

INSURANCE DATA SCIENCE CONFERENCE PROGRAMME - June 14, 2019

Venue: Rooms HG E7 and HG F7, Main Building of ETH Zurich

8:30-9:00 **Registration and Welcome Coffee**

Room HG E7

9:00-9:15 Introduction by **Mario Wüthrich** and Keynote Address by **Jeffrey Bohn**
9:15-10:00 Keynote Talk 1: **Joachim M. Buhmann** "Robust Algorithmics: A Foundation for Science?!"

Room HG E7 Session 1: Non-Life Insurance Pricing (Chair: Mario Wüthrich)

10:15-10:30 **Florian Pechon** "Modelling Multiple Guarantees on a Household Level in Motor Insurance using Multivariate Credibility"
10:30-10:45 **Yves Staudt** "Optimizing Insurance Pricing Models in Collision"
10:45-11:00 **Armando Vieira** "Generative Adversarial Networks (GANs) for Claim Frequency Prediction Models"

11:00-11:30 **Coffee Break**

Room HG E7 Lightning Talks 1 (Chair: Andreas Tsanakas)

11:30-12:30 7 minutes each
Zhiyu Quan "Hybrid Tree-Based Models for Insurance Claims"
Daphné Giorgi "An R Package for Simulating Stochastic Individual-Based Population Models"
Kornelius Rohmeyer "Distribution Fitting in Insurance with the Shiny App DistrFit"
Aurélien Couloumy "Impact of NLP Techniques on Risk Management Practices in Reinsurance"
Lei Fang "Exploring Patterns of Convergence/Divergence among Insurers and Banks using NLP"
Marek Rogala "Improving Verification of Car Insurance Claims by Processing Photos"
Benjamin Abt "How Context Influences Model Selection"
Kevin Kuo "Towards Open Collaboration in Insurance Innovation"

12:30-13:30 **Lunch Break**

Room HG E7 Session 3: Loss Reserving (Chair: Franco Moriconi)

13:30-13:50 **Alessandro Carrato** "From Chain Ladder to Individual Claims Reserving using Machine Learning Techniques"
13:50-14:10 **Jonas Crevecoeur** "Individual Reserving with Claim Specific Covariates"
14:10-14:30 **Phani Krishna Kandala** "Deep Representation Learning using Stacked Autoencoder for General Insurance Loss Reserving"

Room HG E7 Session 5: Life and Mortality Modeling (Chair: Paul Embrechts)

14:30-14:50 **Andrew Cairns** "Medium Data and Socio-Economic Mortality"
14:50-15:10 **Andrés Villegas** "A Data Analytics Paradigm for the Construction, Selection, and Evaluation of Mortality Models"
15:10-15:30 **Elena Kulinskaya** "Administrative Health Databases for Modelling Longevity Improvements"

15:30-16:00 **Coffee Break**

Room HG E7

16:00-16:45 Keynote Talk 2: **Ronald Richman** "AI in Actuarial Science"
16:45-17:30 Panel discussion "Insurance Analytics: What Works, What Doesn't Work, and Future Potential" with **Sabine Betz, Jeffrey Bohn & Volker Reinthaler**; moderation: **Patrick Cheridito**

18:00+ **Reception: Drinks & Dinner - Zunfthaus zur Meisen, Münsterhof 20, Zurich**

Room HG F7 Session 2: Workflows and Satellite Data (Chair: Guojun Gan)

10:15-10:30 **Jürg Schelldorfer** "Principles and Best Practices for Applied Machine Learning Models [in Industry]"
10:30-10:45 **Roland A. Schmid** "TensorFlow Probability - Why We Should Care"
10:45-11:00 **Damian Rodziewicz** "How to Use Satellite Data with Machine Learning in Insurance"

11:00-11:30 **Coffee Break**

Room HG F7 Lightning Talks 2 (Chair: Markus Gesmann)

11:30_12:30 7 minutes each
Xi Liu "Automobile Insurance Fraud Detection using Evidential Reasoning and Data-Driven Inference"
Maria Oskarsdottir "Fraud Detection in Insurance with Social Network Analytics"
Nicolas Attalides "How to Build a Data Driven Insurance Business"
Tobias Baltensperger "Solvency Contagion Modeling"
Silvana Pesenti "Scenario Weights for Importance Measurement - R Package for Sensitivity Analysis"
Salvatore Scognamiglio "Accuracy and Robustness of Machine Learning Methods in SCR Estimation"
Mick Cooney "Terrorism as a Virus: Epidemiological Techniques for Outbreak Detection"
Kshitij Srivastava "Market Segmentation in Life Insurance: a Case Study"

12:30-13:30 **Lunch Break**

Room HG F7 Session 4: NatCat, Risk Management and Cyber Risk (Chair: Christophe Dutang)

13:30-13:50 **Christian Klose** "Deep Learning of Remote Sensing Images to Predict Wildfires"
13:50-14:10 **Lucio Fernandez-Arjona** "Neural Networks for Life Insurance Risk Management"
14:10-14:30 **Alexandre Boumezoued** "Predicting Cyber-Attacks using the 'Hawkes' R Package"

Room HG F7 Session 6: Industry Case Studies (Chair: Jürg Schelldorfer)

14:30-14:50 **Jakob Gerstenlauer** "Using Boosted Regression Trees in Insurance"
14:50-15:10 **Mark Lee** "Feature Synthesis Using t-SNE and Clustering"
15:10-15:30 **Markus Senn** "Medical Underwriting Triage: An End-To-End Machine Learning Case Study"

15:30-16:00 **Coffee Break**