POREXPERT

Online training

Three 4-hour sessions on three convenient days, via e.g. MS Teams or Zoom

Presented by Prof. G.Peter Matthews and staff of PoreXpert Ltd as available

Examples start times and approximate session times, with comfort breaks as convenient.

Day 1. Basic modelling of simple samples

09:30

Welcome
Introductions: course leader and attendees'
backgrounds and interests.
Check all participants have working copies of PoreXpert v2.
Aims of the course. Running PoreXpert in your native language[1]

09:45

Presentation 1
Scientific basis of PoreXpert
with emphasis on mercury porosimetry

11:00

Hands-on session 1
Fitting a mercury porosimetry curve
See the Introduction to Initialisation tutorials,
then carry out the
Sampling tutorial , Fitting tutorial and Building tutorial

11:45

Presentation 2
Structure type, cluster analysis, connectivity
and content distributions, microtoming

12:45

Hands-on session 2
See the Introduction to Analysis operations tutorials, then carry out the
Auto cluster ratio tutorial, Connectivity distribution tutorial and Content
distribution tutorial. Read the description of Microtoming, and microtome a
sample via the PoreXpert Analysis dropdown menu

Day 2. Valid modelling of client's own samples

09:30

Presentation 3
Avoiding errors and artefacts
Demonstration of how to use batch mode

10:00

Hands-on session 3
Carry out the tutorials on Pore Batch, and
Artefacts and Stochastic realisations

11:00

Presentation 4
Implications of unit cell size
as described in the Help system

11:15

Hands-on session 4
Carry out the tutorial on
Modelling your own sample

12:00

Presentation 5 and Hands-on session 5
Applying PoreXpert to client's samples
Using the trimmed and thinned[2] data provided, find representative
PoreXpert unit cells for the client's samples . Report results in pdf report
format, csv files and PoreXpert (xml) format.

Day 3 . Pore-fluid properties, and targeted modification

09:30	**Presentation 6** **Simulating pore fluid properties.** **Model validation**
10:30	**Hands-on session 6** Model a property of interest to you using a unit cell representing a client's sample, guided by the [Calculation Operations tutorial introduction](#)
11:30	**Presentation 7** **Materials database** **Targeted modification - What if ?** Brief presentation followed by demonstration
12:00	**Hands-on session 7** Use the [description in the Help system](#) to assist your use of the Targeted Modification facility. Carry out a Targeted Modification investigation procedure to find out how a sample modification of interest to you, such as ageing or processing, changes the void network of the sample, and hence pore-fluid properties.
13:00	**Final feedback session** **and farewells**

[1] PoreXpert's graphical user interface, and data interface with e.g. MS Excel, can be changed instantly to an English, French, German, Italian, Spanish or Portuguese locale – examples are shown in the [Help system](#).

[2] For best results, porosimetry input data should be thinned so that it is equally spaced along the intrusion curve (assuming all measured points are considered equally important). Thinning is currently available using uncompiled Python source code, available from the [Downloads page](#). It will be incorporated into a new application, PoreXY, available mid 2022.