

CONTACT INFORMATION	<i>Affiliation:</i> Associate Professor in Computer Science, École Polytechnique Fédérale de Lausanne (EPFL) <i>Address:</i> Mathias Payer BC 160, Station 14 1015 Lausanne, Switzerland	<i>Phone:</i> +4121-693-2708 <i>E-mail:</i> mathias.payer@nebelwelt.net <i>WWW:</i> https://www.nebelwelt.net/ <i>Group:</i> https://hexhive.epfl.ch/
RESEARCH INTERESTS	My research focuses on <i>software security</i> and <i>system security</i> . Systems continue to have exploitable bugs. On one hand, we discover and remove bugs. On the other hand, we make systems resilient against the exploitation of unknown or unpatched vulnerabilities. To discover bugs we propose (i) sanitization techniques that enforce security properties such as memory, type safety, or API flow safety; given concrete program input, our sanitizers flag property violations and (ii) fuzzing techniques that leverage static and dynamic analysis to create program inputs to broadly and thoroughly explore the reachable program state space. To mitigate exploitable vulnerabilities, we focus on control-flow integrity using specific language semantics, enforcing type integrity, and protecting selective data. We open-source all research prototypes.	
TOP TIER PUBLICATIONS	NDSS'25 (4x) [C104, C105, C106, C103]; ATC'24 [C99], CCS'24 (2x) [C96, C102], OOPSLA'24 [C90], SEC'24 (4x) [C98, C93, C91, C92], SP'24 (2x) [C101, C95]; FSE'23 [C86], ISCA'23 [C81], SEC'23 (6x) [C79, C89, C88, C76, C83, C85], SP'23 (4x) [C82, C87, C77, C78]; CCS'22 (2x) [C69, C70], FSE'22 [C75], NDSS'22 (2x) [C68, C71], SEC'22 (2x) [C74, C66]; ASPLOS'21 [C57], CCS'21 [C61], ICSE'21 [C53], ISCA'21 [C58], ISSTA'21 (2x) [C60, C63], NDSS'21 [C55], MICRO'21 [C54], SIGMETRICS'21 [C59], SEC'21 [C64]; ATC'20 [C50], NDSS'20 [C45], SEC'20 (3x) [C49, C47, C51], SP'20 [C48]; CCS'19 [C40], SEC'19 [C44], SP'19 [C41], RTSS'19 [C43]; CCS'18 [C36, C38] (2x), NDSS'18 [C33], SEC'18 [C35], SP'18 [C37]; CCS'17 [C31], NDSS'17 [C29], SEC'17 [C25], SP'17 [C27]; CCS'16 [C22, C21] (2x), NDSS'16 [C24]; SEC'15 [C15]; SEC'14 [C14], IMC'14 [C11], OSDI'14 [C12]; ATC'13 [C9], SP'13 [C10]; SP'12 [C6]; PLDI'07 [C1].	
AFFILIATION	HexHive group , EPFL, Switzerland. Associate Professor in Computer Science (since May 2021). Tenure Track Assistant Professor in Computer Science (until May 2021). HexHive group , Purdue University, USA. Adjunct Associate Professor in Computer Science (from Nov. 2019 to June 2023). Tenure Track Assistant Professor in Computer Science. BitBlaze group , UC Berkeley, USA. Postdoctoral scholar in Dawn Song's BitBlaze group. <i>Google Inc.</i> , Mountain View, USA. Software engineer in the anti-malware/anti-phishing team. Laboratory for Software Technology , ETH Zurich, Switzerland Research assistant and PhD student.	Sep. 2018 – now Aug. 2014 – Aug. 2018 Sept. 2012 – July 2014 May – July 2010 Oct. 2006 – Aug. 2012
EDUCATION	ETH Zurich , Switzerland Doctor of Science ETH in Computer Science • Thesis title: <i>Safe Loading and Efficient Runtime Confinement: A Foundation for Secure Execution</i> [T4] • Advisor: Thomas R. Gross (ETH Zurich) • Co-advisors: Steven Hand (Google) and Srđan Ćapkun (ETH Zurich) Diploma/Master of Science ETH in Computer Science • Thesis title: <i>Adaptive Optimization using Hardware Performance Monitors</i> [T3, C1] • Area of study: System Software [T1], Software Engineering; Minor: Robotics [T2]	Oct. 2006 – May 2012 Oct. 2001 – Feb. 2006

