

## Positions for two Marie-Curie PhD students and one Marie-Curie postdoc at Linz, Austria

### INSIST - Integrating Numerical Simulation and Geometric Design Technology

The Institute of Applied Geometry at Johannes Kepler University (Linz, Austria) has openings for two 3-year PhD student positions (early stage researchers) and for one 1-year postdoc position (experienced researcher 4-10 years experience) under an EU Marie-Curie Initial Training Network (Call: FP7-PEOPLE-2011-ITN) on "Integrating Numerical Simulation and Geometric Design Technology" (INSIST).



The objective of the INSIST ITN is the development of the next generation design/simulation methods based on isogeometric analysis. The idea of isogeometric analysis is to use the same functions that are used to approximate CAD models to approximate the unknown fields for engineering analysis and simulation. The key outcome of this research is a system/methodology that allows the analysis, simulation and design of engineering products in a more efficient way. We aim to extend the isogeometric analysis concept of Hughes and co-workers who focused on the unification of CAD and CAE whereas we aim to generalize this idea to unify pre-processing (in general) and analysis. The research programme is structured into 4 main sub-programmes:

- Programme A: CAD Feature Processing (2 projects).
- Programme B: Pre-Processing and Mesh Generation (4 projects).
- Programme C: Numerical Analysis/CAE (6 projects).
- Programme M: Voxel-Based Analysis (1 project).

The two students will be working in programmes B "Pre-processing and mesh generation" and C "Numerical analysis/CAE." The postdoc will be working in programme A "CAD Feature Processing".

Suitable candidates for the PhD student positions will have masters (or equivalent) degrees in Mathematics, Engineering, Computer Science, or a closely related subject. They must have proven excellent programming and mathematical skills, and experience in discretisation techniques. Experience with numerical methods for solving partial differential equations is an advantage.

The suitable candidate for the postdoc position will have a PhD degree in Mathematics, Engineering, Computer Science, or a closely related subject. The candidate is expected to possess a strong background in isogeometric analysis.

The successful candidates will participate in a research training network of an EU-funded Marie Curie ITN and will work in a highly interactive international environment with other Marie-Curie PhD students, researchers and industry. They will execute a part of the work during extended visits at the partner institutions outside of Austria. Yearly reference rates: Early-stage researchers (€ 38.000,- 30 hours per week), Experienced Researchers (€ 58.500,- fulltime) furthermore the benefits of the correction Coefficients, Mobility allowance, career exploratory allowance, etc.

<http://ec.europa.eu/research/participants/portal/page/people?callIdentifier=FP7-PEOPLE-2011-ITN>

Eligibility requirements to the Marie-Curie ITN scheme include that the candidates have not spent more than 12 months in Austria in the 3 years immediately preceding the appointment for this position. For further details on eligibility see Work Programm 2011-People

[ftp://ftp.cordis.europa.eu/pub/fp7/docs/fp7-mga-annex3intramulti\\_en.pdf](ftp://ftp.cordis.europa.eu/pub/fp7/docs/fp7-mga-annex3intramulti_en.pdf)

Please send your application (a letter describing your motivation to apply for this post, CV, names of two referees) to

[bert.juettler@jku.at](mailto:bert.juettler@jku.at)

For information on the Marie-Curie program, check:

<http://ec.europa.eu/research/mariecurieactions/>

