Friedrich Grabner | Resumé

Apartment a22, 15 Rue Simone de Boudet – 31200 Toulouse – France
+44 7713 446 893 • +33 (0)6 58 37 58 07
f.m.grabner@warwick.ac.uk

Patience is bitter, but its fruit is sweet.

Current Position

ISAE-SUPAERO **Toulouse, France**
Researcher *10/2015–06/2016*
Working on code optimisation and parallelisation techniques for large object-orientated CFD codes at the petascale of FLOPS. This involves the use of HPC preformance analysis software, such as HPCToolkit, to identify bottlenecks within the code and find novel solutions to said issues.

University of Warwick - Mechanical Engineering MEng

Third Year **1st class**
Modules: : Dynamics of Vibrating Systems: Engines and Heat Pumps: Mechanical Design: Planar Structures and Mechanisms: Fluid Mechanics for Mechanical Engineers: Third Year Thesis (see below)

Second Year **2:1**
Modules: : Design and Durability: Technological Science 2: Starting and Running a Business: Computer Systems

First Year **2:1**
Modules: : Design for Function: Technological Science: Economics and Structure of Industry: Biomedical Engineering

Third Year thesis

Title: *DNS of jet flows: The effect of inflow conditions on the near and far fields using spectral element methods.*

Supervisor: Dr Y.M. Chung

Description: Using spectral element solver Nek5000 free circular jet flows were simulated for two different inlet conditions, laminar and turbulent, for Reynolds number 3600.

Result: 1st class

Experience

Research

Centre for Scientific Computing **The University of Warwick, United Kingdom**
Undergraduate Research Scheme *Summer 2015*
- Continued simulations from third year thesis, investigating the effects of increased Reynolds number.
- Improved the mesh for simulations to make better use of resources.

Centre for Scientific Computing **The University of Warwick, United Kingdom**
Undergraduate Research Scheme *Summer 2014*
- Used spectral element code Nek5000 to simulate pipe flows.
- Investigated the effects of objects in the flow stream, validated Nek5000's accuracy.

Industrial

Zimmermann PV-Stahlbau — **Oberessendorf, Germany**
Intern — *22/06/2015–01/09/2015*
Overview:
- Was given responsibility to alter design of solar mounting system for current and future projects, using both 2D and 3D CAD.
- Remodelled assembly guides.
- Created English language versions of framework contracts, individual projects and non-disclosure agreements.

ProDrive — **Banbury, United Kingdom**
Intern — *April 2014*
Overview:
- Worked in technical assembly, manufacturing and testing high performance automotive components.
- Shadowed staff during meetings organising the set-up of new production lines.

Kupplungswerk Dresden — **Dresden, Germany**
Intern — *15/07/2013–30/08/2013*
Overview:
- Company who make power train couplings for various applications from rail, mining to agriculture.
- Made small CAD alterations for current projects.
- Created new English language operation manuals.

Beach Horizon — **London, United Kingdom**
Intern — *April 2013*
Overview:
- Work shadowed at a hedge fund.
- Learnt theory behind technical trading, creation of trading algorithms and futures financial products.
- Wrote a small program in C to trade, which was tested on historical market data.

Secondary Education - 2004-2012

King Henry VIII Comprehensive School, Abergavenny, Wales

A Levels: *Maths(A), German(A), Physics(B)*
AS Levels: *Religious Studies(A), History(B), Music(C), French(C)*
GCSEs: *3x(A*), 5x(A), 1x(B), 2x(C)*

Languages

English: *Fluent*
German: *Fluent*
French: *Intermediate*
Welsh: *Basic*

Computer skills

Engineering Software: Autocad, Creo, MatLab, Simulink, Solidworks
MS Office: Word, Excel, etc...
Programming: C, C++, Fortran, python
Visualisation: Paraview, VisIt, techplot, GNUPlot
CFD: ANSYS Fluent, Starccm+, Starcd, ICEM CFD, Nek5000, nektar++, openFOAM
Linux/UNIX/HPC: Bash Scripting, UNIX commands, torque, HPCToolkit, libreoffice, latex

References

Available on request.