

数学与系统科学研究院

计算数学所学术报告

报告人: **Prof. Philippe Ricoux**

( *TOTAL SA, R&D Group, PARIS LA DEFENSE, FRANCE* )

报告题目:

**Numerical simulation, High  
Performance Computing and  
Physical Modeling in Oil & Gas  
Industry**

邀请人: **戴小英 研究员**

报告时间: **2018 年 5 月 24 日 (周四)**

**上午 10:00-11:00**

报告地点: **科技综合楼三层**

**311 报告厅**

## Abstract:

Facing energy future, the efficient use and successful exploitation of modern High Performance Computing (HPC) therefore play a significant role in delivering increased understanding of realistic fundamental and engineering problems through high fidelity modeling, simulation, and optimization.

HPC allows also facing the challenge in code coupling: both a **horizontal direction -multi-physics** and in the **vertical direction -multi-scale models**.

This leads to improve at the same time more accurate “physical” model and numerical methods and algorithms in TOTAL strategic activities such as: Depth Imaging by solving wave’s equation, Reservoir modeling by solving transport, thermal and chemical equations ...

## Short Bio:

Dr Philippe Ricoux, Fellow of TOTAL group, is the scientific leader of the Numerical Processing and Modeling group at the TOTAL R&D group, innovative development of transverse technologies such as applied mathematics, numerical simulations, high-performance computing , extreme computing & extreme data, multi-scale simulations, multi fluids flow, dynamic modeling, signal and image processing, etc.

Dr Ricoux trained as Mathematics and Signal Processing Engineer (SUPELEC) and Chemical Engineering Engineer (ENSIC), and hold his PhD (1980) on the Optimal Control of Catalytic Chemical Reactors. He has spent the majority of his career undertaking scientific research and is the author of several patents and publications. He is for a long time an expert for the US Department of Energy and EU R&D, the leader of the European project on Exascale Applications.

During the last 5 years, Dr Ricoux led a large project on multi scale modeling of liquid – solid flows in collaboration with the Institute of Process Engineering of the Chinese Academy of Sciences.

**欢迎大家参加！**