Welcome to ACSAC 2020
Kevin Butler, Conference Chair: Administrative Announcements
Daphne Yao, Program Chair: Technical Program Remarks
Roberto Perdisci, Artifacts Chair: Artifact Evaluation
Daphne Yao: Distinguished Paper Awards
Mary Ellen Zurko and SWSIS Scholarship Presentations
Jeremy Epstein, ACSA: Emily Stark, Distinguished Practitioner Keynote:
Emily Stark, Distinguished Practitioner Keynote: “When Security Meets Compatibility”
Navigating the Conference

Wednesday, 9 December 2020

10:00-10:30
Welcome
ACSAC Conference Welcome: Kevin Butler, Conference Chair
PC Chair Opening Remarks and Distinguished Paper Awards: Daphne Yao, Program Chair
SWISIS Scholarship Awards: Mary Ellen Zurko and Jeremy Epstein, ACSA

10:30-11:45
Distinguished Practitioner Keynote: When Security Meets Compatibility
When Security Meets Compatibility
Emily Stark, Tech Lead and Manager, Chrome Security Team, Google

11:45-12:00
Break

12:00-13:15
Panel: Cybersecurity Research Challenges and Opportunities in 5G and Next Generation Cellular Networks
Panel Chair: Daniel Maceky, OUSD/R6E

- Ehab Al-Shaar, Distinguished Career Professor, Carnegie Mellon INI and CyLab Security, and Privacy Institute
- Wayne Shaue, Visiting Research Engineer, University of Maryland Institute for Systems Research
- Sunil Ressy, Innovate Beyond 5G Lead, OUSD/R6E
- Alex Spridson, Program Director, NSF/CESE
- Vincent Sritaan, Cyber QSM Section Chief, Cybersecurity and Infrastructure Security Agency

- Technical Papers 1B: Anonymity and Privacy
  Session Chair: Tristan Alraft, Sean Oesch
  Betrayed by the Guardian: Security and Privacy Risks of Parental Control Solutions
  Susan Alm; Mourir Arhababawy; Quentin Burdys; Mohammed Momen; Amy Yousef
  Telek; Private Group Messaging with Hidden Access Path
  Raymond Cheng; William Scott; Elisaweta Maesrova; Irene Zhang; Vitaly Cypal; Thomas Andescott; Aviad Krithum; Brian Morris
  Towards a Practical Differentially Private Collaborative Photo Stacking System
  Ucc Dianci; Roberto Perdisci; Jiaohao Li; Matteo Memm

- Technical Papers 1A: Digital Forensics and Malware Detection
  Session Chair: Hong Yi; Ome Rabadi
  The Tangled Genomel of IoT Malware
  Emanuele Costa; Pierre-Antoine Vervier; Matteo D'Amico; Yum Shen; Leyla Biglari; Davide Belvideri
  Spotlight: Malware Lead Generation at Scale
  Prakriti Chauhan; Nicholas Kuchar; Bernhard Grif; Luca Invernizzi; Jennifer Pulman; Cecilia R. Procopio; David Teo; Barbara Berns; Elle Burd
  Any-Agentic Post-Execution Semantic Analysis of Android In-Memory Forensics Artifacts
  Aisha Al-Gonice; Alexandra Tzembaon; Angela Gurtok; Golden. G. Richard III
  AVClass2: Massive Malware Tag Extraction from AI Labels
  Shiyu Sebasti; Juan Caballero
  Advanced Windows Methods on Malware Detection and Family Classification
  Ome Rabadi; Sin G. Tjo

13:15-13:30
Break
Connecting with Others

Chat during Sessions

Directly contact attendees
Mobile Program

Technical Papers 1B: Anonymity and Privacy
Tristan Allard, Sean Oesch

Betrayed by the Guardian: Security and Privacy Risks of Parental Control Solutions
Suzan Hsi; Hsin-Hsuen Elgin; Alahae; Quemnet Douchaouy; Mohammad Mannan; Amy Youssef

Talks: Private Group Messaging with Hidden Access Patterns
Raymond Cheng; William Scott; Eliauweta Masseronia; Irene Chang; Yipol Goyal; Thomas Anderson; Arvind Krishnamurthy; Bryna Paris

