

Application BASTRI

Fiches Equipes

COFFEE (SR0578RR)

CComplex Flows For Energy and Environment
COFFEE (SR0472AR) ☐ COFFEE

Statut: Terminée

Responsable : Thierry Goudon

Mots-clés de "A - Thèmes de recherche en Sciences du numérique - 2024" : *Aucun mot-clé.*

Mots-clés de "B - Autres sciences et domaines d'application - 2024" :
Aucun mot-clé.

Domaine : Santé, biologie et planète numériques
Thème : Sciences de la planète, de l'environnement et de l'énergie

Période : 01/01/2013 -> 31/12/2023
Dates d'évaluation : 18/03/2014 , 13/03/2018 , 01/12/2022

Etablissement(s) de rattachement : CNRS, UCA
Laboratoire(s) partenaire(s) : LJAD (UMR7351)

CRI : Centre Inria d'Université Côte d'Azur
Localisation : Laboratoire JA Dieudonné- Université Côte d'Azur
Code structure Inria : 041139-1

Numéro RNSR : 201121214R
N° de structure Inria: SR0578RR

Présentation

The project aims at studying mathematical models issued from environmental and energy management questions. We consider systems of PDEs of hydrodynamic type or hybrid fluid/kinetic systems. The problems we have in mind involve unusual coupling, which in turn leads to challenging difficulties for mathematical analysis and the need of original numerical solutions. By nature many different scales arise in the problems, which allows to seek hierarchies of reduced models based on asymptotic arguments. The topics require a deep understanding of the modeling issues and, as far as possible boosted by the mathematical analysis of the equations and the identification of key structure properties, we wish to propose innovative and performing numerical schemes.

Axes de recherche

The COFFEE team is particularly interested in the modeling and simulation of * Particulate flows, Mixture flows * Low Mach flows, radiative transfer * Flows in porous media * *Simulation of multiphase compositional flows* * Plasma physics * Biological degradation (biological damage on monuments, biofilms formation and algae proliferation). It also covers modeling, simulation and analysis of * hyperbolic systems* kinetic equations *, possibly including stochastic effects.

Relations industrielles et internationales

The project has established collaborations with several institutes and companies, like ANDRA, BRGM, CEA, Total, GdF-Suez...

Contact

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En savoir plus

- Site de l'équipe
- Site sur inria.fr
- Site du [responsable](#)
- Derniers Rapports d'Activité : [2016](#) , [2017](#) , [2018](#) , [2019](#) , [2020](#) , [2021](#) , [2022](#) , [2023](#)

Documents sur la structure

- [Intranet](#)
- [Privés](#)

Décisions

- [9320](#) (05/04/2013) : création
- [10554](#) (26/01/2015) : prolongation
- [13246](#) (10/12/2018) : prolongation
- [15815](#) (29/11/2022) : prolongation
- [16863](#) (01/03/2024) : fermeture

Localisation

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