HoTSoS'20 Call for Papers

CALL FOR PAPERS

OVERVIEW

Submissions are solicited for the 7th Annual Hot Topics in the Science of Security (HoTSoS) Symposium, which will be held September 22-24, 2020 at the Burge Union on the University of Kansas campus in Lawrence, Kansas. The 7th Symposium continues the series? emphasis on cyber-security with a strong methodology and scientific rigor. This symposium solicits original work in security and privacy, particularly that which examines the scientific foundations of trustworthy systems. The program will include papers, invited talks, a special workshop session, panels, tutorials, and posters. The poster session will be highlighted by a poster competition.

Papers may be submitted to one of three categories:

1. Research Papers: Papers in this category will be reviewed by a selection of members of the Program Committee and will appear in the symposium proceedings published by ACM Press.
2. Systemization of Knowledge (SoK) papers: Papers in this category evaluate, systematize, and contextualize existing knowledge. These papers are valuable in that they provide novel viewpoints on an established research area. Suitable papers may also challenge or support existing research with new evidence or cast existing work in a new framework or taxonomy. SoK papers will be moderated, and accepted SoK papers will appear in the symposium proceedings published by ACM Press.
3. Special Working Session - Works in Progress (WiP): Papers in this category will receive feedback on a research direction, technology, or idea before it has been fully evaluated, or to discuss systems in an early, pre-prototyping phase. Accepted manuscripts will not be published at the symposium. Additional information on this special working session is below.

SPECIAL WORKSHOP SESSION - WORKS IN PROGRESS (WIP)

In keeping with the goal of collaborative community engagement, this year?s Symposium will again feature a special working session for works in progress (WiP). WiP papers offer an opportunity for authors to get early feedback on a research direction, technology, or idea before it has been fully evaluated, or to discuss systems in an early, pre-prototyping phase. Authors who have a WiP paper accepted will attend a special session in which they appear on stage with a discussant for up to one hour of in-depth discussion of their submission. Authors are expected to incorporate session feedback into revisions of their manuscript prior to their next submission for publication. Manuscripts accepted for discussion will not be published at the symposium, and access to the submissions will remain confidential and be restricted to session attendees. The title of accepted WiP papers will appear on the symposium website, prefixed by ?Work in Progress?.

VISION & SCOPE

HoTSoS brings together researchers, practitioners, and thought leaders from government, industry, and academia. The symposium provides a forum for technical dialogue and exchange of experiences about the development and advancement of scientific foundations in cyber security and privacy. The technical emphasis of HoTSoS is on scientific methods, data gathering and analysis, development and evaluation of metrics and measurements, experimental approaches, mathematical models, and the interactions among those various techniques to build a foundational science of security. The HoTSoS vision is to engage and grow a community that includes researchers and skilled practitioners from diverse disciplines focused on the advancement of scientific methods. We invite submissions on any topic that aligns with the symposium scope and vision.

THEMES

The symposium invites submissions on any topic related to the science of security as described above. The 2020 HoTSoS will highlight the following themes:

- Cyber-Physical Systems Security and Resilience, including research related to the Internet of Things,
- Methodologies for analyzing and designing resilient system architectures,
- The construction of scalable, composable, provably secure systems,
- Policy-based tools for secure, private collaboration across different domains of authority,
- Security-Metrics-Driven Development and Evaluation for guiding choice-making assuring or predicting the security properties of cyber systems,
- Designing, modeling, and analyzing systems with specified security properties by taking into account human behavior, including operators, users, and adversaries,
- Policy enforcement that enables the collection, storage, and sharing of data in accordance with privacy requirements,
- Software analysis and retrofitting to improve security and privacy of software systems,
- Application or advancement of privacy preserving technology, and
- Trustworthy AI topics to include understanding theoretical limitations, explainability, design principles, verification and validation metrics.

IMPORTANT DATES

Paper/Tutorial/Talk Submissions:	~~January 8, 2020~~ **January 24, 2020**
Poster Submissions:	~~January 8, 2020~~ **February 29, 2020**
Paper/Tutorial/Talk Decisions:	February 14, 2020
Camera Ready:	February 28, 2020
Symposium:	April 7-8, 2020

RESEARCH PAPERS - DETAILS

Submissions of research papers must be made by the deadline of ~~January 8, 2020~~ **January 24, 2020 11:59 PM CST** through https://easychair.org/conferences/?conf=hotsos2020 and specifying the submission category to be as ?research paper?. Submissions must use the double-column ACM conference proceedings ?Master? Template format provided at https://www.overleaf.com/latex/templates/acm-conference-proceedings-master-template/pnrfvrrdbfwt).

Published papers should be at most 10 pages in the double-column ACM format including the bibliography or, alternatively, 9 pages not including the bibliography. The paper may have optional appendices, but reviewers are not required to read them. Submissions must be in PDF format.

SYSTEMIZATION OF KNOWLEDGE (SoK) PAPERS - DETAILS

Submissions of SoK papers must be made by the deadline of ~~January 8, 2020~~ January 24, 2020 11:59 PM CST through https://easychair.org/conferences/?conf=hotsos2020 and specifying the submission category to be as ?SoK paper?. Submissions must use the double-column ACM conference proceedings ?Master? Template format provided at https://www.overleaf.com/latex/templates/acm-conference-proceedings-master-template/pnrfvrrdbfwt).

