IV Kratos Workshop 2018

7th and 8th June 2018

The Kratos course will be divided into three different modules.

Day 1

K1 KRATOS in engineering

During this module Kratos tool will be presented. A comprehensive overview of its capabilities in dealing with multi physics problems will be shown. The different research groups working with Kratos will present their own experience and research lines showing the capabilities of their applications.

K2 ROUND TABLE

Discussion about the past and the future of Kratos

Day 2

K3 KRATOS short COURSE

This is a module addressed to researchers and engineers who wants to join the Kratos developers community.

During this course the attendants will be initially taught how to download and install Kratos joining the Kratos Github community. Secondly they will enter the Kratos structure by using simple python scripting. After this course the user will be able to run custom cases using existing applications, to couple existing applications, to create a new application and add it to Kratos project.

Basic python knowledge required.

IV Kratos Workshop 2018

REGISTRATION: https://goo.gl/forms/tgn6gavPSrluViWF2 **before May 31, 2018**
Venue:

Building C1, Campus Nord UPC,
calle Jordi Girona 1-3,08034, Barcelona, Spain

AGENDA day 1 - 7th June 2018 - ROOM C1-001 (ground floor)

11:00-16:00 - K1– KRATOS IN ENGINEERING

11:00-11:15	KRATOS welcome and introduction
11:15-11:35 (1)	Structural Mechanics application
11:35-11:55 (2)	Fluid Dynamic application
11:55-12:15 (3)	DEM
12:15-13:00 (4)	KRATOS - CIMNE research lines: • METHODS continuum methods, particle methods (PFEM, DEM-CFD, MPM), coupled method (FSI, thermo-mechanical coupling, etc…), HPC • APPLICATIONS Virtual wind tunnel, Porous media flow, Hydraulic fracture, Geomechanics, Dam Engineering, Ballast, Biomechanics etc…
13:00-14:00	Lunch
14:00-15:00 (5)	KRATOS – TUM – Chair of Structural Analysis (K.-U. Bletzinger and R. Wüchner) research lines 1. Martin Fuesseder: "Sensitivity computation for structural responses w.r.t. different kind of design parameters using the adjoint approach and processing the results within the so-called method of generalized influence functions" 2. Daniel Baumgärtner: "Optimization with Kratos Multiphysics" 3. Tobias Teschemacher: "Realization of Isogeometric B-Rep Analysis (IBRA) / Isogeometric Analysis (IGA) workflow in Kratos Multiphysics"
15:00-16:00 (6)	KRATOS – ALTAIR research lines
16:00-16:30	Coffee break

16:30-18:00 - K2– ROUND TABLE

AGENDA day 2 - 8th June 2018 – ROOM O.C. Zienkiewicz (2nd floor)

9:00-18:30 - K3– KRATOS short COURSE

9:00-9:30(1)	KRATOS DOWNLOAD AND INSTALLATION
9:30-10:00 (2)	KRATOS ARCHITECTURE
10:00-10:30 (3)	KRATOS. HOW TO RUN A GID EXAMPLE
10:30-11:00	Coffee break
11:00-12:00 (4)	KRATOS-PYTHON SCRIPTING READING
12:00-13:00 (5)	KRATOS-PYTHON SCRIPTING BASIC CUSTOMIZATION
13:00-14:30	Lunch
14:30-16:30 (6)	KRATOS- COUPLED PROBLEMS VIA PYTHON
16:30-17:00	Coffee break
17:00-18:30(7)	KRATOS ON GITHUB KRATOS APPLICATION GENERATION KRATOS SYMBOLIC

REMARK: All the attendants to the Kratos course are kindly required to bring their own laptop.