

Within the last decade, the use of computational techniques in areas of computational electrodynamics as well as the modeling of thermal processes has become indispensable in scientific as well as commercial R&D environments. ETH and the IT'IS Foundation together with different partners have developed one of the most advanced TCAD platforms for the numerical simulation of electrodynamic and thermal physics.

## **Computational Thermo- / Electro-Dynamics for Cancer Treatment (PhD)**

### **Job Profile:**

In this context we are offering an interesting PhD. Its focus will be on the development of novel tools and techniques enabling fast and accurate thermal modeling based on MRI data, mainly addressing the following applications:

- Effective patient-specific Hyperthermia cancer treatment planning by coupled EM and thermal simulations
- Development of new RF related safety standards.
- The task may also include fast conversion methods of MRI data into 3D computational models of the human body.

The PhD will be embedded in a highly motivated and dynamic team of electrical engineers, physicists and computer engineers at ETH working in various related research areas. Furthermore, we work together with prominent research laboratories as well as worldwide leading companies in telecommunications and biomedicine.

### **Education:**

We are looking for talented candidates with theoretical background and a university degree in electrical/communications engineering, computer science, (medical) physics or in a similar field. Enhanced knowledge and skills in programming (C/C++) and corresponding tools (Windows and Linux/UNIX based platforms) is 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. Nicolas Chavannes ([greatjobs@itis.ethz.ch](mailto:greatjobs@itis.ethz.ch) or phone +41 44 245 9696).

Please send your application to:

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