



**UPM**  
UNIVERSITI PUTRA MALAYSIA  
BERILMU BERBAKTI

# CRYSTALS WORKSHOP FOR BEGINNERS: FROM DIFFRACTION DATA TO COMPLETE STRUCTURE SOLUTION



**17-19<sup>th</sup> FEBRUARY  
2020**



BILIK SAINTIS GEMILANG,  
FACULTY OF SCIENCE,  
UNIVERSITI PUTRA MALAYSIA.

## TENTATIVE WORKSHOP SCHEDULE

Date	Topics
Monday, 17 <sup>th</sup> February 2020	X-ray diffraction, data collection, symmetry Structure solution and refinement Introduction to <i>CRYSTALS</i>
Tuesday, 18 <sup>th</sup> February 2020	Assessment of results: Fourier maps Advanced refinement: Disorder Refinement of disordered materials Production and pre results
Wednesday, 19 <sup>th</sup> February 2020	Advanced refinement: Absolute structure Twinning Diagnosing problems Absolute structure examples Twin examples and other problems

## SPEAKER



**Assoc. Prof. Dr. Richard Cooper**

Head of the Chemical Crystallography Unit,  
University of Oxford, UK

Co-writer for the *CRYSTALS* software package

Join  
us

**Registration** can be made at:

<https://forms.gle/Fh5kQ1YTtogZ5jTi9>

## REGISTRATION FEES

**Early bird** (before 31st January 2020): **RM750.00**

**Normal** (until 14th February 2020): **RM800.00**

Registration will get a **FREE** SCXRD analysis for one sample

## CONTACT DETAILS

For further details you can contact;

**Dr Mohamed Ibrahim Mohamed Tahir**

[ibra@upm.edu.my](mailto:ibra@upm.edu.my) / +60397697489/6775

[facebook.com/UniPutraMalaysia](https://www.facebook.com/UniPutraMalaysia)

@uputramalaysia

[instagram.com/uniputramalaysia](https://www.instagram.com/uniputramalaysia)

[youtube.com/user/bppupm](https://www.youtube.com/user/bppupm)

AGRICULTURE · INNOVATION · LIFE

[www.upm.edu.my](http://www.upm.edu.my)

BERILMU BERBAKTI  
WITH KNOWLEDGE WE SERVE

