Lecture Title	**SESAME – a Regional Research Opportunity**
Speaker	Dr. Andrea Lausi SESAME Scientific Director Synchrotron-light for Experimental Science and Applications in the Middle East, Jordan
Abstract	Officially opened in Jordan on 16 May 2017, SESAME (Synchrotron-light for Experimental Science and Applications in the Middle East) is a cooperative venture by scientists and governments of the region, the first synchrotron light source in the Middle East and neighbouring countries, and the region's first major international centre of excellence for research. The need for an international light source in the Middle East was first recognised more than 30 years ago by the Pakistani Nobel Laureate Abdus Salam. The idea of building a light source was very attractive thanks to the rich diversity of fields of science that can make use of such a facility and was later shared by the Middle East Scientific Co-operation (MESC) group, led by Sergio Fubini and located in CERN and the Middle East. Nowadays, SESAME is a third-generation synchrotron light source with five beamlines already open to users, which will be soon joined by a sixth which will enter the commissioning phase in spring 2025.
Learning Objectives	1) History of SESAME 2) Diffraction, spectroscopy and imaging beamlines at SESAME 3) SESAME impact 4) SESAME perspectives
Keywords	Science diplomacy, diffraction, absorption, fluorescence, spectroscopy, imaging
Target audience	Begginer synchrotron users, graduate students, early carreer researchers
Language	English
Contents	1. SESAME, from dream to reality 2. Beamlines from bending magnet 3. Wiggler beamlines 4. Undulator beamlines 5. Calls and scientific output 6. SESAME in the international landscape
Prerequisites	Basic knowledge of x-ray science
References	**CERN and SESAME – Science Diplomacy Building Bridges** **Author:Chris Llewellyn Smith, AAAS Science & Diplomacy, 2022** **https://doi.org/10.1126/scidip.adf8093**

3D image processing software

name	URL	features	open source	license type
ImageJ	https://fiji.sc/	Image analysis for everyone	yes	
Dragonfly	https://www.theobjects.com/dragonfly/index.html		no	Academic; single user
BONEJ	https://bonej.org/	ImageJ plugin	yes	
Paraview	https://www.paraview.org/		yes	
3D Slicer	https://www.slicer.org/		yes	
napari	https://napari.org	Interactive Python viewer for multi-dimensional images	yes	
simpleITK	https://github.com/InsightSoftwareConsortium/SimpleITK-Notebooks	Python package for advanced 3D image processing	yes	
Silx	https://www.silx.org/	Explore RAW synchrotron experiment data	yes	