



CAE Tech Talk



16 February 2023

Data enrichment and business enablement (1:00 – 1:50 pm EST)

Modern Memory Hard Hashing Functions: Argon2 vs Balloon!(2:00 – 2:50 pm EST)

Mark your calendars and come join your friends in the CAE community for a Tech Talk. CAE Tech Talks are free and conducted live in real-time over the Internet so no travel is required. Capitol Technology University (CTU) hosts the presentations using Zoom which employs slides, VOIP, and chat for live interaction. Just log in as “Guest” and enjoy the presentation(s).

Below is a description of the presentations and logistics of attendance:

PRESENTATION #1

Topic: Data enrichment and business enablement

Time: 1:00pm – 1:50 pm EST

Location: <https://captechu.zoom.us/j/664120328>

Just log in as “Guest” and enter your name. No password required.

Presenter(s): Dharam Padhaya, University of the Cumberland

PRESENTATION #2

Topic: Modern Memory Hard Hashing Functions: Argon2 vs Balloon!

Time: 2:00pm – 2:50 pm EST

Location: <https://captechu.zoom.us/j/664120328>

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Presenter(s): George Meghabghab, Roane State Community College

Description: Memory-hard functions (MHFs) is a class of hash functions whose fast evaluation requires the heavy use of memory, and an evaluation that spends less memory has to incur a much larger time penalty. Memory-hardness is particularly useful in the setting of password hashing and cryptocurrencies, as memory cost is platform-independent and efficient special-purpose hardware for brute-forcing attacks becomes much harder to be built. The author will discuss two such MHF: Argon2(2015) and Balloon(2017). Implementation of both will be considered. A Javascript (nodejs) app using Postman for Argon2 will be demonstrated. Balloon will be implemented on Ubuntu with real time computational results.

A summary of computational results will be presented!

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<https://www.caecommunity.org/resources/cae-tech-talk-resources>

For questions on CAE Tech Talk, please send email to CAETechTalk@nsa.gov