-price basis, offering customers a high level of certainty in their budget and time planning.

ELCA puts great emphasis on identifying and recruiting top talents from leading Swiss and European universities. ELCA thoroughly trains new hires on its specific methodologies and approaches. ELCA's working methods are regularly reviewed with regard to quality assurance and the company is ISO 9001 certified. The company's development center in Vietnam, successfully in place for more than 15 years, has been under Swiss leadership from the beginning. The offshore branch has already attained Level 3 of the CMMI evaluation several times and offers ELCA and its clients the capacity to scale capabilities quickly and efficiently.

**[www.elca.ch](http://www.elca.ch)**



HCL Technologies helps global enterprises reimagine their businesses for the digital age. Through innovative technology solutions built around Analytics, Digital, IoT, Cloud, Automation, Cybersecurity, Infrastructure Management and Engineering Services, amongst others, we solve complex business problems for our clients. We are a 'next-generation' technology firm, driven by a unique Mode 1-2-3 strategy that not only acts as our roadmap for the future, but also a powerful model for any enterprise looking to thrive in this age of disruption.

Since our inception in 1999, we've charted a compelling growth story. Over the years our customer satisfaction scores have gone up every year, revenues have more than tripled and profits more than quadrupled. Very recently, we were recognized as one of the fastest growing IT services brands globally, by the 2017 Brand Finance study of global 500 Brands. Our robust business performance has been a result of our unique 'Relationship Beyond the Contract' engagement model, and our 'Employees First, Customer Second' philosophy has inverted the organizational pyramid and created an ecosystem of innovation, with employees proactively generating solutions for our clients. This culture of idea-driven entrepreneurship is called Ideapreneurship.

Through our engagement with our customer advisory council, thought leadership platforms, community giveback initiatives, and as mentors in our solutions development process, our customers can go beyond the contract. Which is why, when a customer choose us, they are not just another business. They are a relationship. And we, at HCL, are committed to go beyond the contract.

**<https://www.hcltech.com/about-us/about-hcl-technologies>**



At Roche Diagnostics, our focus is to improve the lives of patients, from research to lab tests to personalized healthcare; we touch the entire spectrum of diagnostics users. Roche Diagnostics is a member of the Roche Group, which is headquartered in Basel, Switzerland.

Roche is a leader in research-focused healthcare with combined strengths in pharmaceuticals and diagnostics. Roche is the world's largest biotech company with truly differentiated medicines in oncology, virology, inflammation, metabolism and CNS. Roche is also the world leader in in-vitro diagnostics, tissue-based cancer diagnostics and a pioneer in diabetes management. Roche's personalized healthcare strategy aims at providing medicines and diagnostic tools that enable tangible improvements in the health, quality of life and survival of patients.

Diagnostics Information Solutions (DIS), a newly formed organization within Roche Diagnostics- is addressing the challenge of bringing together complex diagnostic and treatment data from medical devices and IT systems within a hospital and intelligently process and present this data to doctors and caregivers to improve patient care.

For more details please visit:

<https://www.roche.com/about/business/diagnostics.htm>

<https://www.navify.com>



SAS is the global market leader in analytics and one of the largest software manufacturers with sales of USD 3.24 billion. Customers worldwide use innovative software and services from SAS to transform data into knowledge and make intelligent business decisions. Since 1976 SAS has provided customers around the globe with THE POWER TO KNOW.

With SAS, companies develop and implement strategies, measure their own success, make their customer and supplier relationships profitable, manage the entire organization in real time and meet regulatory requirements.

The US parent company is based in Cary, North Carolina. SAS Switzerland has its headquarters in Zurich and another branch in Geneva.

Further information: [www.sas.com/ch](http://www.sas.com/ch)



## Why Big Data is a key for your data and business strategy?

Data is a valuable asset for each company in Switzerland. In today's complex market situation data is the core driver to understand yourself, your clients and your competitors. Data enables you to create new products and services and helps you to elaborate new market approaches to continuously grow your business.

Scigility has a proven track records in transforming data challenges into business value. We help customers building the ideal data platforms in house and on the cloud with innovative technologies.

## What is the business value of a Big Data platform?

With a modern Big Data platform, your data is available at the right time, to the right person at the right place. Some examples how we use our modern Big Data platform to increase business values are:

- Improving **forecast and product life cycle management** activities, increase accuracy using modern approaches such as graph databases and predictive forecast models.
- Creating scalable **real-time marketing and recommendation engines** to increase customer satisfaction and cross-selling revenue.
- Implementing **real-time fraud detection** applications to help customers in finance industry to maintain their reputation and credibility.
- Providing **data stream engines** to process and anonymize data to comply with the new **GDPR regulations**.