Towards a Practically Differentially Private Collaborative Phone Blacklisting System
Uchi Daniellé; Roberto Perdisci; Jannson Leo; Mustaque Ahmed

Towards Realistic Membership Inferences: The Case of Survey Data
Luke A. Bauer; Vincent Bindelsdorfer

Quantifying measurement quality and load distribution in Tor
Andre Grafel; Steffen Pohl; Samuel Knauss

NITRD Panel: Homomorphic Encryption: Clever Idea, But Can We Make It Practical?
Tomas Vagoun, NITRD/NCO

Panelists:
- Heidi Sofia, Program Director, National Human Genome Research Institute, NIH
- Josh Baron, Program Manager, Information Innovation Office, DARPA
- Kurt Rohloff, Co-founder and CTO, Duality Technologies
- Moderator: Tomas Vagoun, Cybersecurity R&D Coordinator, NITRD/NCD

Abstract:
Fully homomorphic encryption promises computation directly on encrypted data, which would solve one of the major security challenges: we must first decrypt protected data in order to use the data. Over the years, the Federal Government has been investing long-term research funding to bring HE to fruition. How far have we gotten? The panelists will discuss advances in this field, what is possible today, and what research would be useful to further advance HE to improve resiliency and effectiveness.

https://www.openconf.org/acsac2020/mobile
Program At-a-Glance (Wednesday)

• Welcome
• Distinguished Practitioner Keynote
• Break (all breaks are 15 minutes)
• Multi-track Sessions
• Break
• Multi-track Sessions
• Break
• Poster and Work in Progress Talks 1
Program At-a-Glance (Thursday)

- Tribute to Marshall Abrams
- Test of Time Awards
- Break
- Multi-track Sessions
- Sponsored Talk/Break
- Multi-track Sessions
- Break
- Poster and Work in Progress Talks 2
Program At-a-Glance (Friday)

• Multi-track Sessions
• Sponsored Talk/Break
• Multi-track Sessions
• Break
• Multi-Track Sessions
• Closing Remarks
• BoF
Panels & National Interest Track

Wednesday

• Panel: Cybersecurity Research Challenges and Opportunities in 5G and Next Generation Cellular Networks

• NITRD Panel: Homomorphic Encryption: Clever, Idea But Can We Make It Practical?

Thursday

• NITRD Panel: CMMC: Raising the Bar on Cybersecurity Maturity

Friday

• Panel: Diversity & Inclusion in the Cybersecurity Research Community
Case Studies

Thursday
• Cybersecurity Test and Evaluation Lessons Learned

Friday
• Anchoring Trust in a Totally Open Platform
• Incident Response Planning for Election Cybersecurity: Designing a Workshop for County Clerks
• Summarizing Intrusion Alerts to Attack Models for Higher-Ed SOC
Poster and Work in Progress Talks

Wednesday and Thursday (3:00-4:00 PM Eastern Time)

• 10 talks in each session, each 1 hour
• Short talks with lots of Q&A opportunities
Test of Time Paper Awards, 2\textsuperscript{nd} edition

- Recognize and honor selected papers from the first 20 years (1985-2004) that have had a significant impact
  - Led to a major change in the field
  - Are used commercially
  - Have been well cited
  - Are well known as strong papers
- Special panel of distinguished speakers

https://www.wabisabilearning.com/blog/13-educational-tools-test-time

Thursday, 10:30 AM Eastern
Tribute to Marshall Abrams

Recollections and remembrance of the founder of ACSAC and his indelible influence

Thursday, 10:00 AM Eastern
Thank You to our Sponsors!!
Sponsored Talks

- Memory corruption attacks in the Spectre era (Thurs 1:15 PM Eastern)
- Unleashing Cyber Reasoning: DARPA Transparent Computing Threat Hunting Retrospective (Fri 11:15 AM Eastern)
Conference Proceedings
Conference Proceedings: ACM Digital Library (thru Friday)

https://www.acsac.org/2020/proceedings

https://dl.acm.org/citation.cfm?id=34271228
Accepted Papers

The following technical papers have been accepted for this year's program.

