



Canadian Light Source
Centre canadien de rayonnement synchrotron



SESAME International Teacher Workshop Online January 2022

PROGRAMME

MONDAY JANUARY 17TH

Virtual Hangout *OPTIONAL*

4:30-5:00 PM (GMT + 2)

Opportunity for teachers to connect before the first session to address any technical difficulties.

Welcome & Introductions

5:00 PM (GMT + 2)

Welcome from SESAME, LAAAMP, & CLS

Dr. Özgül Öztürk, LAAAMP, SESAME User Committee

We will provide an overview of the initiative and our ambitious goals

Dr. Andrea Lausi, SESAME, Jordan

Getting to know each other

Mirwat Shamshad, School of Astronomy & Physics, Pakistan

Tracy Walker, CLS, Canada

Introduction to Synchrotrons and Education

Tracy Walker & Dr. Andrea Lausi

A very general introduction to synchrotron facilities like the ones in Jordan and Canada including how synchrotron light (x-rays and infrared) are produced plus examples of how it is applied in world-class research.

TUESDAY JANUARY 18TH

Virtual Tour of SESAME

Dr. Andrea Lausi, Scientific Director, SESAME, Jordan

This will be a virtual tour around the facility including visits to beamlines and explanations from the science staff followed by a question period.

WEDNESDAY JANUARY 19TH

Connections of Synchrotron Research to Science Curriculum

Dr. Giorgio Paolucci, Chief Scientific Officer, Elettra, Italy

Dr. Thierry d'Almeida, CEA, France

While the technical aspects of light production fit well in Physics, applications of that light to research connect very well with Chemistry, Biology, Environmental Sciences, as well as Computer Sciences, Math, and History. Followed by a discussion of possible classroom connections lead by science teachers.

THURSDAY JANUARY 20TH

Tomography at SESAME

Dr. Gianluca Iori, SESAME Beamline Scientist, Jordan

Tomography is creating images of an object by stitching together individual 'slices'. Dr. Iori will demonstrate this x-ray technique using visible light.



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MONDAY JANUARY 24TH

Physics Curriculum in Synchrotrons

EM spectrum, light & optics, waves, vacuum systems, magnetic fields, and more! These teachers will highlight connections between the concepts discussed in previous sessions to those presented in the classroom.

Itamar Feigenbaum, Israel
Masoumeh Shahsavari, Iran
Alp Köksal, Turkey

TUESDAY JANUARY 25TH

Research Story: Tomography in Palaeontology

Dr. Kudakwashe (Kuda) Jakata,
ESRF, Wits University South Africa

WEDNESDAY JANUARY 26TH

Using Research & Facilities in Science Education

Tracy Walker, CLS, Canada

Exploring inquiry-based learning with students, examples from the Canadian Light Source

THURSDAY JANUARY 27TH

Pakistan Student Research Project

Mirwat Shamshad, Pakistan

The story of a student lead research including a social science survey and spectroscopy at a synchrotron.

What are the opportunities?

Dr. Andrea Lausi, SESAME,
Jordan