**Who are we?** Scigility is the leading expert for Big Data Solutions in Switzerland and Austria. Comprised of an eclectic, multilingual and international team of Big Data experts, Scigility works closely with industry as well as academic partners to remain on top of the newest developments in the field of Big Data and Digitalization. We create pragmatic, tailored solutions, troubleshoot existing infrastructures and teach with passion, enthusiasm and precision.

**Our approach:** We encourage our clients to take the next step in digital evolution by offering comprehensive services focusing on Big Data that are divided into four pillars:

- Architecture & Conception
- Analytics Solution Development, Reporting & Data Science
- Platform Engineering, DevOps & Training
- Legal & Governance

We build bridges in a digital world with our seamless integration of end-to-end Big Data services.





Think Big Analytics™ is the global business analytics consultancy organization of Teradata. We partner with the world's most advanced, analytics-driven companies to deliver agile, transformational data and analytics programs for better business outcomes. Relying on our business and technical expertise, we deliver industry consulting, data science, data engineering and management, and analytic solution development to support the entire analytics lifecycle. With the tested, proven Teradata Velocity™ Services portfolio, we define your analytics strategies; roadmap, architect, and implement high-performance analytic ecosystems; and develop and deploy advanced analytics solutions at scale. Combined with leading practices and intellectual property developed over decades of delivering breakthrough analytics innovation for clients across all major industries and functional domains, we bring unparalleled speed and direction to your analytics journey. Visit [Teradata.com/thinkbiganalytics](https://www.teradata.com/thinkbiganalytics).





## **Our promise**

As a strong solutions partner, we contribute our expertise across domains, and take responsibility for the success of your projects. This calls for innovation - we need to push the boundaries and break new ground.

## **What we do**

By bridging business and technology, Zühlke helps its clients to transform their vision from a smart idea into a resounding market success. Our tailor-made machine learning and analytics and AI solutions support our customers in optimizing their processes, help to make better, data-based decisions and provide the basis for disruptive, new products, services and business models.

## **Who we are**

Zühlke is an independent service provider for product and software engineering, management consulting, and start-up financing. Zühlke provides added value as a result of the experience gained through more than 10'000 successful international projects, as well as continued investment in business and technology knowledge and understanding. Founded in 1968, the Zühlke Group today has local teams in Austria, Germany, Serbia, Switzerland, the United Kingdom and in Singapore. In 2017, Zühlke generated CHF 154 million in revenue, employing 960 staff.

## AWK Group

### Silver Sponsor

## La Mobilière

### Silver Sponsor



#### Leading Swiss ICT consulting company

As an independent Swiss company, AWK Group advises its clients on matters relating to information technology and leads demanding projects along the path to success, as demonstrated by more than 4000 successfully implemented projects in various sectors. The unique combination of expertise in consulting, engineering and project management enables AWK to offer comprehensive support to its clients. AWK has more than 250 employees at four locations and is among the most attractive Swiss employers for engineers, computer scientists and physicists.

#### We support you in getting the most value out of your data

AWK has a strong team of highly experienced analytics specialists and data scientists. In combination with AWK's profound sector knowledge and project experience, our experts get the maximum added value out of your data. In addition to customized solutions for your challenges, AWK offers an exciting range of reliable service products at a fixed price.

The logo for La Mobilière consists of the words 'la Mobilière' in a white, lowercase, serif font, centered on a solid red rectangular background.

#### La Mobilière: Live your life. We'll be here.

La Mobilière is the most personal insurance company in Switzerland. Founded in 1826, la Mobilière is Switzerland's first private insurance provider and has over 190 years of expertise. The company has grown to the Swiss market leader in several major insurance segments. It is organised as a cooperative and customers directly participate in its success. With 79 general agencies at 160 locations throughout Switzerland, la Mobilière serves two million customers and nine out of ten claims are handled locally.

The Data & Analytics team at la Mobilière establishes and enables business-driven analytics as part of the company wide digital transformation. In order to create value from data, we identify and work on data-based use cases combining state of the art technologies with the business's long standing insurance expertise. With the benefits for our customers in focus, we optimise and innovate processes and support decision-making.

# IMSD

## Silver Sponsor

# Raiffeisen

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**Digitalization** of production processes and industry 4.0 approaches are placing most companies in front of new challenges:

- what does this really mean for my company?
- what are the **potentials** if I start a digitalization process, what are the risks?
- what is the **business model** behind industry4.0 in my specific case?