GRANTS

- We are incredibly grateful for the generous support from our sponsors.
- Total funding, including joint grants: \$15,777,619, 1,499,970 €, 6,566,955 CHF.
- My group's share: \$4,359,533, 1,499,970 €, 2,144,821 CHF.
- ArmaSuisse: Automated Vulnerability Discovery and Prioritization (CHF 136'776, *sole PI*, 2024)
- Qualcomm Innovation Fellowship (*supporting Atri Bhattacharyya*), (\$40,000.00, 2023).
- Intel TSA: Virtual Memory for Post-Moore Servers (\$1,187,310.00, co-PI jointly with Babak Falsafi, David Atienza, Abhishek Bhattacharjee, and Boris Grot, my share is \$237,400.00, 2021).
- Oracle: Triangle Fuzzing (CHF 70,000, *sole PI*, 2021).
- Oracle: Automatic generation of deserialization gadgets via fuzzing (CHF 70,500, *sole PI*, 2021).
- CYD Fellowship (CHF 12,000, *sole PI*, 2021).
- IBM Fellowship (\$40,000, *supporting Atri Bhattacharyya*, 2020).
- Huawei: ProtoFuzz (CHF 94,371.20, *sole PI*, 2020).
- **Botnar Foundation:** COVID-19 Real-Time Epidemiology I-DAIR Pathfinder (CHF 4,997,768.00, co-PI, jointly with Carmela Troncoso, Jim Larus, Edouard Bugnion, Marcel Salathé, Martin Jaggi, Srdjan Capkun, Seda Gürses, Michael Veale, Klaus Schönenberger, and Boris Danev, my share is CHF 575,634, 2020).
- **US Air Force Research Lab:** Cross-Abstraction Analysis for Complex Embedded Systems (\$735,436, co-PI, jointly with Aurélien Francillon and Davide Balzarotti, my share is \$322,538, 2020).
- Facebook AI infrastructure gift (61,000 CHF, *sole PI*, 2020).
- **DARPA AMP DICER:** Directed Compilation for Assured Patching (\$3,869,729, co-PI at EPFL, jointly with Antonio Bianchi, Giovanni Vigna, Chris Kruegel, Machiry Kumar, my share is \$684,918, 2020).
- **ONR Grant 12523149** IoT-D: Towards Internets of Dialect-Speaking Things (\$976,000 sub-contract at EPFL, 2020).
- Huawei Shield Lab gift (99,968 CHF, *sole PI*, 2020).
- **SNFS Eccellenza MultiSan:** Software Security through Multi-dimensional, Input-guided Sanitization (1'024'572 CHF, acceptance rate: 45/229, *sole PI*, 2019).
- **ERC H2020 Starting Grant 850868** CodeSan: Code Sanitization for Vulnerability Pruning and Exploitation Mitigation (1,499,970 €, acceptance rate 178/1363, *sole PI*, 2019).
- **NSF CNS-1801601** SaTC: CORE: Medium: Collaborative: Threat-Aware Defense: Evaluating Threats for Continuous Improvement (\$1,199,849, *lead PI*, jointly with Trent Jaeger and Gang Tan at PSU, my share is \$399,849, 2018)
- **ONR Grant 12523149** IoT-D: Towards Internets of Dialect-Speaking Things (\$6,000,000, jointly with Dongyan Xu, Xiangyu Zhang, Byoungyoung Lee, and Jason Li (IAI), my share is \$1,250,000, 2018)
- PRF XR Research Grant: Effective Protection From Type Safety Violations. (\$29,526, jointly with Byoungyoung Lee, 2017).
- Purdue CS Corp. Partners Funding Program: Compiler-based Control-Flow Safety (1 RA, about \$30,000, 2017).
- **ONR Grant 12338602** Towards Transformation-Based Legacy Software Fitness: Usage-Driven Binary Debloating and Hardening (\$1,049,028, *lead PI*, jointly with Dongyan Xu, 2017)
- Intel CERIAS grant (1 50% RA, about \$15,000), 2017.
- Purdue CERIAS seed grant, (2 RA for 1 semester, about \$30,000), 2017.
- Intel SSG gift (\$75,000, *sole PI*, 2016).
- Sponsored supplement to NFS grant CNS-1513783 (\$46,820, *sole PI*, 2016).
- PRF XR Research Grant: Program Analysis for Security and Privacy of Embedded Devices. (\$29,130, jointly with Patrick Eugster, 2016).
- **NSF CNS-1513783:** SaTC: ENCORE ENhanced program protection through COmpiler- REwriter cooperation (\$1,199,953, jointly with Michael Franz, UC Irvine and Kevin Hamlen, UT Dallas, my share is \$404,000, 2015).
- **NSF CNS-1464155:** CISE CRII: SaTC: Lockdown: Guarded Control-Flow and Data Privacy for Sensitive Data (\$175,000, *sole PI*, 2015).
- PRF XR: PrivData: Enforcing Data Confidentiality for C/C++ (\$25,838, *sole PI*, 2015).

