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**Project acronym:** NanoSim

**Project title:** A Multiscale Simulation-Based Design Platform for Cost-Effective CO<sub>2</sub> Capture Processes using Nano-Structured Materials (NanoSim)

**Funding scheme:** Collaborative Project

**Thematic Priority:** NMP

**THEME:** [NMP.2013.1.4-1] Development of an integrated multi-scale modelling environment for nanomaterials and systems by design

**Starting date of project:** 1<sup>st</sup> of January, 2014

**Duration:** 48 months

**Document ID:** NanoSim-WP4-D9.8\_Delivery\_AcademicTrainingFeedback

WP N°	Del. N°	Title	Contributors	Version	Lead beneficiary	Nature	Dissemin. level	Delivery date from Annex I	Actual delivery date dd/mm/yyyy
1	D9.8	Academic Training and Student Feedback	Author: Stefan Radl Checked by: Christoph Kloss (DCS)	1	TUG	R	PU	30/06/2015	03/07/2015

# 1 Introduction

This document summarizes (i) the portfolio of courses offered by the NanoSim consortium, (ii) the main channels available for user feedback, as well as (ii) the results of feedback studies so far.

## 1.1 Document identification

<b>Document Identification</b>	<b>ACADEMICTRAININGFEEDBACK_M18</b>
<b>Author(s)</b>	Stefan Radl
<b>Reviewers</b>	DCS
<b>Manager</b>	Stefan Radl (TUG)
<b>Version of the Product</b>	0.1
<b>Version of CAT</b>	1.0.1
<b>Version of feedback form</b>	1.0.1

## 1.2 Scope

The efficient use of simulation and data analysis tools requires highly-skilled researchers and engineers that are familiar with (i) the necessary theoretical background, and (ii) the features offered by the tools. NanoSim has decided to offer academic education and training activities to meet these requirements as specified in Task 9.4 of the DoW. The courses and training web page (CAT) constitutes the central hub for this dissemination activity. CAT is embedded in the OPH-PU, i.e., the core project hosting web resource.

## 1.3 References

<b>Acronym</b>	<b>Name</b>
<b>CAT</b>	The courses and training web page hosted on github: <a href="https://github.com/NanoSim/CoursesAndTrainingPortfolio">https://github.com/NanoSim/CoursesAndTrainingPortfolio</a>
<b>FEEDBACKR</b>	A publicly available platform for the collection of user feedback <a href="https://www.feedbackr.io/">https://www.feedbackr.io/</a>
<b>DOW</b>	Description of Work (Work Package 9)
<b>OPH-PU</b>	Online Project Hosting – Public ( <a href="https://github.com/CFDEMproject">https://github.com/CFDEMproject</a> and <a href="https://github.com/NanoSim">https://github.com/NanoSim</a> )

## 1.4 Course Portfolio

The CAT platform has currently four subsections as shown in Figure 1: three for individual topics related to the project, and one for user feedback. Links to available online teaching material are collected on this platform in order to make it easy for potential users to access the material. For example, TU Graz hosts the relevant course on the “TeachCenter” (see Figure 2) , which allows students to not only access the course material, but also hosts a forum and links to the official syllabus.

### Course Material Overview

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[PDF showing Overview of the Course Portfolio](#)

#### Atomistic Modeling

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- [Course Material offered by University College London \(UCL\)](#)

#### Lagrangian Modeling

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- [Course Material offered by TU Graz \(Austria\)](#)
- [Course Material offered by DCS Computing GmbH \(Austria\)](#)

#### Eulerian Modeling

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- [Course Material offered by TU Graz \(Austria\)](#)
- [Useful external courses](#)

#### Feedback

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- [Link to Feedback Platform](#)

#### Acknowledgement

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#### Copyright Notice

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Figure 1. Overview of NanoSim’s CAT platform.

