

# MAGSTR 2020 ORGANIZERS

**DR. VASILE OVIDIU GARLEA**  
**Instrument Scientist (HYSPEC)**  
**Spectroscopy Group, Neutron Scattering Division**  
**Neutron Sciences Directorate**  
**Oak Ridge National Laboratory, USA**



Dr. Garlea is an instrument scientist at the HYSPEC spectrometer at the Spallation Neutron Source (SNS), Oak Ridge National Laboratory. He received his PhD in solid state physics from Joseph-Fourier University, Grenoble, France in 2001. Since then he has worked as a post-doctoral researcher at the Synchrotron Light Laboratory ELETTRA, at the Ames Laboratory, and at the Oak Ridge National Laboratory. From 2007 until 2013, he served as lead instrument scientist at the HB2A Neutron Powder Diffractometer at High Flux Isotope Reactor (HFIR) where he oversaw the installation of the instrument and built a vibrant magnetic diffraction community. He initiated a workshop series on magnetic structure determination that runs regularly since 2009. Starting with 2013, he contributed to the successful commissioning of the HYSPEC spectrometer at the SNS and to the implementation of the neutron polarization analysis capability. Ovidiu holds a courtesy appointment with the Department of Chemistry and Biochemistry at Florida State University and is adjoint associate professor at the Department of Materials Sciences and Engineering at the University of Tennessee. His research focuses on studies of frustrated magnets, quantum systems and strongly correlated electron systems using neutron diffraction and inelastic neutron scattering technique.

**DR. CLARINA DELA CRUZ**  
**Quantum Materials Initiative Science Coordinator**  
**and Instrument Scientist (HB2A)**  
**Diffraction Group, Neutron Scattering Division**  
**Neutron Sciences Directorate**  
**Oak Ridge National Laboratory, USA**

Dr. dela Cruz received her BS and MS degrees in Physics at the National Institute of Physics, University of the Philippines-Diliman in 2001 and 2003 where she fabricated and studied the transport properties of various cuprate high temperature superconductors. She proceeded to complete her PhD in Physics at the University of Houston in 2006, high-lighted by her work on the pressure effect in multiferroic materials at the High Pressure and Low Temperature Laboratory of the Texas Center for Superconductivity under Dr. Paul Chu. She then pursued a Postdoctoral fellowship at the Department of Physics and Astronomy, University of Tennessee (UT) and the Neutron Scattering Science Division, Oak Ridge National Laboratory (ORNL) with Dr. Pengcheng Dai And Dr. Herbert Mook. As a dual UT/ORNL postdoc, she learned to use neutron scattering techniques to study correlated electron systems particularly the Fe-based superconductors. Dr. dela Cruz won the International Union of Pure and Applied Physics C10 Young Scientist Prize in 2013, awarded by the American Physical Society. She was selected for her achievements in the field of strongly correlated electron systems. Currently, she is part of the Neutron Scattering Division at ORNL designated as Initiative Coordinator for NScD's Quantum Materials science Initiative as well as instrument scientist for the HB-2A Neutron Powder Diffractometer housed at the High Flux Isotope Reactor, ORNL.

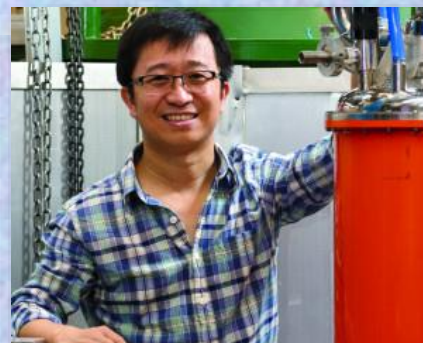




**DR. HUIBO CAO**  
**Instrument Scientist (HB3A-DEMAND)**  
**Diffraction Group, Neutron Scattering Division**  
**Neutron Sciences Directorate**  
**Oak Ridge National Laboratory, USA**

Dr. Cao is a neutron scattering instrument scientist in the Neutron Scattering Division at ORNL. He received his PhD degree in the condensed matter physics from the Institute of Physics (CAS), Beijing, China in 2007. Then he did a two-year postdoc on neutron scattering on magnetism at Leon Brillouin Laboratory (LLB) in France and came to ORNL at the end of 2009. He became a neutron scattering instrument scientist since 2010 and continued his studies on magnetism.