The Tangled Genealogy of IoT Malware
Emanuele Cozzi (Eurecom), Pierre-Antoine Vervier, Matteo Dell'Amico, Yun Shen, Leyla Biige (HortonX iLock Research Group), Davide Balzarotti (Eurecom)

Spotlight: Malware Lead Generation at Scale
Tobias Kaczmarczyck, Bernhard Grill, Luca Invernizzi, Jennifer Pullman, Cecilia M. Procopiuc, David Tao, Borbala Benko, Elie Burshtein (Google)

App-Dagnostic Post-Execution Semantic Analysis of Android In-Memory Forensics Artifacts
Asha Ali-Gombe, Alexandra Tambara, Angela Gurfinkel (Towson University), Golden Richard (Louisiana State University)

AVClass2: Massive Malware Tag Extraction from AV Labels
Silvia Sebastián, Juan Caballero (IMDEA Software Institute)

Advanced Windows Methods on Malware Detection and Classification
Dima Rabadi, Sin Teo (Institute for Infocomm Research (I2R), A*STAR, Singapore)

SAIBERSOC: Synthetic Attack Injection to Benchmark and Evaluate the Performance of Security Operation Centers
Martin Rosso, Michele Campobasso, Gandaulga Gankhuyag, Luca Alidi (Eindhoven University of Technology)

https://www.acsac.org/2020/program/papers/
Organizing Committee

- Kevin Butler, University of Florida (Conference Chair)
- Danfeng (Daphne) Yao, Virginia Tech (Program Chair)
- Heng Yin, UC Riverside (Program Chair)
- Roberto Perdisci, University of Georgia (Artifacts Evaluation Chair)
- Randy Smith, Boeing (Case Studies Co-Chair)
- Saurabh Shintre, Norton Lifelock Research Group (Case Studies Co-Chair)
- Tomas Vagoun, NITRD (National Interest Track Chair)
- David Balenson, SRI International (Panels Chair & ACSA Government Liaison & Treasurer & Conf. Chair Emeritus)
- Kevin Roundy, Norton Lifelock Research Group (Posters & Work-in-Progress Co-Chair)
- Brandon Saltaformaggio, Georgia Tech (Posters & Work-in-Progress Co-Chair)
- Harvey Rubinovitz, MITRE (Workshops Chair)
- Daniel P. Faigin, Aerospace (Training Workshops Chair)
- Dan Thomsen, SIFT (Knowledge Coordinator)
- Charles Payne, Adventium (Local/Virtual Arrangements Chair)
- Giorgio Giacinto, Univ. of Cagliari (Proceedings Coordinator)
- Peter Mayer, Karlsruhe Institute of Technology (Publicity Co-Coordinator)
- Adam Bates, UIUC (Publicity Co-Coordinator)
- Karen Davis (Registration Coordinator)
- Thomas Moyer, UNC Charlotte (Student Conferenceships)
- Sarah Diesburg, UNI (Student Conferenceships)
- Robert H’obbes’ Zakon, Zakon Group LLC (Web Advisor)
- Marshall Abrams (ACSAC Curmudgeon and Treasurer)
- Jeremy Epstein, NSF (ACSA President)
- Mike Moshell, Carole Mann, Sharri Hanacek, Registration Systems Lab (Registration)
Steering Committee

- Marshall Abrams
- David Balenson, SRI International
- Davide Balzarotti, Eurecom
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- Juan Caballero, IMDEA Software Institute
- Jeremy Epstein, National Science Foundation
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- Steve Schwab, USC-ISI
- Cristina Serban, AT&T Security Research Center
- Dan Thomsen, SIFT
- Danfeng (Daphne) Yao, Virginia Tech
- Robert H’obbes’ Zakon, Zakon Group LLC
Special Thanks: Virtual Conference Committee

• Marshall Abrams
• Charles Payne
• David Balenson
• Robert Zakon

Conference Direct Team: Marcy Hilecher, Maile Kim, Michelle Mears
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  – https://www.facebook.com/groups/acsacattendees/

LinkedIn
  – https://www.linkedin.com/in/acsac-chair/
Keynote
Distinguished Practitioner Keynote

When Security Meets Compatibility

Emily Stark,
Tech Lead and Manager, Chrome Security Team, Google