



## Advanced workshop on Rietveld Refinement with Profex and BGMN

An advanced block course for materials scientists, earth scientists, and chemists interested in using the Rietveld refinement software Profex and BGMN for the characterization of inorganic materials.

The workshop is aimed at users with basic experience in powder X-ray diffraction and Rietveld refinement with the open-source software Profex and BGMN, who are interested in learning more about advanced applications of Rietveld refinement with this software package. Lectures will focus on i) instrument configuration files and structure files for Profex, ii) advanced refinement techniques, and iii) refinement of **clay minerals**.

Date: June 13 – 15, 2018

Location: RMS Foundation  
Bischmattstrasse 12  
2544 Bettlach  
Switzerland

Organizers: Dr. Nicola Döbelin [nicola.doebelin@rms-foundation.ch](mailto:nicola.doebelin@rms-foundation.ch)  
Dr. Kristian Ufer [kristian.ufer@bgr.de](mailto:kristian.ufer@bgr.de)

Registration: By e-mail to [nicola.doebelin@rms-foundation.ch](mailto:nicola.doebelin@rms-foundation.ch)

Registration Deadline: April 29, 2018

Registration Fee: 300.-- € (including lunches)

Language: English

Limit of Participants: 12

# Program

## Day 1:

- **Introduction to Rietveld refinement**  
Brief repetition from beginners' workshop
- **Introduction to BGMN and Profex**  
Brief repetition from beginners' workshop
- **Creating instrument configuration files, part II**  
In-depth discussion of conventional and unconventional setups
- **Creating crystal structure files, part II**  
Importing CIF and PDF-4+ XML files from various sources, fixing import problems

## Day 2:

- **Advanced refinement strategies**  
Linking of parameters, chemical substitutions, bi-modal crystallite sizes, ...
- **Advanced features in Profex**  
Refinement presets, batch refinements, CIF export, visualization in VESTA, internal and external standard quantification, ...
- **Tutorial: Free processing of course examples or own datasets**  
Tutored by Dr. N. Döbelin and Dr. K. Ufer

## Day 3:

- **Session "Geology":**
  - **Advanced Rietveld refinement of clay minerals (Lecturer: Dr. K. Ufer)**  
The detailed program will be communicated prior to the workshop
- **Session "Medtech":**
  - **Instrument qualification and validation in a Medtech production environment (Lecturer: Dr. N. Döbelin)**

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Free Rietveld refinement software\* can be installed during the course. Personal computers must be used. Software for Windows® 7 - 10, Mac OS X 64bit\*\* (≥ 10.7), and source code for Linux are available.

\*for more information visit

\*\*Apple users visit

<http://profex.doebelin.org>

<http://support.apple.com/kb/ht3696>

# Travelling and Accomodation

## Venue:

The workshop will take place at [RMS Foundation](#) in Bettlach. It is recommended to book a hotel in the city of Solothurn ([map](#)) and take the train (10 minutes) to Bettlach in the morning.

## Travelling:

Flights to Zürich Airport (ZRH) or Geneva Airport (GVA) are operated from many European cities. Both airports have direct train connections to Solothurn:

Airport:	Train Departure:	Duration:	Changes:	Cost:
Zürich Airport	hh:13 (every hour)	01:06	0	44.-- CHF
Zürich Airport	hh:43 (every hour)	01:11	1	44.-- CHF
Geneva Airport	hh:05 (every hour)	01:54	0	64.– CHF

## Accomodation:

Several hotels are situated in the center of Solothurn within 10 minutes walking distance from the main station:

Youth Hostel:	<a href="https://www.youthhostel.ch/de/hostels/solothurn/">https://www.youthhostel.ch/de/hostels/solothurn/</a>
Hotel Ambassador:	<a href="http://www.ambassador-hotel.ch/index.php/de-de/">http://www.ambassador-hotel.ch/index.php/de-de/</a>
H4 Hotel:	<a href="https://www.h-hotels.com/de/h4/hotels/h4-hotel-solothurn">https://www.h-hotels.com/de/h4/hotels/h4-hotel-solothurn</a>
Hotel Roter Ochsen:	<a href="https://www.hotelroterochsen.ch/de/">https://www.hotelroterochsen.ch/de/</a>
Zunfthaus zu Wirthen:	<a href="https://www.wirthen.ch/">https://www.wirthen.ch/</a>
Rest. Hotel Baseltor:	<a href="http://www.baseltor.ch/">http://www.baseltor.ch/</a>
Hotel Bären*:	<a href="http://www.baeren-solothurn.ch/de/">http://www.baeren-solothurn.ch/de/</a>

\* 30 min walking distance to the main station