ADVISING

Currently advised Ph.D. students:

<i>Type safety sanitization</i> , Nicolas Badoux [C103]	Advisor: 2020 – now
<i>Efficient Static Rewriting</i> , Luca Di Bartolomeo [C87, C76]	Advisor: 2021 – now
<i>OS Security</i> , Florian Hofhammer [W18, C77]	Advisor: 2021 – now
<i>Two-phased testing</i> , Zhiyao Feng [C99, C85]	Advisor: 2021 – now
<i>Filesystem testing</i> , Tao Lyu [C99]	Co-advised with Sanidhya Kashyap: 2021 – now
<i>Abstraction testing</i> , Chibin Zhang	Advisor: 2022 – now
<i>Mobile testing</i> , Philipp Mao [C92, C93, C100]	Advisor: 2022 – now
<i>Automated Testing</i> , Han Zheng [W19, C89]	Advisor: 2023 – now
<i>Fuzzing Architecture</i> , Solène Hosseini	Advisor: 2024 – now
<i>Supply chain testing</i> , Rafaila Galanopoulou	Advisor: 2024 – now

Postdoctoral scholars:

Qinying Wang [C101, W18]	Oct. 2024 – now
Qiang Liu [C94, C91, C82]	Nov. 2023 – now
Marcel Busch [C92, C93, C98, W18, C78]	Mar. 2021 – now
Flavio Toffalini [W19, C86, C89, C82, C87, C73, C69]	Nov. 2021 – Aug. 2024
Gwangmu Lee [C97]	Apr. 2022 – Mar. 2024
Daniele Antonioli [C67, W13, C65, C64, J7, J8, TR23, TR25]	Jan. 2020 – May 2021

Graduated Ph.D. students:

Adrian Herrera , ANU PhD [J12, C69, C60, C59] Leveraging data flow as coverage feedback in fuzzing for bug discovery.	Co-advised with Tony Hosking: 2018 – 2024
Atri Bhattacharyya , EPFL PhD [C77, C66, C58, C46, C40] Secure Interface Design Leveraging Hardware/Software Support.	Co-advised with B. Falsafi: 2018 – 2024
Ahmad Hazimeh , EPFL PhD [C94, C61, C59] Fuzz testing in practice by drilling down into abstractions and metrics.	Advisor: 2019 – 2024
Prashast Srivastava , Purdue PhD [C86, C72, C63, W11, C27] Leveraging abstraction awareness to increase the quality of auto-generated test inputs.	Advisor: 2016 – 2023
Derrick McKee , Purdue PhD [W17, C71, C62, C34, C33] Establishing a baseline for efficient compartmentalization mechanisms and policies.	Advisor: 2015 – 2022
Hui Peng , Purdue PhD [C83, C51, W11, C37, C21, W7] Customizing coverage exploration to improve fuzzing for “hard to fuzz targets”.	Advisor: 2015 – 2021
Priyam Biswas , Purdue PhD [C56, C31, C25] Novel mitigations that enforce type-aware control-flow integrity, guarding against attacks.	Advisor: 2015 – 2020
Yuseok Jeon , Purdue PhD [C50, C42, C31, C21] Development of sanitizers for cast safety for C++ and fast memory safety, eliminating software bugs.	Advisor: 2015 – 2020
Naif Almkhdhub , Purdue PhD [C45, C39, C27] Protecting embedded systems against control-flow hijacking and assessing the impact of mitigations.	Co-advised with Saurabh Bagchi: 2016–2020
Kyriakos Ispoglou , Purdue PhD [C49, C36, W8, W7] Analyzing vulnerability threat surface discovered through fuzzing and synthesizing data-flow attacks.	Advisor: 2015–2019
Abe Clements (ECE), Purdue PhD [C45, C47, C35, C39, C27] Defending IoT devices against advanced threats by enforcing strong mitigations at low overhead.	Co-advised with S. Bagchi: 2015–2019
Nathan Burow , Purdue PhD [C56, C50, C41, C34, C33, J5] Enforcement of low overhead memory safety mitigations for C/C++, to protect unsafe code.	Advisor: 2015–2018
Terry Ching-Hsiang Hsu , Purdue PhD [C22] Development of memory abstractions for security, performance, and large data.	Co-advised with Patrick Eugster: 2016–2018
Scott A. Carr , Purdue PhD [C34, C33, C31, C25, C26, J5, C24] Enforcing confidentiality and integrity of sensitive data to mitigate attacks.	Advisor: 2014–2017
Ahmed Hussein , Purdue PhD [C30, C16, C17] Development and optimization of garbage collection strategies for Android mobile systems.	Co-advised with Tony Hosking: 2014–2016

