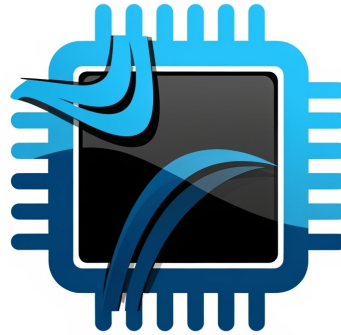




Integrated development environment for teaching and research on RISC-V processors (PDC2023-145832-I00)

Integrated development environment for teaching and research on RISC-V processors



CREATOR

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Final project report and conclusions

Universidad Carlos III de Madrid

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1. MAIN RESULTS OBTAINED

This report presents the main results obtained with the development of the project:

- Publications.
- Results obtained.

1.1. Publications

1.1.1. Journal publication

- Diego Carmarmas-Alonso, Félix García-Carballeira, Alejandro Calderón-Mateos, Elias del Pozo-Puñal. CREATOR: An Educational Integrated Development Environment for RISC-V Programming. IEEE Access (Q2). Mayo de 2024. <https://doi.org/10.1109/ACCESS.2024.3406935>. <https://hdl.handle.net/10016/46494>

1.1.2. Articles under review

- Juan Carlos Cano-Resca, Félix García-Carballeira, Diego Carmarmas-Alonso, Alejandro Calderón-Mateos. RISC-V web simulator based on Sail ISA specification. En revisión en la revista Journal of Systems Architecture (Q1)
- Diego Carmarmas-Alonso, Félix García-Carballeira, Alejandro Calderón-Mateos, Elias del Pozo-Puñal, Juan Carlos Cano-Resca, Elisa Utrilla. CREATOR: An Integrated Development Environment for Programming Assembly in RISC-V Architectures. En Revisión en la revista Software-X (Q2).

1.1.3. National conferences

- Elisa Utrilla-Arroyo, Diego Camarmas-Alonso, Félix García-Carballeira, Alejandro Calderón-Mateos. Extensión del simulador CREATOR para integrar funcionalidades de Arduino: caso de estudio con el microcontrolador ESP32. Jornadas Sarteco 2025, Sevilla. 10.5281/zenodo.8378898
- Juan Carlos Cano-Resca, Félix García-Carballeira, Diego Carmarmas-Alonso, Alejandro Calderón-Mateos. Simulador web para RISC-V basado en la especificación SAIL. Jornadas Sarteco 2025, Sevilla. 10.5281/zenodo.15773217
- Diego Carmarmas-Alonso, Félix García-Carballeira, Alejandro Calderón-Mateos, Elias del Pozo-Puñal. Servicio de laboratorio remoto para la integración del simulador CREATOR con hardware RISC-V. Jornadas Sarteco 2024, A Coruña. 10.5281/zenodo.11632954

1.2. Dissemination activities

- Seminar: "CREATOR: an integrated development environment for teaching and research in RISC-V processors". XV CAPAP-H Winter Seminar (High Performance Computing Network on Heterogeneous Parallel Architectures), Cáceres, January 2025.
- Presentation of the simulator at the international Science for Industry (S4i) event held in Madrid in January 2026 and dedicated to the transfer of scientific knowledge to the industrial sector.
- A proposal has been submitted for presentation at the RISC-V Europe Summit to be held in Bologna in June 2026.
- A tutorial has also been prepared to be given at the Sarteco conference to be held in June 2026 in Madrid.

1.3. Results obtained

- Web page of the project: <https://arcos-uc3m.github.io/EDIRISC/>
- Source code: <https://creatorsim.github.io>
- Documentation (Wiki): <https://creatorsim.github.io/creator-wiki/>