

Within the last decade, computational techniques have become increasingly relevant in areas such as biomedicine, engineering, etc. Often, complex models covering interacting phenomena from multiple fields of physics have to be studied and the need for multiphysics simulation tools arises. The IT'IS Foundation employs more than 20 electrical engineers, physicists and computer engineers and is active in the fields of modeling, electromagnetic exposure as well as dosimetric measurements and is extending its current activities in the field of biomedicine. Together with the ETH and its spin-off SPEAG it has developed one of the most advanced TCAD platforms for the numerical simulation of electrodynamic and thermal physics. IT'IS has experience in studying tumor growth and treatments as well as blood flow related phenomena.

## **Development of a Multiphysics Framework (PhD)**

### **Job Profile:**

In this context we are offering an interesting PhD. It will focus on creating a multiphysics environment suitable for the flexible coupling of different solvers and extending our existing range of solvers. Additional tasks will include the development of visualization pipelines and optimized solutions for specific application problems. Parallelization and hardware accelerated computing are other potential fields of work.

The PhD will be embedded in a highly motivated and dynamic team working in various related research areas. Furthermore, we work together with prominent research laboratories as well as worldwide leading companies in telecommunications and biomedicine. Our close ties with manufacturers, government bodies and regulatory agencies ensures a socially relevant impact of the work on practical application

### **Education:**

We are looking for talented candidates interested in the modeling of physical and biomedical phenomena with a strong theoretical background in numerics and a university degree in (medical) physics, mathematics, computer science, material science, electrical/communications engineering or in a similar field. Enhanced knowledge and skills in programming (C/C++/vtk/python) and corresponding tools (Windows and Linux/UNIX based platforms) are recommended.

Are you interested? We look forward to receiving your application (complete resume materials including references, as a pdf file). For further information or to discuss the scope of this position please contact Dr. Esra Neufeld ([greatjobs@itis.ethz.ch](mailto:greatjobs@itis.ethz.ch) or phone +41 44 245 9696).

Please send your application to:

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