Most of these questions are related to **your company data**: how much, how relevant, how volatile, etc? In order to get the first answers to these questions you need to have a strong look at your data and at **any data about your company**.

Not the available resources? **no inhouse data scientist?** then have a chat with us: **IMSD is a young, small and flexible data science company**. We group, analyse, visualize, interpret and model data for our customer in almost all sectors: machine industry, eHealth, services, science and research, dye casting, etc.

Our philosophy consists in developing, with you and for you, analysis tools to get added value to your data: the importing procedure, the visualisation, the report, you'll get everything, inclusive source code, **no expensive black box**.

Interested or simply curious? Don't hesitate to contact us.

[www.imsd.ch](http://www.imsd.ch) – Zürich – Les Reussilles - [info@imsd.ch](mailto:info@imsd.ch)

# RAIFFEISEN

**Raiffeisen: third-largest banking group in Switzerland**

The Raiffeisen Group is the leading Swiss retail bank. The third largest bank in the Swiss banking sector has 1.9 million cooperative members and 3.7 million clients. The Raiffeisen Group is represented at 912 locations throughout Switzerland. The 255 legally autonomous Raiffeisen cooperative banks are amalgamated into the Raiffeisen Switzerland Cooperative, which is the strategic leader of the entire Raiffeisen Group. Raiffeisen offers private individuals and companies a wide range of products and services through Group companies, joint ventures and enterprises in which it holds an equity investment. As of 31 December 2017, the Raiffeisen Group had CHF 210 billion in assets under management and CHF 181 billion in loans to clients. The market share is 17.5 % in the mortgage business. Total assets amount to CHF 228 billion.

Raiffeisen is an attractive employer for more than 11'000 employees and strives to build long-term relationships with both its customers and its employees. The advancement and continuous development of all employees is a core element of Raiffeisen's corporate culture. We are constantly looking for people with different educational backgrounds: Are you interested in joining our team? Visit [www.raiffeisen.ch/deine-karriere](http://www.raiffeisen.ch/deine-karriere) to learn more about Raiffeisen's unique corporate culture.

## SIX Group

### Silver Sponsor



#### **The innovative backbone of the Swiss financial center**

SIX provides a solid financial market infrastructure for Switzerland. It ensures the flow of information and money between banks, traders, merchants, investors and service providers worldwide. Around 130 international and local banks are both owners and customers of SIX. Almost 4.000 employees ensure the quality of service that Swiss banking and finance institutions are known for.

#### **SIX is investing in innovation**

Besides the Swiss exchange, leading financial information, the interbank payment platform, and the payment terminals, starting 2018, SIX has built another pillar to its business: Innovation&Digital. The growing team will focus its efforts on three areas: developing new services for customers, driving novel ideas and infrastructure at SIX and investing in breakthrough innovations on the market, through its acceleration program. A CHF 50 million venture fund will scout for ideas and startups, to promote innovation.

#### **A new data science program**

SIX is ramping up its new data science program. Its Centre of Excellence serves as an expert hub for topics, trends, and technologies. The new team is preparing to provide development and data science know-how for proofs of concept, products and services as well as other innovative undertakings, and is looking for talent to support its growth.

## UMB

### Silver Sponsor



#### **UMB: Unterwegs mit Begeisterung**

UMB combines strong commitment with strong products to create winning solutions. Successfully, too. In fact, we are one of the most successful IT service providers in Switzerland.

#### **Our team makes the difference**

At eight locations in Switzerland, 300 employees are providing their bundled know-how to our clients based on our performance-oriented and innovative corporate culture. UMB has been rated several times best employer in Switzerland by The Great Place to Work Institute.

#### **What is Curo©?**

Curo drives the digital transformation at our clients and at UMB. It simplifies the challenges of process automation, application, data integration and artificial intelligence.

Its main goal is to have a single business process platform, open to any device, for workflow user interactions and business integration.

It is very adaptable and offers a huge set of integrations out of the box. Different use cases e.g. contract management, invoice creation, financial reporting, logistics, health, service desk support, or customer onboarding etc., can be implemented on the same platform. It is hosted in the Swiss UMB cloud and can be easily configured to your requirements. Curo is developed by UMB with love!

# Wincasa

## Silver Sponsor



### **Innovative solutions spanning the real estate life cycle**

Wincasa is the leading integrated real estate service provider in Switzerland. With 860 specialists, we offer customers an extensive service portfolio covering the entire lifecycle of properties, from initial planning, construction and management to revitalisation and repositioning. The public limited company founded in 1999 with its head office in Winterthur is part of the Swiss Prime Site Group.