**NanoSim**  
 NanoSim - A Multi-scale Simulation-Based Design Platform for Cost-Effective CO<sub>2</sub> Capture Processes using Nano-Structured Materials

TU Graz Teach Center | VU - Mehrphasenprozesstechnik [669.266, CHE.782, CHE.874]

HELP | SEARCH | FORUM | USERS

ANNOUNCEMENTS | COURSE CURRICULUM | COURSE LIBRARY | HTML SITE

Download | Portfolio

**LectureHandOut** 28.03.2014

- 0\_IntroductionSlides\_2014.pdf Document 28.03.2014  
File Size: 591 Kb
- 1\_a\_TurbulenceTheory\_2014.pdf Document 28.03.2014  
File Size: 10.713 Mb
- 1b\_Mixing\_2014.pdf Document 28.03.2014  
File Size: 1.054 Mb

**Script** 29.05.2015

- 1\_BasicsMixingFastChemicalReactions.pdf Document 02.03.2014  
File Size: 2.808 Mb
- 2\_ImmobilizedCatalysts.pdf Document 03.06.2014  
File Size: 4.860 Mb
- 3\_RheologyTransportPhenomena.pdf Document 02.03.2014  
File Size: 202 Kb
- 4\_fluidizedBedTechnology\_new.pdf Document 06.06.2014  
File Size: 7.604 Mb
- 5\_GassedStirredTanks.pdf Document 02.03.2014  
File Size: 3.646 Mb
- 6\_ModelingSimulation\_partA.pdf Document 12.06.2014  
File Size: 1.743 Mb
- 6\_ModelingAndSimulation\_partB.pdf Document 12.06.2014  
File Size: 5.874 Mb
- 7\_IntroToMicrofluidics.pdf Document 29.05.2015  
File Size: 1.515 Mb
- Appendix\_A\_VectorsTensorsNon-NewtonianFluidMechanics.pdf Document 03.06.2014  
File Size: 117 Kb
- Appendix\_B\_LIGGGHTS\_intro.pdf Document 12.06.2014  
File Size: 1.081 Mb
- Appendix\_C\_screencastsLIGGGHTS.txt Document 12.06.2014  
File Size: 1 Kb

Exam 02.06.2015

Exercises 16.11.2014

Papers 30.03.2015

**Lecture Recordings** 16.11.2014

- 28. March 2014 (1 - Introduction and Outline) Movie
- 28. March 2014 (2 - Application Areas & Turbulence) Movie

Anonymous Student | LogIn | Map | My Courses

Course evaluation: ★★★★★ [Total 0/Average: 0.0]

**RECENT CHANGES**

**ADDITIONAL TOOLS**

- Recent Visitors 17.06.2015
- My Files 13.03.2015
- Books 28.03.2014

**RSS FEEDS**

- This Course

**ONLINE USERS**

TC Version 1.4 (01.04.2014)  
 Benutzerrichtlinien | Impressum  
 Feedback

Figure 2. Snapshot of TU Graz' Teach Center (shown is the "course library that hosts the teaching material and lecture recordings).

## 1.5 User Feedback

The CAT platform also hosts a page that allows users to give feedback using “FEEDBACKR” (<https://www.feedbackr.io/>). The request for user feedback was sent out to all involved partners in Task 9.4. Input from all users that have been trained by the project partners has been requested. While details about the first feedback round are collected in Chapter 2.3, the most important results of this round can be summarized as follows:

- None of the current users was informed via an industrial workshop. This suggests that such a workshop could facilitate the dissemination activities.
- The group size for training was mainly between 6 and 20, with typically 1 to 3 tutors. This seems to be adequate.
- The current quantity and quality of the training material was acceptable, with some room for improvement.
- Users were provided mainly with printed training material, however, they would prefer online training material and screencasts.
- All users are aware of the user and developer forums.

## 2 Appendix

### 2.1 Document Change Log

Date	Description	Author(s)	Comments
20.06.2015	Initial version	Stefan Radl	
02.07.2015	Review	Christoph Kloss	

### 2.2 Glossary

*See List of definitions and abbreviations in Section 1.3*

### 2.3 Details of User Feedback

Details are available online via:

[https://github.com/NanoSim/CoursesAndTrainingPortfolio/blob/master/PDFs/2015-06-30\\_AcademicTrainingAndFeedback.pdf](https://github.com/NanoSim/CoursesAndTrainingPortfolio/blob/master/PDFs/2015-06-30_AcademicTrainingAndFeedback.pdf)