Dr. Cao is interested in novel and anomalous magnetism that presents quantum and topological phenomena, or outstanding functional properties when it is coupled to superconducting, ferroelectric, thermal, and optical properties. He is currently focused on exploring quantum and topological magnetism through polarized neutron scattering under extreme sample environment conditions, especially with high pressure, which is the substance of his DOE Early Career Award proposal conferred in 2018. The relevant materials include geometrically frustrated magnets and low dimensional magnets.

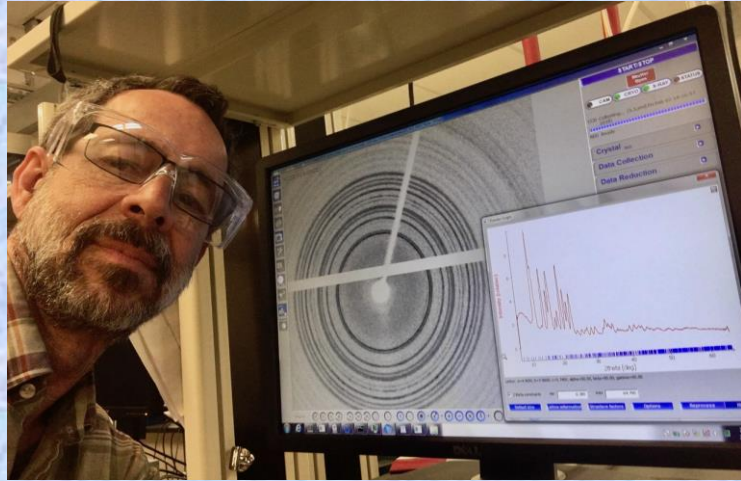


**DR. STUART CALDER**  
**Instrument Scientist (HB2A)**  
**Diffraction Group, Neutron Scattering Division**  
**Neutron Sciences Directorate**  
**Oak Ridge National Laboratory, USA**



Dr. Calder is the Point of Contact on the HB2A neutron powder diffractometer housed at the High Flux Isotope Reactor (HFIR) at ORNL that focuses on magnetic structure determination. His research probes the magnetic ground state and inelastic excitations in strongly correlated quantum materials of fundamental interest with potential avenues for applications. The principle technique utilized is neutron scattering, which offers uniquely powerful insights into magnetic behavior. These investigations are supported by resonant x-ray scattering and bulk characterization techniques. Materials of interest include magnetic two-dimensional (2D) layered structures, *5d*-based compounds with strong spin-orbit interactions and geometric frustrated materials. He received his PhD from University College London, United Kingdom, and joined Oak Ridge National Laboratory as a postdoctoral fellow before becoming a Staff Scientist.

**DR. BRYAN CHAKOUMAKOS**  
Corporate Fellow  
Single Crystal Team Leader  
Diffraction Group, Neutron Scattering Division  
Neutron Sciences Directorate  
Oak Ridge National Laboratory, USA



Dr. Chakoumakos is a Corporate Fellow in the Neutron Scattering Division at Oak Ridge National Laboratory (ORNL), where he conducts research on properties of novel and technologically important materials. He currently is the Team Leader for the Single-Crystal Neutron Diffraction suite of instruments. He employs crystallography and X-ray/neutron diffraction methods and broadly publishes in physics, materials science, chemistry, and mineralogy. He received his Ph.D. in Geological Sciences (mineralogy & crystallography emphasis) from Virginia Tech in 1984.



**DR. KEITH TADDEI**  
Instrument Scientist (HB2A)  
Diffraction Group, Neutron Scattering Division Neutron Sciences  
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Oak Ridge National Laboratory, USA

Dr. Taddei Keith Taddei received a B.S. in Physics from Lewis University where he performed research building and characterizing open cavity lasers. He received his Ph.D. in Physics from Northern Illinois University where he held a joint position as a researcher at Argonne National Laboratory in the Neutron and X-ray Scattering group. There his research focused on the synthesis and study of unconventional superconductors. He then took a postdoc at Oak Ridge National Laboratory, where he continued to use neutron scattering to study low-dimensional superconductors, multiferroics and novel magnet states. Keith is currently an instrument scientist on the WAND<sup>2</sup> and HB-2A diffractometers of ORNL's HFIR. His current research focuses on using neutron scattering (and advancing neutron scattering techniques) to study magnetic Weyl semimetals, spin-triplet superconductivity and triangular lattice antiferromagnets.





**MS. KEOSHA ANDERSON**  
**Administrative Assistant and**  
**MAGSTR 2020 Point of Contact**  
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