Wincasa is perceived as the leading competent and strategic advisory company, based on its broad spectrum of internal expert know-how, proactive development and expansion of knowledge as well as application of state-of-the-art technologies and security standards.

### **Playing a pioneering role in digitalisation**

Digitalisation is fundamentally changing the real estate sector. Wincasa recognised at an early stage the necessity for digital transformation and corresponding change management. The company has been increasingly focusing on digital leaders from other sectors, systematically pursuing digitalisation and developing the digital skills of its employees.

In order to maintain and extend its competitive capabilities, Wincasa is executing numerous projects within the scope of its digital strategy revolving around mobility, communications, process efficiency and data utilization.

## Euresearch

### Community Sponsor

## SGAICO

### Community Sponsor



*Swiss guide to European research & innovation*

#### **Euresearch – your Swiss guide to European research and innovation**

Euresearch is an information and advisory service on the European Research and Innovation Framework Programmes. It is organised as an association and is supported by the federal government. Euresearch has a Network Office in Bern and Offices all over Switzerland, including advisors with specific services for companies.

Researchers and other interested parties in Switzerland can request specific information on European funding opportunities free of charge.

**Horizon 2020** is the biggest EU Research and Innovation programme with nearly €80 billion of funding over 2014 to 2020. Numerous opportunities for Information and Communication Technologies (ICT) innovation and their applications are available for Swiss participants from the public and private sector.

#### **Get in touch:**

More information: [www.euresearch.ch](http://www.euresearch.ch)

Contact: [info@euresearch.ch](mailto:info@euresearch.ch)

swiss group for artificial intelligence  
and cognitive science



#### **Artificial Intelligence and Cognitive Science Special Interest Group of the Swiss Informatics Society**

- Promotes intelligent technologies for innovation in our society
- Provides a platform for exchange between industry and universities
- Is open for your ideas and initiatives

#### **SGAICO events**

- Bring together members that work on methods and technologies
- Discuss and disseminate related knowledge
- Explore interdisciplinary contexts such as for example engineering, medicine, psychology and law
- Establish contacts between users and experts in Switzerland to exchange on applications
- Promote education in Switzerland

**Join the largest and fastest growing network for AI in Switzerland to discuss and experience the technology everybody talks about!**

More Information: <https://sgaico.swissinformatix.org/>

Contact: [sgaico@swissinformatix.org](mailto:sgaico@swissinformatix.org)

# SAA

## Community Sponsor

# SSS

## Community Sponsor



### Swiss Association for Analytics

The main objective of the Swiss Association for Analytics is to spread the word about analytics in Switzerland. Our goal is to show added value of predictive analytics, data mining and machine learning to Swiss companies.

To exchange ideas, share news and job offers, we manage a LinkedIn page ([www.linkedin.com/groups/4586163](http://www.linkedin.com/groups/4586163)). To facilitate networking, we organize regular Meetups ([www.meetup.com/swiss-analytics](http://www.meetup.com/swiss-analytics)). To share expert knowledge, we publish the Swiss Analytics Magazine (online and printed). You can find it, and many more content, on our website:

[www.swiss-analytics.com](http://www.swiss-analytics.com)



### Swiss Statistical Society

The Swiss Statistical Society (SSS, [www.stat.ch](http://www.stat.ch)), founded in 1988, propagates application and development of statistics in Switzerland, represents the interest of professionals working in this field in relation to practice, research and education and contributes to the recognition of statistics as a scientific discipline in its own right. It fosters contacts between statisticians in administration, business and institutions of research and education. It supports cooperation between all institutions which deal with such goals.

#### The Society

- edits a bulletin three times a year. The bulletin informs about the activities and upcoming events in statistics in Switzerland.
- organizes the yearly Swiss Days of Statistics.
- consists of three Sections (official statistics, education / research and business / industries).
- organises short courses oriented towards practical applications.
- supports a yearly seminar of PhD students.



# Swiss Alliance for Data-Intensive Service

## Organizer



Swiss Alliance for  
Data-Intensive Services

The Swiss Alliance for Data-Intensive Services is a technology network for innovative companies, academic institutes and individuals with a focus on data-driven value creation: services, products and business models based on digital data. It is a community that helps companies to move forward with digitalization and brings key innovators together.

In doing so, we rely on three pillars for our success:

- R&D projects by our members for pushing forward innovation, and cooperation within an interdisciplinary network of experts from innovative companies and universities to combine knowledge from different fields into marketable products and services.
- Top employees and best-in-class education.
- Inspiration and exchange via connecting domain experts and joint workshops, conferences and Expert Groups such as Machine Learning Clinic, Natural Language Processing and Predictive Maintenance.

