Containers have become integral components of modern software development and deployment, offering flexibility, scalability, and efficiency. However, ensuring the security of containerized environments remains a significant challenge due to the dynamic nature of container ecosystems and the evolving threat landscape. This presentation focuses on the generation of Vulnerability Exploitability Exchange (VEX) reports tailored specifically for containers.

The VEX framework provides a standardized approach to assess and communicate the severity of vulnerabilities in containerized environments. By evaluating both the technical details of vulnerabilities and their potential exploitability, VEX reports offer valuable insights for existing vulnerabilities in container images and deployments.

This presentation explores the key points of VEX report generation for containers, including:

1. *VEX-structure: We discuss what VEX is, how VEX-reports are formed and what do they contain.*
2. *Container scanning: How tools perform container layers scanning and how vulnerability mapping process works in these scenarios.*
3. *Tool analysis: What is a toolset, which can be used for generating a list of vulnerabilities for container images and a short overview of each tool.*
4. *Result analysis: visualization of obtained results for a dataset, underlying differences in interpretations, absence of general truth and particular framework for estimating VEX quality.*
5. *Future works and analysis: main problems found in the current step of research, preliminary conclusions, current recommendations.*

Overall, this presentation discusses existing challenges in VEX reports production for container images, their effectiveness for container security strategy, existing gaps and uncertainties in vulnerability mapping process and possible future works in this field.

Yekatierina Churakova
PhD Student
KTH Royal Institute of Technology
School of Electrical Engineering and Computer Science (EECS)
Department of Computer Science
Division of Network and System Engineering