

CATHARE 3 WORKSHOP

Objective: This training course is designed for users of the CATHARE 3 code. Upon completion of this training, you will be able to use the main functionalities of CATHARE 3 to conduct your studies.

Prerequisites: Knowledge of two-phase flow thermo-hydraulics, familiarity with using a workstation running Linux.

Duration: 4 days

Location: CEA Saclay, Training Room 45 of the Maison de la Simulation (Porte d'Orphée)

Planning :

JOUR 1			
Schedule	Session	Speaker	Title
8:45-9:15	Welcome		
9:15-10:00	I.A & I.B	Raphael PREA	Introduction : CATHARE development and validation strategy, code general organization
10:00-11:30	I.C	Marc TAJCHMAN	CATHARE input decks - POSTPRO decks
11:30-11:45	Break		
11:45-12:30	I.D Exercice	Amandine CAPOGNA (Marc TAJCHMAN)	Practical exercise : First computation
12:30-14:00	Lunch		
14:00-15:00	I.E	Lucia SARGENTINI	Physical modelling approach in CATHARE 3
15:00-15:15	Break		
15:15-16:45	I.F	Valentin COTTAREL	1-D Element, TEE, Junctions & Boundary Conditions

JOUR 2

Schedule	Session	Speaker	Title
8:45-9:45	II.A	Marine ANDERHUBER	GUTHARE, the CATHARE Graphical User Interface
9:45-10:30	II.B Exercice	Marine ANDERHUBER (Amandine CAPOGNA)	Practical exercise on a reactor pressure vessel (1/4)
10:30-10:45	Break		
10:45-11:15	II.C	Alexis BERNY	0D (VOLUME) MODULE
11:15-11:45	II.D Exercice	Marine ANDERHUBER (Alexis BERNY)	Practical exercise on a reactor pressure vessel (2/4)
11:45-13:15	Lunch		
13:15-14:00	II.E	Marine ANDERHUBER	WALL & EXCHANGER submodule
14:00-14:30	II.F Exercice	Marine ANDERHUBER (Amandine CAPOGNA)	Practical exercise on a reactor pressure vessel (3/4)
14:30-14:45	Break		
14:45-15:15	II.G	Alexis BERNY	How to obtain the initial state and the reference state ?
15:15-16:45	II.H Exercice	Alexis BERNY (Lucia SARGENTINI)	Practical exercise on a reactor pressure vessel (4/4)

JOUR 3

Schedule	Session	Speaker	Title
8:45-9:15	III.A	Marine ANDERHUBER	Neutronics : the point kinetics model
9:15-9:45	III.B	Marine ANDERHUBER	Mechanics : the deformation model
9:45-10:15	III.C	Marine ANDERHUBER	How to define specific fluids ?
10:15-10:30	Break		
10:30-11:15	III.D Exercice	Marine ANDERHUBER (Lucia SARGENTINI)	Practical exercise with sodium fluid
11:15-11:45	III.E Exercice	Marine ANDERHUBER (Lucia SARGENTINI)	Practical exercise on PERICLES 1D
11:45-13:15	Lunch		
13:15-13:45	III.F	Alexis BERNY	How to use sources and sinks ?
13:45-15:00	III.G Exercice	Alexis BERNY (Florian GUILLOU)	Practical exercise on injection and subtraction
15:00-15:15	Break		
15:15-15:45	III.H	Florian GUILLOU	CATHARE gadgets (Valves, CCFL)
15:45-16:45	III.I Exercice	Florian GUILLOU (Amandine CAPOGNA)	Practical exercise on Valves (Accumulateur)

JOUR 4			
Schedule	Session	Speaker	Title
8:45-9:45	IV.A	Valentin COTTAREL	How to use rotating machinery (pumps, turbines,...) ?
9:45-10:45	IV.B Exercise	Marc TAJCHMAN	Practical exercise on TABLE
10:45-11:00	Break		
11:00-12:00	IV.C	Amandine CAPOGNA	Presentation of the 3D module
12:00-13:30	Lunch		
13:30-15:30	IV.D Exercise	Amandine CAPOGNA (Alexis BERNY)	Practical exercise on a 3D input deck
15:30-15:45	Break		
15:45-16:15	IV.E	Amandine CAPOGNA	The 3D module in the GUITHARE GUI
16:15-16:45	IV.F	Raphael PREA	Questions and Training workshop evaluation