C2S@Exa
Computer and Computational Sciences at Exascale

Postdoctoral project proposal

Parallel hybrid solver for DG linear systems in the 3D time-harmonic Maxwell équations with application to radar cross section evaluation

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HiePACS project-team
Inria Bordeaux – Sud Ouest research center

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Starting date : 1/9/2014
Duration: 24 months

A one-year post-doc research position (with possible extension for an additional year) is available at Inria to work in the framework of a project entitled "Novel High-Performance Numerical Solution Techniques for RCS Computations" (TECSER funded by the ANR). This project involves three Inria teams (CORIDA, HiePACS and NACHOS), Airbus Group Innovations and the company Nuclétudes.

In that framework, the candidate will work on the solution of large sparse linear systems arising from the 3D discontinuous Galerkin discretization of Maxwell's equations by using hybrid direct-iterative schemes for industrial applications. The candidate will be hosted by the HiePACS team (https://team.inria.fr/hiepacs/) from Inria Bordeaux Sud-Ouest and will make short time (couple of weeks) visits in the CORIDA (http://iecl.univ-lorraine.fr/Corida/members.htm) team from Inria Nancy-Grand Est.

We are looking for candidates at the post-doc level with strong interest, motivation and background in computational sciences (scientific computing or/and applied mathematics or computer science), experience in high-performance computing would be an asset. Applicants should provide a complete curriculum vitae, a list of referred papers published and submitted, a brief statement describing his or her research interests. Applicants should also provide the names and contact informations for three additional references.

The position can be starting ideally by the end of summer 2014, flexibility exists for an earlier hiring. The income salary is about 2100 euros/month net before incoming taxes. Applications must be sent by email to xavier.antoine@univ-lorraine.fr and luc.giraud@inria.fr.