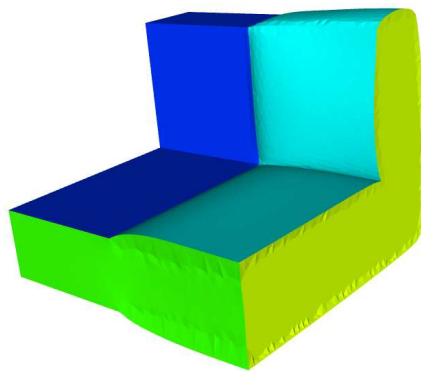


Doctoral Position

Computation of Die Swell behind a Complex Profile Extrusion Die

Profile extrusion is a manufacturing process for continuous plastic profiles, such as pipes or window panes. The highest design effort is caused by the extrusion die, which, at the current state of the art, has to be designed based on experience and running-in experiments. One of the key properties of plastics melts are their viscoelastic behavior, which leads to die swell when the material leaves the shape giving extrusion die. An important step towards dimensional accuracy is therefore the accurate numerical prediction of the amount of die swell. The latter will be your task. Towards this goal, a viscoelastic model will have to be analyzed regarding its numerical properties and subsequently implemented into the existing flow solver. Simulations will be based on an in-house software employing stabilized finite element formulation of incompressible flow.



Your profile: Requirement for this position is a diploma or masters degree in CES, engineering, applied mathematics, physics or a similar subject with superior academic record. Practical programming experiences in Fortran or C as well as with parallelization (MPI or OpenMP) are of advantage. Familiarity with UNIX operating system would be ideal. We expect you to contribute to general tasks at the institute, such as teaching or advising master or project theses.

Our offer: The candidate will be employed as a regular employee and must meet required personal qualifications. This is a full-time position and the salary is according to TV-L E 13. Initially, it is a fixed-term position for one year, but is expected to be extended for up to five years. Applications are being reviewed now.

RWTH Aachen University has been rewarded with the Total-E-Quality-Award“ for its efforts with respect to gender equality. In cases of equal qualification, aptitude and expertise of the applicants, female applicants will be given preferential treatment for those salary groups and careers in which females are underrepresented, unless there are preponderant reasons to give preference to another applicant. RWTH Aachen University has been rewarded with the title “disability-friendly”(Prädikat behindertenfreundlich“) for its efforts with respect to training and employment of severely disabled people. Applications from severely disabled with appropriate suitability are explicitly welcome.

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Starting date: as soon as possible