

# Nicolas Meseguer Iborra

Portfolio: nicolasmeseguer.github.io

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## EDUCATION

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- **Universidad de Murcia** Murcia, Spain  
*Doctor of Philosophy (Ph.D.) - Computer Architecture* 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 (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* October 2016 - June 2018  
*Courses:* Databases, High-level Computer Architecture, Web Language, Client and Server side frameworks, Usability and UX+UI

## SKILLS SUMMARY

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

## EXPERIENCE

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- **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)* 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

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- **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

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- Winner of a scholarship for the master's degree (M.S.) - Nov, 2022
- Hack4Good Winner in Murcia, 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 (B.S. Degree) - Feb, 2021
- Erasmus+ Scholarship for an abroad Internship (HNC Degree) - Mar, 2018