UNAI EIBAR ARAMBARRI

PhD student in applied engineering

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SUMMARY

I'm finishing my PhD studies, linked to fracture mechanics and finite element method. After that, I would like to reach a researcher position in a R&D department, where I could help in different topics associated with mechanical engineering, structural analysis and FEM simulations.

SKILLS

Programming: MATLAB, Simulink, Python, FORTRAN, LaTeX, Lua

Softwares: ABAQUS, ANSYS Workbench, PTC Creo, NX, Autodesk Inventor

EXPERIENCE

Since 9/2023 — **Predoctoral researcher** CEIT Centro Tecnológico (BRTA). Donostia/San Sebastián, Spain.
- Developed my thesis in applied engineering, fully working on the SUREWAVE project. At the end of the project, a digital twin of the case study was presented, capable of analysing the structural integrity of the part and making a prediction of its remaining life based on crack propagation.

2/2023 – 7/2023 — **Research intern** I2M – Institut de mécanique et d'ingénierie. Bordeaux, France.
- Realized my master thesis developing a multi-technology human-robot automatic disassembly cell to recover components from End of Life products to intensify Circular Economy, linked to the SDC2 project.

PROJECTS

European project — **SUREWAVE** SUREWAVE webpage

The main objective of the project was to develop and test an innovative concept of a Floating Photo-Voltaic (FPV) system consisting of an external floating breakwater structure made of new circular materials acting as protection against severe wave loads on the FPV structure itself, allowing increased operational availability and energy output. Research laboratories and industrial partners from Norway, the Netherlands, Germany and Spain were involved.

National project — **SDC2 – Smart disassembly for circularity** SDC2 webpage

Circular economy can be seen as recycling, but this project wanted to promote higher value recovery thanks to components or module recovery. In SDC2, a multi-technology human-robot automatic cell was developed to test and define some potential disassembly lines. The platform development involved 6 French laboratories and industrial partners and started at the end of 2022.

PUBLICATIONS

Conferences — **3 articles, 2 as main author**

Presented two articles linked to my investigation in SUREWAVE in GEF (2024) and VI. MZT (2024). Coauthor of an article presented in CIRP LCE (2024) linked to SDC2.

Articles — **1 in an idexed journal**

For more information about the publications, it is available in **ueibar.github.io**.

EDUCATION

2021 – 2023 — **Master degree in Mechanical Engineering** Universidad del País Vasco (UPV/EHU). Bilbao, Spain.

Relevant course work: Mechatronics, Robotics, Structural dynamics, Fatigue design, Materials science, Advanced maths, Fabrication processes, Composite materials.

2022 – 2023 — **Research Master in KIMP: Advanced Production Systems** Arts et métiers (ENSAM). Lille, France.

Relevant course work: Mechatronics, Robotics, AI, Operational research, Machine learning.

2017 – 2021 — **Bachelor degree in Mechanical Engineering** Universidad del País Vasco (UPV/EHU). Bilbao, Spain.

Relevant course work: Mechanical design, CAD/CAM, Fluid dynamics, Supply chain management, Materials science.

LANGUAGES

Spanish - Native, **Basque** - Native | C1, **English** - B2, **French** - B1

HOBBIES

Sports : Cycling, basketball, football, handball, running; **Literature and cinema**; **Nature and travelling**