# Nicolás Meseguer Iborra

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## EDUCATION

**Universidad de Murcia** — Murcia, Spain
*PhD - Computer Architectura* — *October 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 - 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 Católica San Antonio de Murcia** — Murcia, Spain
*Bachelor of Science - Computer Engineering; GPA: 9.31* — *October 2018 - June 2021*

**Courses:** Computer Programming, Information Science, Networking, Operating Systems, Databases, Mathematics, Software Architecture, Algorithms, Data Structures

**Universidad Católica 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

**IES José Planes** — Murcia, Spain
*Higher National Certificate - Web App Developer; GPA: 8.84* — *October 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(++), Java, PHP, JavaScript, SQL, Bash, JAVA
- **Frameworks:** Laravel, Scikit, TensorFlow, Keras, Django
- **Tools:** Docker, GIT, SSH
- **Platforms:** Linux, Web Apps, AWS
- **Parallelization:** OpenMP, MPI, CUDA, Heterogeneous Programming
- **Others:** Advanced Memory Usage (Memory Registers, Pinned Memory)

## EXPERIENCE

**Universidad Católica 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)* — *Mar 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)

- **Evaluación de un Sistema de Recomendación en un Acelerador Híbrido (Deep Learning, Recommender System)**: Work in XXXI Jornadas de Paralelismo (JP). Tech: Python, PyTorch, C++, Bash (September '21)

## HONORS AND AWARDS

- Extraordinary Award for the Best Academic Record (Bachelor Degree) - Jun, 2022

- Research Initiation Grant (Bachelor Degree) - Feb, 2021

- Erasmus+ Scholarship for an abroad Internship (HNC Degree) - Mar, 2018