Nicolas Meseguer Iborra

Email: n.meseguerIborra@um.es
Portfolio: nicolasmeseguer.github.io
Github: github.com/NicolasMeseguer

Education

- **Universidad de Murcia** — Murcia, Spain
  Doctor of Philosophy (Ph.D.) - Computer Architecture — *September 2022 - December 2026*
  Goal: *Suggest approaches for addressing two transcendental concerns in the design of a heterogeneous processor's memory system; (1) novel organizations for the memory structures and (2) share the same memory space across general purpose cores and hardware accelerators.*
- **Universidad de Murcia** — Murcia, Spain
  Master of Science (M.S.) - New Technologies in Computer Science; GPA: 9.24 — *September 2021 - June 2022*
  Courses: *High Performance Computing and Architecture, Microarchitecture of the processing cores, Parallel programming standards, Compiler-optimised libraries, High performance system administration*
- **Universidad Catolica San Antonio de Murcia** — Murcia, Spain
  Intern Student — *October 2019 - June 2020*
  Objectives: *Introduction to Machine Learning (ML) and Deep Learning (DL) using novel-models: MLPs, RNNs and CNNs*
- **Universidad Catolica San Antonio de Murcia** — Murcia, Spain
  Bachelor of Science (B.S.) - Computer Engineering; GPA: 9.31 — *October 2018 - June 2021*
  Courses: *Computer Programming, Information Science, Networking, Operating Systems, Databases, Mathematics, Software Architecture, Algorithms, Data Structures*
- **IES Jose Planes** — Murcia, Spain
  Higher National Certificate (HNC) - Web App Developer; GPA: 8.84 — *September 2016 - June 2018*
  Courses: *Databases, High-level Computer Architecture, Web Language, Client and Server side frameworks, Usability and UX+UI*

Skills Summary

- **Languages**: Python, C/C++, Java, PHP, JavaScript, SQL, Bash
- **Frameworks**: Laravel, Scikit, Keras, Django, Node.js, React.js
- **Tools**: Docker, GIT, SSH
- **Platforms**: Linux, Web Apps, AWS
- **Parallelization**: OpenMP, MPI, CUDA, Heterogeneous Programming

Experience

- **Universidad de Murcia** — Murcia, Spain
  Ph.D. Researcher (Part-time) — *Nov 2021 - Present*
  - **Objectives**: Suggest approaches for addressing two transcendental concerns in the design of a heterogeneous processor's memory system. 1) novel organizations for the memory structures employed by cores. 2) investigate alternatives to present virtual memory concepts in order to more efficiently share the same memory space.
- **Universidad Catolica San Antonio de Murcia** — Murcia, Spain
  Research Initiation Grant (Part-time) — *Feb 2021 - Jul 2021*
  - **Objectives**: In charge of developing a hybrid accelerator (CPU+GPU) for a recommender neural network model (DLRM, WATERoT) using specialized accelerator architectures for inference (SIGMA, MAERI). Aiming at maximizing the model efficiency, waiting times and studying memory accesses (W/R) and total cycles consumed.
- **Plinga GmbH** — Berlin, Germany
  Full-stack Web Developer Erasmus+ Internship (Full-time) — *Apr 2018 - Sep 2018*
  - **Experience acquired**: First-hand experience on front-end and back-end of various PHP and Ruby projects, including Amazon AWS services (EC2 servers, Databases and CDNs)

Publications

- **CPU-PCGCN: Procesamiento Eficiente de Redes Convolucionales de Grafos en Arquitecturas CPU (Deep Learning, Graph Neural Networks)**: Work in XXXII Jornadas de Paralelismo (JP). Tech: Python, PyTorch, C++, C, Bash (September '22)
- **Evaluacion de un Sistema de Recomendacion en un Acelerador Hibrido (Deep Learning, Recommender System)**: Work in XXXI Jornadas de Paralelismo (JP). Tech: Python, PyTorch, C++, Bash (September '21)

Honors and Awards

- Second place in Mercedes-Benz Talent Highway with a predictive analytical market model - Nov, 2022
- University scholarship for the master's degree (M.S.) - Nov, 2022
- Telefónica Hack4Good Winner, with an application against zero food waste - Oct, 2022
- Extraordinary Award for the Best Academic Record in Computer Engineering (B.S. Degree) - Jun, 2022
- Research Initiation Grant for promising young researchers (B.S. Degree) - Feb, 2021
- Erasmus+ Scholarship for a european internship (HNC Degree) - Mar, 2018