Challenges in BIG DATA
8:30 am  Welcome coffee

8:45 am  Welcome
Philippe Gillet, EPFL’s Vice-President for Academic Affairs

9:00 am  Introduction
James Larus, School of Computer and Communication Sciences’ Dean

9:15 am  Big Data at EPFL
Karl Aberer, EPFL’s Vice-President for Information Systems

9:30 am  DeepDive: A Data System for Macroscopic Science
Christopher Re, Stanford University

10:15 am  Coffee break

10:40 am  Modern Security Analytics: Finding a Needle in the Hay Blower
Martin Rehak, Cisco Systems

11:30 am  In-situ Exploration of Big Scientific Data
Anastasia Ailamaki, EPFL

12:30 pm  Buffet lunch

Poster Session and Demos
Welcome to the Brand New SwissTech Convention Center
EPFL’s School of Computer and Communication Sciences’ Research Days: on the rise!

18 Research Day events (1996-2014)

Number of registrations (2011-2014)

IC Dean James Larus’ Introduction
EPFL’s School of Computer and Communication Sciences (IC)

Welcome Nisheeth Vishnoi

41 Professors
667 Bachelor Students
363 Master Students
286 PhD Students
IC RESEARCH DAY 2014
School of Computer and Communication Sciences

Who we are

→ RESEARCH / RECHERCHE

- Algorithms & Theoretical Computer Science
- Artificial Intelligence & Machine Learning
- Computational Biology
- Computer Architecture & Integrated Systems
- Data Management & Information Retrieval
- Graphics & Vision
- Human-Computer Interaction
- Information & Communication Theory
- Networking
- Programming Languages & Formal Methods
- Security & Cryptography
- Signal & Image Processing
- Systems
EPFL’s School of Computer and Communication Sciences (IC)
Bachelor and Master Students

<table>
<thead>
<tr>
<th>Year</th>
<th>IN</th>
<th>SC</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>369</td>
<td>247</td>
<td>616</td>
</tr>
<tr>
<td>2010</td>
<td>429</td>
<td>292</td>
<td>721</td>
</tr>
<tr>
<td>2011</td>
<td>518</td>
<td>304</td>
<td>822</td>
</tr>
<tr>
<td>2012</td>
<td>595</td>
<td>369</td>
<td>964</td>
</tr>
<tr>
<td>2013</td>
<td>654</td>
<td>377</td>
<td>1031</td>
</tr>
</tbody>
</table>

Total: 1031
EPFL’s School of Computer and Communication Sciences (IC)

PhD Students

<table>
<thead>
<tr>
<th>Year</th>
<th>Total IC</th>
<th>Total EDIC</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>207</td>
<td>294</td>
<td>290</td>
</tr>
<tr>
<td>2008</td>
<td>235</td>
<td>339</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>231</td>
<td>285</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>235</td>
<td>281</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>257</td>
<td>284</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>265</td>
<td>282</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>282</td>
<td>290</td>
<td></td>
</tr>
</tbody>
</table>
IC Dean James Larus’ Introduction