To boost innovation several initiatives are launched in 2018, e.g., the initiative “From ideas to projects” and a start-up grant 2018/2019. The Swiss Alliance for Data-Intensive Services makes a significant contribution in creating data-driven added value in Switzerland.

**Get in touch:**

**More information:** [data-service-alliance.ch](https://data-service-alliance.ch)

**Contact:** Gundula Heinatz Bürki ([gundula.heinatz@data-service-alliance.ch](mailto:gundula.heinatz@data-service-alliance.ch))

## Notes

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## Program Committee

Marcel Baumgartner, Nestlé  
Michel Benard, Data+Service Alliance  
Martin Braschler, InIT, ZHAW  
Lukas Budde, UniSG  
Mark Cieliebak, InIT, ZHAW  
Rodolphe Dewarrat, IMSD  
Oliver Dürr, Konstanz University of Applied Sciences  
Nico Ebert, SML, ZHAW  
Melanie Geiger, InIT, ZHAW  
Jörg Gerigk, PwC  
Stefan Hegyi, SML, ZHAW  
Gundula Heinatz, Data+Service Alliance  
Christoph Heitz, IDP, ZHAW  
Jana Koehler, HSLU  
Michael Luggen, BFH, UNIFR  
Andreas Ruckstuhl, IDP, ZHAW  
René Schumann, HES-SO  
Christian Spindler, PwC  
Thilo Stadelmann, Datalab, ZHAW  
Kurt Stockinger, InIT, ZHAW  
Marcel Zemp, D ONE

## Organization Committee

Michel Bénard, Melanie Geiger, Gundula Heinatz, Amrita Prasad

## SDS|2019

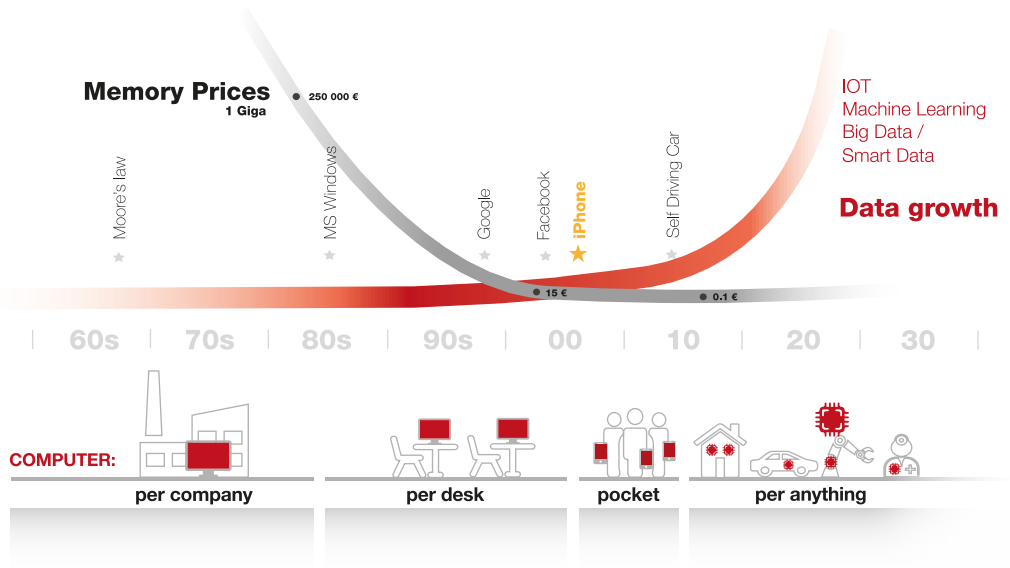
We hope you enjoyed SDS|2018 and got useful insights and contacts. Please use the feedback forms to help us optimize SDS|2019. You can also send your comments and ideas for participation to

[gundula.heinatz@data-service-alliance.ch](mailto:gundula.heinatz@data-service-alliance.ch)

## Imprint

Swiss Alliance for Data-Intensive Services  
Bälliz 62  
3600 Thun  
Phone: +41 33 221 88 20  
Email: [gundula.heinatz@data-service-alliance.ch](mailto:gundula.heinatz@data-service-alliance.ch)

# DATA DRIVES DIGITIZATION



**D | ONE**  
WE MAKE SENSE.

## DATA DRIVEN VALUE CREATION

DATA SCIENCE & ANALYTICS | DATA MANAGEMENT | VISUALIZATION & DATA EXPERIENCE