



HAL
open science

Modeling Rowhammer in the gem5 simulator

Loïc France, Florent Bruguier, Maria Mushtaq, David Novo, Pascal Benoit

► **To cite this version:**

Loïc France, Florent Bruguier, Maria Mushtaq, David Novo, Pascal Benoit. Modeling Rowhammer in the gem5 simulator. CHES 2022 - Conference on Cryptographic Hardware and Embedded Systems, Sep 2022, Leuven, Belgium. . lirmm-03817275

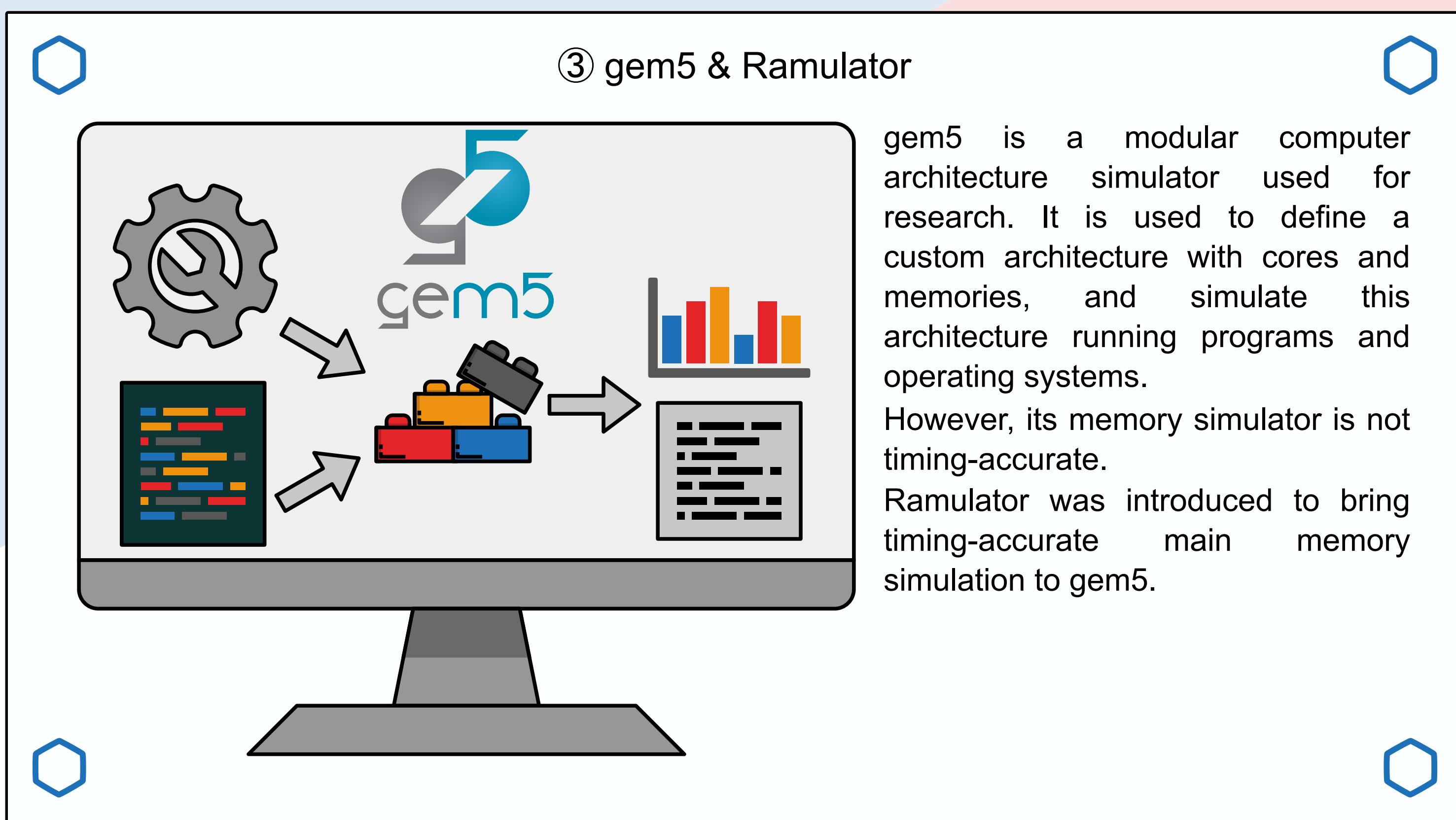
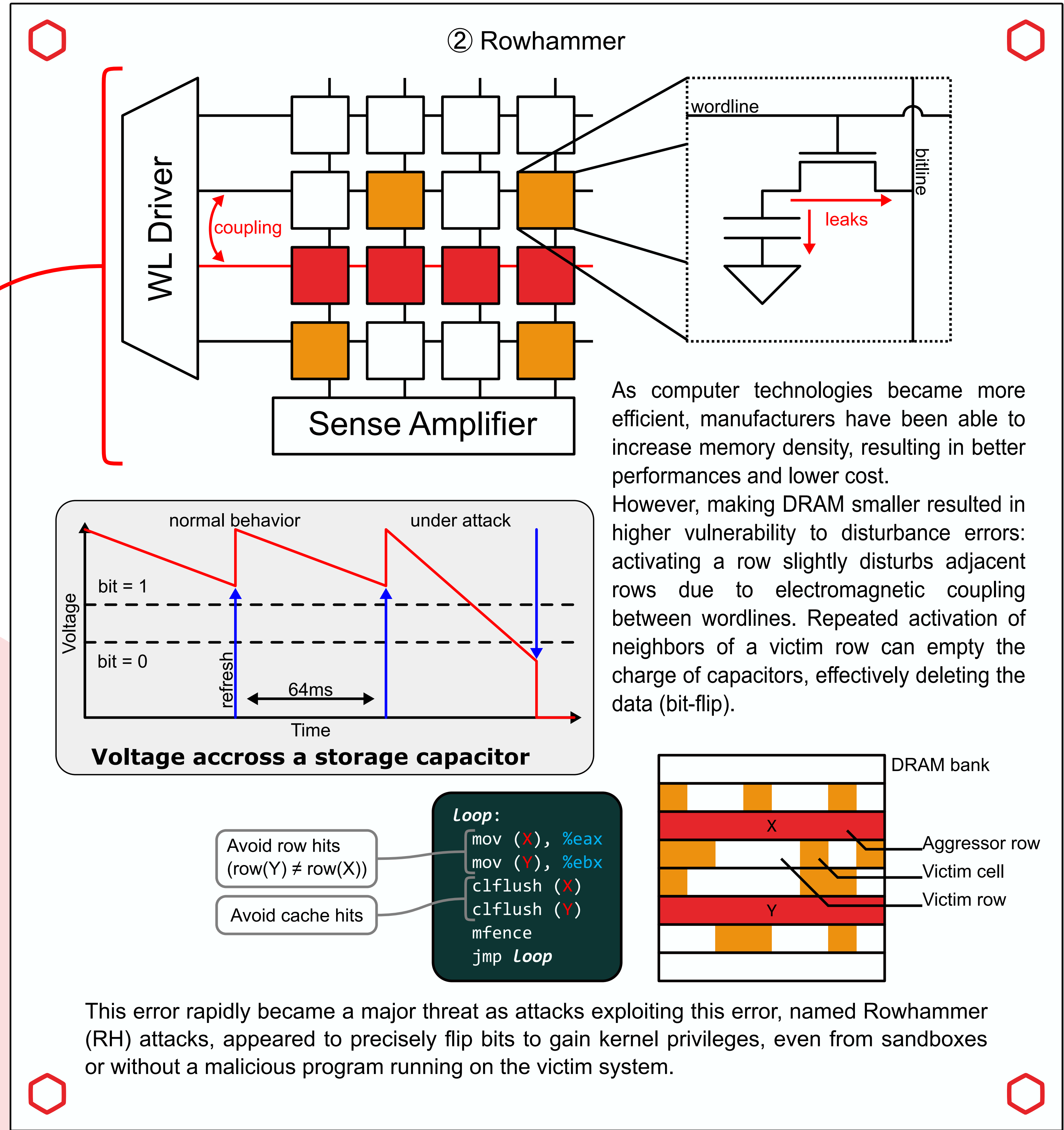
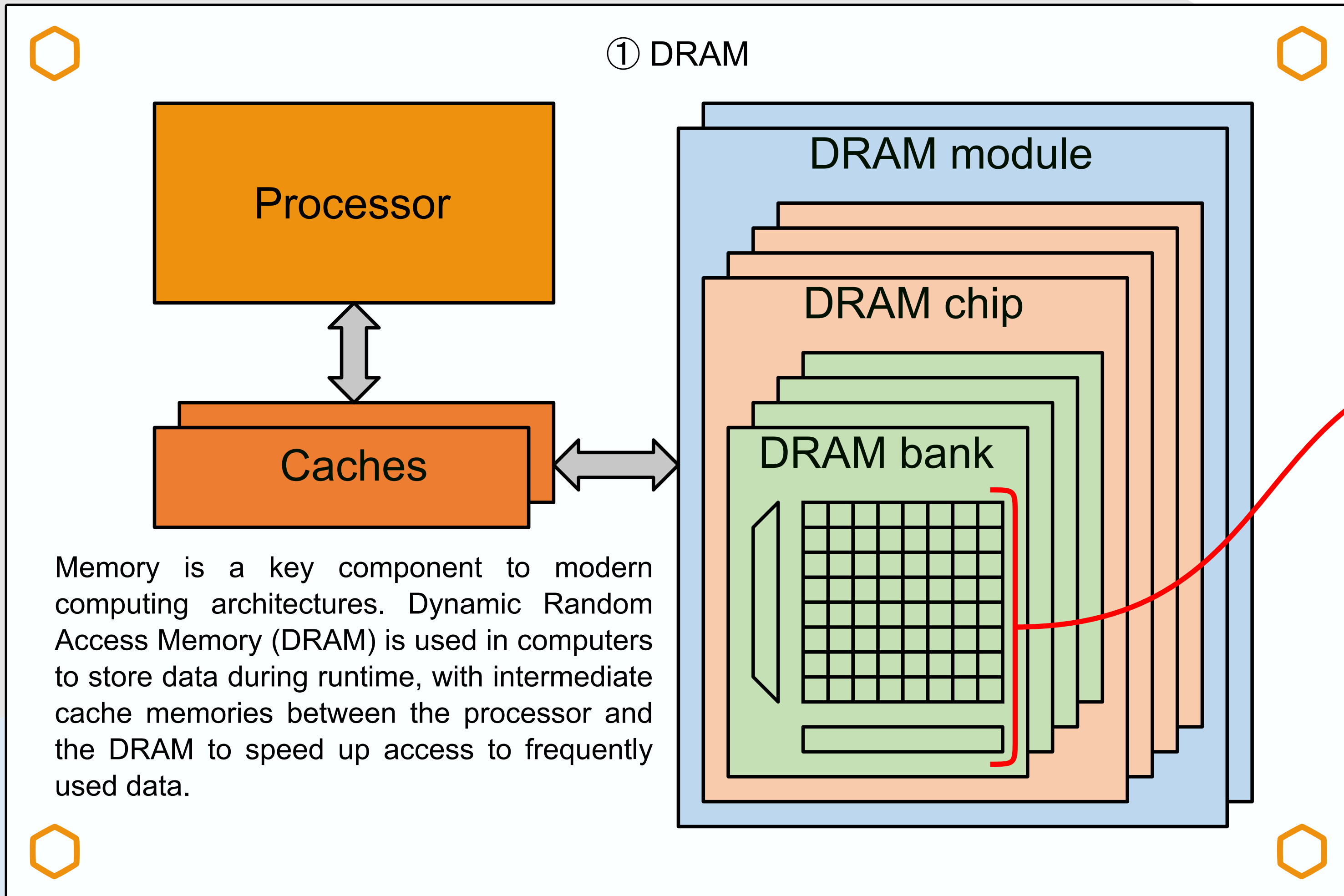
HAL Id: lirmm-03817275

<https://hal-lirmm.ccsd.cnrs.fr/lirmm-03817275>

Submitted on 17 Oct 2022

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Despite a timing-accurate main memory simulation with Ramulator, gem5 does not provide any implementation of unintended memory modifications like bit-flips caused by Rowhammer attacks. We created a gem5 module to introduce memory corruption to architectural simulations. This modification will allow the development of new attack methods and associated counter-measures.