EPFL Polygl0ts student Capture-the-Flag (CTF) team advisor

2018 – now

Founder and advisor for the polygl0ts CTF team (ranked in the top 50 of thousands of teams worldwide).

Founder and former advisor of the Purdue b01lers CTF team (2014–2019).

AWARDS

Distinctions, best paper awards, and prestigious grants

- **RAID '24** best paper award [C94], 2024.
- **Usenix Security'24** distinguished paper award [C91], 2024.
- **Usenix WOOT'24** best paper award [C100], 2024.
- **ISOC BAR'24** distinguished paper award [W18], 2024.
- **ACM Distinguished Member** for protecting systems in the presence of vulnerabilities, 2024.
- **ACM SIGSOFT FSE'22** distinguished paper award [C75], 2022.
- **ISOC NDSS'22** distinguished paper award [C71], 2022.
- **Usenix WOOT'20** best paper award [W12], 2020.
- **SNFS Eccellenza Grant MultiSan**, 2019.
- **ERC H2020 Starting Grant 850868 CodeSan**, 2019.
- **IEEE LangSec'15** best paper award [W6], 2015.
- **ACM IMC'14** best paper award [C11], 2014.
- **IEEE PST'13** best paper award [C8], 2013.

Other awards

- **ACM CCS'24** distinguished PC Reviewer Award, 2024.
- **10th place at DefCon 32 CTF** (team Organizers), 2024.
- **9th place at DefCon 31 CTF** (team OrgaKraut), 2023.
- **5th place at DefCon 30 CTF** (team Organizers), 2022.
- **10th place at DefCon 29 CTF** (team Organizers), 2021.
- **DINAcon'20** Open Government Award for DP3T [TR25], 2020.
- **CSAW MENA '20** best Applied Research Award for uRAI [C45], 2020.
- **CSAW US '20** best Applied Research Runner Up for BLESA [W12], 2020.
- **IEEE SSP'19** distinguished PC Reviewer Award, 2019.
- **IEEE SSP'19** distinguished Service Award, 2019.
- **Purdue College of Science Team Award** for work on the information security master program, 2016.
- Finalist for the Cor Baayen PhD award, 2013.
- European patent application 12003967.2/GP161299CH00 *Safe Loading*, May 2013.

SERVICE

Program Committee chair and General chair

2015 – now

ISOC NDSS'24 (co-chair with Christina Pöpper); **ISOC NDSS'23** (co-chair with Wenyuan Xu); **WOOT'21** (co-chair with Fangfei Liu); **WoSSCA'18** (co-chair with Eric Jul and Jan Vitek; ECOOP/ISSTA workshop on speculative side channel analysis); **ESSoS'18** (co-chair with Awais Rashid); **IEEE ICDCS'18** (co-chair of security track with Herbert Bos); **Usenix CSET'17** (co-chair with José Fernandez); **ESSoS'17** (co-chair with Eric Bodden); **Usenix CSET'16** (co-chair with Eric Eide).

Steering committee: RAID'17 – now; WOOT'21 – now.

