



Elena García Trelles – Fraunhofer IWM

Unternehmensübergreifende Datenräume und rückverfolgbare Datenvernetzung für die datengetriebene Strukturauslegung

Work experience

Position: **Research engineer**

Dates: From March 2012 until present day

Principal subjects / occupational skills covered:

- Digitalization of process data based on knowledge graphs and Semantic Web technology with focus on material and mechanical testing data architecture (since September 2019). Projects: DMD4F, MaterialDigital, MatOLab, Alutrace.
- Characterization of metals used for high temperature applications (combustion chamber, turbine blades, turbocharger, cylinder head)
- Modelling of deformation and fatigue of DCIs, Steels and Ni-based Alloys
- FE simulation
- R&D projects within the aerospace and automobile industry (Rolls Royce, MAN, VFI-Gesellschaft für Forschung und Innovation)
- Project management, internal leading of a European research project within the framework Horizon 2020 generation of reports, presentation of results
- Communication with clients (English and German)
- Programming focused on fatigue data analysis and modelling
- Scanning electron microscope fractography for failure analysis

Organisation: Fraunhofer IWM, Wöhlerstr. 11, 79108 Freiburg

Group: Lifetime Concepts, Thermomechanics, www.iwm.fraunhofer.de

Education and training

Final degree project “Determinación de las propiedades mecánicas de estructuras sándwich para aplicaciones náuticas” (performance of different mechanical tests)

Dates: January 2011 – November 2011

Organisation: Escuela Politécnica de Ingeniería de Gijón - University of Oviedo

ERASMUS exchange student at Luleå University of Technology

Dates: August 2009 – June 2010

Organisation: Luleå University of Technology (Luleå, Sweden)

Industrial engineer – “Ingeniero industrial superior, especialidad de construcción”

Dates: 2005 – 2011

Organisation: Escuela Politécnica de Ingeniería de Gijón - University of Oviedo