Challenges in BIG DATA

IC RESEARCH DAY 2014
School of Computer
and Communication Sciences

41 PhD awarded in 2013

Tri Kurniawan Wiljaya receives the IBM Ph.D. Fellowship Award

Appu Shaji selected as one of the Venture Leaders of Switzerland

Katerina Argyraki and Mihai Dobrescu receive Best Paper award

41 PhD awarded in 2013

A paper on Nanowire Systems published in the Royal Society journal

PODC 2013 Best Student Paper award goes to LPD researchers

Joppe W. Bos nominated for an EPFL doctorate Award 2013

Best Student Paper award for Tam Nguyen Thanh & Quoc Viet Hung Nguyen

Eren Sasoglu receives EPFL doctorate award 2013

Vitaly Chipounov & Djordje Jevdovic winners of Intel PhD Fellowship

Hamed Hassani won the 2014 Thomas M. Cover Dissertation Award

Guillermo Barrenechea receives Zeno Karl Schindler Award 2013

Best Paper award for Siddhartha Brahma, Ayan Sengupta and co-authors

Marc Stevens wins the "van Marum Prize" 2013

3 papers at the 24th ACM Symposium on Operating Systems Principles

PARSA student recipient of the IBM Ph.D. Fellowship Award

CloudSpaces receives 2nd Best Poster award at the ESWC Summer School

3rd prize at the Semantic Web Challenge 2013 for LSIR researchers

DSLAB project awarded Gold Prize at OSS World Challenge 2013

Best Paper at the IEEE International Conference on Image Processing

LASEC student winner of the 2013 ERCIM STM Award for his PhD thesis

Baris Kaskici from DSLAB recipient of the VMware Graduate Fellowship

PARSA researchers win the Best Paper Runner-Up award at MICRO'13

Joannis Aigionannis winner of the Symantec Graduate Fellowship 2014

Eurocrypt 2014 Best Paper Award for Alessandro Duc and Sebastian Faust

Naoki Peter and fellow students among finalists for their SHB project

LACAL researchers set a new cryptanalysis record

IC School students among winners and finalists of the QnF 2013

A virtual 3D museum wins the Swiss Informatics Competition

IVRG student receives Fritz Kutter Award 2013 for the best PhD thesis
IC RESEARCH DAY 2014
School of Computer and Communication Sciences

Challenges in BIG DATA

EPFL’s School of Computer and Communication Sciences (IC)

Major Faculty Awards

ACM

IEEE

Turing Award
Joseph Sifakis

IEEE Medals
Amin Shokrollahi,
Rüdiger Urbanke,
Richard W. Hamming Medal

ACM Awards
Edouard Bugnion,
Software System Award

IEEE Society awards
Giovanni De Micheli,
Mac Van Valkenburg Award
Martin Vetterli,
Signal Processing Society Award
Willy Zwaenepoel,
Tsutomu Kanai Award

ACM Fellows
Giovanni De Micheli
Rachid Guerraoui
Jean-Pierre Hubaux
James Larus
Martin Odersky
Joseph Sifakis
Martin Vetterli
Willy Zwaenepoel

IEEE Technical Field Awards
Giovanni De Micheli,
Emanuel R. Piore Award
Amin Shokrollahi,
Eric E. Sumner Award
Ruediger Urbanke,
Koji Kobayashi Award

IEEE Fellows
Giovanni De Micheli
Jean-D. Decotignie
Babak Falsafi
Pascal Fua
Jean-Pierre Hubaux
Jean-Yves Le Boudec
Bixio Rimoldi
Amin Shokrollahi
Emre Telatar
Patrick Thiran
Martin Vetterli
Willy Zwaenepoel

2014 IEEE Richard W. Hamming Medal for Ruediger Urbanke
Information and Computing Technology is essential to the Human Brain Project

Anastasia Ailamaki
Pascal Fua
Wulfram Gerstner
Christoph Koch
And many other Projects:

Visit the Poster Session after Lunch
IC Anniversary
IC School Open House

22\textsuperscript{nd} November 2014

This year, both IC School Teaching Sections will celebrate a major anniversary: Computer Science will be 30 years old and Communication Systems 20.
Professor Anastasia Ailamaki, Chair and Speaker 2014

Professor Karl Aberer, Chair 2014

Alexandra Walther, IC School Communication

Kamila Madry, Coordinator IC Research Day Poster Session

Tania Epars, IC Research Day General Logistics

Bertrand Dutoit, IT

Heidi Bernau, Josiane Gisclon, Simone Muller, Erika Raetz, Madeleine Robert, Welcome desk

And Pinar Tözün, Anca Alexandrescu, Farhan Tauheed and Xuesong Lu
Challenges in BIG DATA