Other committees: DIMVA'24 general chair, U.S. Open-Source Software Security Initiative'22 (NSF/NIST/White House) organization, Usenix Security'22 awards committee, Software Security Summer School (SSSS'21) organization, Software Security Summer School (SSSS'20) organization, IEEE SP'19 40-year celebration chair, ACM CCS'19 publicity co-chair with Emiliano de Cristofaro, ISOC NDSS'19 workshops co-chair with Giulia Fanti, ISOC NDSS'18 workshops co-chair with Matthew Smith, ACM CCS'16 workshops co-chair with Stefan Mangard.

*Program committee member***2012 – now**

- 2025: **NDSS'25, SEC'25**
2024: **CCS'24, SEC'24, WOOT'24**
2023: **CCS'23, EuroSYS'23, FUZZING'23, Oakland'23, WOOT'23**
2022: **CCS'22, LangSec'22, NDSS'22, SEC'22, WiSec'22**
2021: **LangSec'21, NDSS'21, Oakland'21, SEC'21, WiSec'21**;
2020: **NDSS'20, Oakland'20, SEC'20, WOOT'20**;
2019: **CCS'19, EuroSYS'19, NDSS'19, Oakland'19, PRiSC'19, SEC'19, WOOT'19**;
2018: **AsiaCCS'18, CCS'18, EuroSYS'18** (PC, awards), **NDSS'18, SEC'18** (PC, awards), **WOOT'18**;
2017: **ACISP'17, ACSAC'17, AsiaCCS'17, CCS'17, DSN'17, EuroSec'17, NSS'17, SEC'17, SecDev'17**;
2016: **ACISP'16, CCS'16, DSN'16, ESSoS'16, EuroSec'16, NSS'16, SEC'16, SSPREW'16, TRUST'16, WIFS'16, WWW'16**;
2015: **ACNS'15, AsiaCCS'15, CCS'15, EuroSYS'15, PLDI'15** (ERC), **PPREW'15**;
2014: **AsiaCCS'14, PPREW'14, PPREW'14b, VEE'14, SyStor'13**

*Panelist, reviewer, and external reviewer***2006 – now**

RVO reviewer, 2021. ERC H2020 reviewer, 2020. Poster reviewer for Usenix SEC, 2016. NSF review panelist for SaTC '16, CPS '16, SaTC '17, CPS '17, SaTC '18, '24. NWO (Netherlands Organisation for Scientific Research) reviewer, 2015, 2023. Journal reviewer for ACM TACO, ACM TOPS, Elsevier COSE, IEEE TDSC, IEEE TPDS. Conference reviewer for CAV, CGO, HiPeak, PACT, PLDI, PPoPP.

INVITED
TALKS

<i>Invited Talk</i> , CYD Campus Conference, Zurich, Switzerland	December 2024
<i>Invited Talk</i> , Cybersecurity-Konferenz by Digital Liechtenstein, Bendern, FL	November 2024
<i>Invited Talk</i> , University of Utah, USA	October 2024
<i>Security Seminar</i> , Stony Brooke University, USA	August 2024
<i>Huawei Laps Seminar</i> , Singapore	May 2024
<i>ETH Zurich Seminar</i> , Zürich, Switzerland	May 2024
<i>DARPA HARDEN Keynote</i> , Online	October 2023
<i>ESORICS Keynote</i> , Den Haag, Netherlands	October 2023
<i>GoGE Seminar</i> , SNU, South Korea, Online	May 2023
<i>QIF Invited Talk</i> , Qualcomm, Online	May 2023
<i>CERIAS Security Seminar</i> , Purdue University, USA	April 2023
<i>Security Seminar</i> , KAIST, South Korea	March 2023
<i>Security Seminar</i> , DSO National Laboratories, Singapore	November 2022
<i>CS Colloquium Talk</i> , UC Irvine, USA	November 2022
<i>CS Colloquium Talk</i> , UC Santa Barbara, USA	November 2022
<i>Security Seminar</i> , Universität Stuttgart, Germany	July 2022
<i>Security Seminar</i> , WPI, Worcester, USA	April 2022
<i>DSRC-TII Security Seminar</i> , TII, Dubai	January 2022
<i>NoHat Conference</i> , Italy	November 2021
<i>RAID Keynote</i> , Spain	October 2021
<i>Security and Trust Summit</i> , Huawei, Germany	September 2021
<i>Cyber Alps</i> , CYD, Switzerland	July 2021
<i>Security Seminar</i> , Baidu Research, USA	April 2021
<i>CS Colloquium</i> , Chalmers University, Sweden	March 2021
<i>Huawei Trusted Computing Forum</i> , Singapore	February 2021
<i>CANS Keynote</i> , Vienna, Austria	December 2020
<i>CS Colloquium</i> , Ohio State University, USA	October 2020
<i>Systems Security Summer School</i> , Zhejiang University, China	August 2020
<i>SSSS20 RetroWrite Tutorial</i> , Purdue University, USA	August 2020
<i>Huawei Mobile Security Forum</i> , Munich, Germany	November 2019
<i>CEA/Leti</i> , Grenoble, France	October 2019