SoK papers should be at most 10 pages in the double-column ACM format including the bibliography or, alternatively, 9 pages not including the bibliography. The paper may have optional appendices, but reviewers are not required to read them. Submissions must be in PDF format and the title should begin with ?SoK: ?.

WORK IN PROGRESS (WIP) PAPERS - DETAILS

Submissions and Eligibility

Submissions of WiP papers must be made by the deadline of ~~January 8, 2020~~ January 24, 2020 11:59 PM CST through https://easychair.org/conferences/?conf=hotsos2020 and specifying the submission category to be as ?WiP paper?. Submissions must use the double-column ACM conference proceedings ?Master? Template format provided at https://www.overleaf.com/latex/templates/acm-conference-proceedings-master-template/pnrfvrrdbfwt).

WiP papers should be at most 10 pages in the double-column ACM format including the bibliography or, alternatively, 9 pages not including the bibliography. Note that WiP papers are encouraged even if they are substantially shorter than the page limit. The paper may have optional appendices, but reviewers are not required to read them. Submissions must be in PDF format and the title should begin with ?WiP: ?.

Each author must assert that the manuscript is unpublished and revisions can be incorporated into the manuscript prior to their next submission for publication. Prior publication includes the appearance in a proceeding, online or in print, of any version of the work that received peer review, including short papers. Posters and online, pre-submission non-archival versions of non-peer reviewed papers will not be considered prior publication. Pre-submission non-archives include arXive.org and CiteSeerX. A short paper version of a submission may not immediately disqualify the submission, however, and the committee will consider the differences in the versions prior to making final decisions. Thus, authors are encouraged to briefly disclose in a cover page to their submission any prior submissions and/or publications related to the submission.

Selection Process

Shortly after the submission deadline, a small program committee will review WiP manuscripts for acceptance. Acceptance is determined by the following criteria: (1) is the manuscript topic appropriate for the Science of Security; (2) is the manuscript sufficiently clear about the problem, approach, evaluation and results to engage an audience in productive discussions; (3) has the manuscript been previously published in any format; and (4) does the manuscript complement the overall program. Manuscripts that are not accepted may be invited as posters for presentation in a separate poster session.

WiP Workshop Format

One month prior to the workshop session and symposium, registered attendees will be provided confidential access to accepted manuscripts. Because the manuscripts are unpublished, all attendees are expected to keep the research results and discussions confidential. Registered attendees to the special session are expected to read the manuscripts prior to attendance and they are encouraged to participate in discussions. There are no formal presentations of the work.

Each manuscript will be assigned up to a one-hour, in which a non-author discussant will present the manuscript for up to 10-15 minutes. The discussant will identify the strengths and weaknesses along multiple dimensions:

- Is the problem framing clear, is this the right problem given the approach? Is the threat model described, the right model?

- Is the chosen analysis appropriate for the claims being made? Is there an alternative analysis better suited to the research questions or hypotheses? Do threats to internal validity exist, if so, how can those be appropriately acknowledged and/or mitigated?
- Are the results being presented clearly, what alternative presentations exist?
- Is the scope of impact consistent with the results, are connections to a broader impact missing or available for further research?

Following the discussant questions and author reactions, the remaining 30-50 minutes will be used by the audience to raise their own questions and to engage in audience discussion. It is expected that audience members will prepare their own questions in advance, when reading the manuscript prior to attending the workshop. The discussant and author can moderate the discussion by choosing audience members to speak and by asking audience members follow-up questions. The ultimate goal for each session is to provide authors with detailed actionable feedback, which they will then use to improve their manuscripts prior to submission for publication at a different venue.

SUBMISSION REQUIREMENTS - TUTORIALS

Submissions of tutorials must be made by the deadline of ~~January 8, 2020~~ January 24, 2020 11:59 PM CST through https://easychair.org/conferences/?conf=hotsos2020 and specifying the submission category to be a tutorial. Submissions must use the double-column ACM conference proceedings ?Master? Template format provided at https://www.overleaf.com/latex/templates/acm-conference-proceedings-master-template/pnrfvrrdbfwt).
Tutorial proposals should be at most 2 pages in the double-column ACM format* including the bibliography. A submission should include a detailed syllabus of material to be presented. Submissions must be in PDF format.

SUBMISSION REQUIREMENTS - POSTERS

Please upload a submission of your poster abstract by the deadline of ~~January 8, 2020~~ February 29, 2020 11:59 PM CST through https://cps-vo.org/hotsos20/poster-cfp. Poster abstracts will be included in the ACM proceedings and must be submitted in the double-column ACM conference proceedings ?Master Template? format (the TeX format for which is provided, along with examples, at the following link: https://www.overleaf.com/latex/templates/acm-conference-proceedings-master-template/pnrfvrrdbfwt). Accepted posters will be displayed on the symposium website. Each extended abstract should be at most 2 pages, including citations and references.

ADDITIONAL INFORMATION

Simultaneity

Submissions must not have been published previously, and may not be submitted in parallel to any other journal or conference/workshop with published proceedings. The program chairs reserve the right to consult confidentially with other chairs and responsible parties if a double submission is suspected.

Government/Industry Talks

Nominations or proposals for government or industry talks can be sent directly to the program chairs via email at hotsos2020@cps-vo.org.

ACM Template: https://www.overleaf.com/gallery/tagged/acm-official#.WIayAktG3v0

Please send any questions about topics or submission requirements to hotsos2020@cps-vo.org