Call for Contributions

1. Inform the Chair: with the Title of your Contribution
2. Submission URL:
https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=CYBER+2022+Special
Please select Track Preference as **UZDE**
3. Note: *For 2022, all events will be held in a hybrid mode: on site or virtual choices (live, prerecorded videos, voiced presentation slides, and .pdf slides). We hope for better times allowing us to return to the traditional on site scientific events. However, we are ready to adapt any which way the conditions dictate.*

Special track

UZDE: Unanticipated Zero Day Equivalents

Chair
Dr. Steve Chan**,** Decision Engineering Analysis Laboratory, VTIRL, VT, USA
schan@dengineering.org

along with
CYBER 2022: The Seventh International Conference on Cyber-Technologies and Cyber-Systems
https://www.iaria.org/conferences2022/CYBER22.html
November 13 - 17, 2022 - Valencia, Spain

This special track deal with Unanticipated Zero Day Equivalents (UZDE), such as Hidden Defects/Failures (HDF), within Complex Cyber-Physical Systems (CPS), such as Cyber-Physical Power Systems (CPPS).

"Zero-day" or "0-day" vulnerability exploit is a frequently utilized term to describe a software, hardware, or firmware vulnerability for which no mitigation (i.e., no patch) yet exists. Hence, the involved software is deemed to be vulnerable with a particular attack surface, and the "0-day" references the associated flaw/defect. As reference, the 0-day tracking project (a.k.a., Project Zero) keeps track of 0-days with assigned Common Vulnerabilities and Exposures (CVEs), and for 2022, it lists 17 known 0-days, which have been subsequently patched. In 2021, there were 58. In 2020, there were 25, etc.

Along a similar vein, various Cyber-Physical Systems (CPS), such as Cyber-Physical Power Systems (CPPS), have hidden defects. The involved product (and the involved software, hardware, or firmware) contains a hidden defect that is not discoverable, via prototypical testing or inspection, and the hidden defect only manifests itself under specific abnormal operating conditions. Accordingly, the CPPS hidden defect constitutes a hidden failure. For Security and Stability Control Devices (SSCDs) within CPPS, these hidden failures can induce aberrant behavior that can result in cascading effects (e.g., large-scale power failures).

In recent times, machine learning has been brought to bear to help mitigate against HDF, with various Defect Diagnosis/Prediction Models (DDPM) proposed. This area of research and contributions to advance DDPMs can have profound societal impact. We invite paper submissions addressing this topic.

Example Subtopics for Contributions include, but are not limited to:

• Defect Diagnosis/Prediction Models (DDPM) for Cyber-Physical Power Systems (CPPS)

• Hidden Defects/Failures (HDF) within Security and Stability Control Devices (SSCDs) of Cyber-Physical Power Systems (CPPS)

• Mitigating against Hidden Defects/Failures (HDF) in Complex Cyber-Physical Systems (CPS)

Contribution Types
- Regular papers [in the proceedings, digital library]
- Short papers (work in progress) [in the proceedings, digital library]
- Posters: two pages [in the proceedings, digital library]
- Posters: slide only [slide-deck posted on www.iaria.org]
- Presentations: slide only [slide-deck posted on www.iaria.org]
- Demos: two pages [posted on www.iaria.org]

Important Datelines
Inform the Chair or Coordinator: As soon as you decide to contribute
Submission: Oct 1, 2022
Notification: Oct 17, 2022
Registration: Oct 27, 2022
Camera ready: Oct 27, 2022
Note: *The submission deadline is somewhat flexible, providing arrangements are made ahead of time with the chair.*

Paper Format
- See: http://www.iaria.org/format.html
- Before submission, please check and comply with the editorial rules: http://www.iaria.org/editorialrules.html

Publications
- Extended versions of selected papers will be published in IARIA Journals: http://www.iariajournals.org
- Print proceedings will be available via Curran Associates, Inc.: http://www.proceedings.com/9769.html
- Articles will be archived in the free access ThinkMind Digital Library: http://www.thinkmind.org

Paper Submission
https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=CYBER+2022+Special
Please select Track Preference as **UNZE**

Registration
- Each accepted paper needs at least one full registration, before the camera-ready manuscript can be included in the proceedings.
- Registration fees are available at http://www.iaria.org/registration.html

Contact
Chair: Steve Chan, schan@dengineering.org
Logistics: steve@iaria.org