<i>EURECOM</i> , Nice, France	September 2019
<i>Security/Privacy Week</i> , TU Graz, Graz, Austria	September 2019
<i>CROSSING</i> , TU Darmstadt, Darmstadt, Germany	September 2019
<i>DIMVA Keynote</i> , Gothenburg, Sweden	June 2019
<i>IC Research Day</i> , EPFL, Lausanne, Switzerland	June 2019
<i>Huawei Research Forum</i> , Singapore, Singapore	May 2019
<i>CISPA: distinguished lecture</i> , Saarbrücken, Germany	March 2019
<i>RUB: CASA distinguished lecture</i> , Bochum, Germany	March 2019
<i>UniBW FI_CODE Seminar</i> , Munich, Germany	February 2019
<i>Intel ISEC Conference</i> , Portland, USA	December 2018
<i>ISSISP: Intl. Summer School on Information Security and Protection</i> , Canberra, Australia	July 2018
<i>AsiaCCS invited talk</i> , Songdo, Korea	June 2018
<i>EPFL</i> , Lausanne, Switzerland	March 2018
<i>ETHZ</i> , Zurich, Switzerland	March 2018
<i>TUG</i> , Graz, Austria	January 2018
<i>PRiSC keynote</i> (POPL'18 workshop), Los Angeles, USA	January 2018
<i>ETH Zurich Colloquium</i> , Zurich, Switzerland	January 2018
<i>UC Irvine Colloquium</i> , Irvine, California	November 2017
<i>MILCON IoT Panel</i> , Baltimore, USA	October 2017
<i>Internet2 Workshop</i> , Indianapolis, USA	October 2017
<i>WTB Cybersecurity: System Security</i> , Online	October 2017
<i>ICARS Symposium</i> , Washington DC, USA	September 2017
<i>GA Tech Cyber Seminar</i> , Atlanta, USA	September 2017
<i>Science on Tap, Lafayette Brewing Company</i> , Lafayette, USA	September 2017
<i>KIT</i> , Karlsruhe, Germany	June 2017
<i>CERIAS Symposium</i> , West Lafayette, USA	May 2017
<i>AsiaCCS invited talk</i> , Abu Dhabi, UAE	April 2017
<i>IBM Research Seminar</i> , Zurich, Switzerland	January 2017
<i>TU Darmstadt</i> , Darmstadt, Germany	December 2016
<i>TU Wien</i> , Wien, Austria	June 2016
<i>East China Normal University Colloquium</i> , Shanghai, China	June 2016
<i>Midwest PL summit</i> , West Lafayette, USA	December 2015
<i>CS seminar, Northeastern University</i> , Boston, USA	October 2015
<i>Dagstuhl seminar 15294</i> , Dagstuhl, Germany	July 2015
<i>CS seminar, ETH Zurich</i> , Zurich, Switzerland	July 2015
<i>Greater Chicago Area Systems Research Workshop</i> , Chicago, USA	April 2015
<i>Harris Corporation</i> , Melbourne, Florida, USA	February 2015
<i>SSP'14 workshop, invited talk</i> , Phoenix, Arizona, USA	November 2014
<i>Google Security seminar</i> , San Francisco, CA, USA	June 2014
<i>ECE seminar, Virginia Tech</i> , Blacksburg, VA	March 2014
<i>CS seminar, University of Utah</i> , Salt Lake City, UT, USA	February 2014
<i>CS seminar, Purdue University</i> , West Lafayette, IN, USA	January 2014
<i>TRUST seminar, UC Berkeley</i> , Berkeley, CA, USA	December 2013
<i>EPFL invited talk</i> , Lausanne, Switzerland	June 2013
<i>SoCal PLS invited talk</i> , Santa Barbara, CA, USA	May 2013
<i>UC Irvine seminar</i> , Irvine, CA, USA	May 2013
<i>Intel invited talk</i> , Santa Clara, CA, USA	April 2013
<i>Adobe security invited talk</i> , San Francisco, CA, USA	January 2013
<i>UC Berkeley invited talk</i> , Berkeley, CA, USA	May 2012
<i>UC Irvine invited talk</i> , CA, USA	May 2012
<i>IBM Research ARL invited talk</i> , Austin, TX, USA	April 2011
<i>Swiss Cyber Storm Security Conference</i> , Rapperswil, Switzerland	March 2011

