

Mr. Sorin DAHNOVICI

France | Singapore
www.sorin-dahnovici.com
sorin.dahnovici@gmail.com
www.linkedin.com/in/sorin-dahnovici
Driving Licence EU cat. B, A2

Mechanical Engineer, specialized in structural analysis graduated from INSA Rouen. Experienced in automation tool developing, R&D, structural analysis, and forensic failure analysis. Proficient in CATIA V5, ANSYS/Abaqus, and Microsoft Office Suite. Quadrilingual: French, English, Romanian, and Russian.

Skills & Languages

- FEA: ANSYS, LS-Dyna, Abaqus | CAD: CATIA V5, SolidWorks
- Programming: Matlab, Microsoft VBA, Python, Fortran
- Standards: RCC-M, Eurocode 3 and EN 13001
- Proficiency in Microsoft Office
- English (Advanced), TOEIC: 950 pts.
Romanian (Native); Russian (Intermediate)

Professional Experience

Technical Consultant / Cetim-Matcor

Singapore

Sept. 2024 – Aug. 2026

- Development of a **Python-Abaqus application** automating the calculation of performance envelopes for **composite pipes**, incorporating sales and training. Design validation using **LaRC-05** criteria.
- **R&D: Phase Field Modelling** for **SCC** and **Hydrogen Permeation in Metals (Abaqus UEL)** with experimental validation via a 4-point bending setup immersed in saline solution.
- **R&D:** Developed **CAFÉ** (Cellular Automata - Finite Elements) simulations coupling **Python** and **Abaqus** to model pitting corrosion.
- **FE analyses:** stamping process residual stress study, surveillance camera pole and weld analysis.
- **Forensic Failure Analysis** (Piping Stress Corrosion Cracking (**SCC**), boiler tube overheating failures, semi-brittle rupture of diesel engine exhaust valve, etc.).

Mechanical Stress Analysis Engineer / TechnicAtome

Aix-en-Provence, France

Dec. 2023 – Mar. 2024

- **Mechanical analysis and validation of nuclear equipment** (lifting clamp, pump support frame, etc.) using analytical methods (**Mathcad**) and numerical analysis (**ANSYS Mechanical**).

Mechanical Engineer / EDF UNIE (ALTEN sub-contractor)

Saint-Denis, France

Sept. 2022 – Nov. 2023

- Drafting of analytical **calculation notes (DERESMA, Eurocode 3, and RCC-M)** and mechanical design of anchoring structures for nuclear power plants (**CNPE**). Management of the "Anchorage" unit and coordination with **CNPEs**.

Maintenance Engineer / TotalEnergies

Le Havre, France

Sept. 2021 – Aug. 2022 (Work-Study Programme)

- Consolidation and **continuous improvement of maintenance methods** for the steam cracker furnaces.
- **Updating specifications and interfacing with suppliers** for a call for tenders for a **tubular heat exchanger** designed according to **ASME VIII div.2** and worth €500,000.

Others: Production Methods Intern at La SIARR, sales employee at Grand Frais and at the French Coffee Shop in Rouen, etc.

Educational Background

Mechanical Stress Engineering / INSA Rouen Normandie – 2022 Promotion

- Design and analysis of mechanical systems, including finite element numerical simulations.

Erasmus: Advanced Mechanical Engineering / Politecnico di Milano, Italie

- Machine Design, Signal Processing, and Production Systems Management.

Other activities

- **Co-founder**, Technical Director, and Head of Structural Division at INSA Rouen Racing (**Formula Student** single-seater car project). Organisational structuring and preliminary structural analysis (**LS-Dyna**).