

# BEN VAN BAVEL

Researcher ◇ Mechanical Engineer ◇ Consultant

[linkedin.com/in/ben-vanbavel/](https://www.linkedin.com/in/ben-vanbavel/)

## PERSONAL PROFILE

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Mechanical engineer and researcher with a strong background in computational mechanics, statistics, programming, and composite materials. Proven track record in securing multi-million euro research funding, collaborating in cross-disciplinary industrial consortia, and leading R&D projects to translate research into industrial applications.

## COMPETENCES

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<b>Soft Skills</b>	Planning & Organization, Communication, Mentorship, Leadership & Collaboration
<b>Hard Skills</b>	Statistics, Computational Mechanics (FEM/FEA), Composite Materials, Programming
<b>Tools</b>	Python, Siemens NX (CAD), Simcenter 3D (CAE), Nastran, Samcef, Git
<b>Languages</b>	Dutch (Native), English (Fluent), French (Basic)

## EXPERIENCE

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<b>Research Associate</b> <i>Flanders Make @KU Leuven</i>	March 2025 - Present <i>Leuven, BE</i>
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- **Leadership:** Led a specialized Work Package within a €9.6M European research consortium (15 partners), coordinating R&D efforts to develop economical and sustainable composite hydrogen storage vessels.
- **Funding Acquisition:** Contributed to securing the €9.6M consortium budget, and independently secured €350k funding to valorize PhD research into industrial statistical software.
- **Technical Valorization:** Developed simulation-based reliability assessment software for mechanical product design in collaboration with industrial partners.
- **Mentorship:** Supervised 13 MSc theses and 1 early-stage researcher, focusing on mechanical engineering, statistical simulation and composite material reliability.

<b>Doctoral Researcher</b>	September 2020 - March 2025
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- **Innovation:** Developed a novel reliability-based design methodology for composite pressure vessels, reducing material costs by 20% while maintaining safety standards.
- **Collaboration:** Partnered with 3 PhD candidates and 3 multinationals (CAE software, automotive OEM, manufacturing) to realize a 4-year project "OptiVAS" on reliable hydrogen storage, ensuring industrial relevance.
- **Communication:** Presented research findings at 7 international conferences and published 5 journal articles, enhancing the visibility of the research group.

## EDUCATION

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<b>PhD in Mechanical Engineering</b> KU Leuven, Belgium	2020 - 2025
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Thesis: Reliability-Based Design of Filament Wound Composite Pressure Vessels: Incorporating Multiscale Spatial Material Variability

<b>MSc in Mechanical Engineering: Aerospace</b> KU Leuven, Belgium	2015 - 2020
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Grade: Magna Cum Laude

## INTERESTS

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Dog walking, playing guitar, reading (non)-fiction, board games, space(flight), building a pumpkin chunkin launcher