TEACHING	Lectures and classes prepared and taught	
	• <i>Information Security and Privacy</i> , COM-402, 8 ECTS, 254 students	Fall 2024
	• <i>Topics in Software Security</i> , CS-510, 3 ECTS, 32 students	Fall 2024
	• <i>Software Security</i> , CS-412, 6 ECTS, 96 students	Spring 2024
	• <i>Information Security and Privacy</i> , COM-402, 8 ECTS, 246 students	Fall 2023
	• <i>Topics in Software Security</i> , CS-510, 2 ECTS, 27 students	Fall 2023
	• <i>Software Security</i> , CS-412, 6 ECTS, 130 students	Spring 2023
	• <i>Software Security</i> , CS-412, 6 ECTS, 131 students	Spring 2022
	• <i>Operating Systems</i> , CS-323, 6 ECTS, 151 students (with Sanidhya Kashyap)	Fall 2021
	• <i>Software Security</i> , CS-412, 6 ECTS, 74 students	Spring 2021
	• <i>Operating Systems</i> , CS-323, 6 ECTS, 128 students	Fall 2020
	• <i>Software Security</i> , CS-412, 6 ECTS, 77 students	Spring 2020
	• <i>Operating Systems</i> , CS-323, 6 ECTS, 81 students (newly designed)	Fall 2019
	• <i>Software Security</i> , CS-412, 6 ECTS, 42 students	Spring 2019
	• <i>Topics in Language-based Software Security</i> , CS-725, 2 ECTS, 17 students	Fall 2018
	• <i>Software Security</i> , CS-527, 3 credits, 25 students (reworked)	Spring 2018
	• <i>CERIAS Seminar</i> , CS-591-SEC, 1 credit, 11 students	Spring 2018
	• <i>Systems Security Seminar</i> , CS-590-SYS, 1 credit, 10 students	Spring 2018
	• <i>Operating Systems</i> , CS-354, 3 credits, 148 students	Fall 2017
	• <i>Systems Security Seminar</i> , CS-590-SYS, 1 credit, 11 students, several auditors	Fall 2017
	• <i>Software Security</i> , CS-527, 3 credits, 17 students, (reworked)	Spring 2017
	• <i>Systems Security Seminar</i> , CS-590-SYS, 1 credit, 9 students, several auditors	Spring 2017
	• <i>Operating Systems</i> , CS-354, 3 credits, 123 students	Fall 2016
	• <i>Systems Security Seminar</i> , CS-590-SYS, 1 credit, 16 students, several auditors	Fall 2016
	• <i>Software Security</i> , CS-590-SWS, 3 credits, 18 students, several auditors (new, founded)	Spring 2016
	• <i>Systems Security Seminar</i> , CS-590-SYS, 1 credit, 7 students, several auditors	Spring 2016
	• <i>Operating Systems</i> , CS-503, 3 credits, 45 students	Fall 2015
	• <i>Informal Systems Seminar</i> , 15 students	Fall 2015
	• <i>Software Engineering</i> , CS-510, 3 credits, 47 students (significantly redesigned)	Spring 2015
	• <i>Informal Systems Seminar</i> , 8 students (new, founded)	Spring 2015
	• <i>Language-based Systems Security</i> , CS-590-LBS, 3 credits, 16 students	Fall 2014
	• <i>Introduction to C Programming</i> , 6 hrs., ca. 120 students (developed)	Fall 2008 and 2009
	• Exam preparation courses, Head TA, and TA for a variety of courses at ETH Zurich	2006 – 2012

- JOURNAL ARTICLES
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