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CARBON 14 ANALYSIS FOR DATING AND CLIMATE ISSUES

CCRI WEBINAR SERIES - THURSDAY 30 JUNE 11:00 - 12:30 UTC

The CCRI is pleased to welcome in its webinar series three speakers to discuss about carbon 14 analysis related to dating and climate issues.

Adam J. Fleisher (NIST) - *Towards accurate infrared spectroscopy of radiocarbon*

Adam J. Fleisher, Research Chemist at NIST, performs accurate measurements of absorption cross-sections and isotopic composition using precision molecular spectroscopy. The research leverages optical frequency combs, quantum cascade lasers, stable near-infrared lasers, and high-finesse optical resonators. He was a National Research Council Postdoctoral Fellow at JILA (University of Colorado Boulder and NIST) and earned his Ph.D. in Physical Chemistry from the University of Pittsburgh. He is an Optica (formerly OSA) Ambassador and currently sits on the Optica Board of Meetings as Sensing Development Chair. He is also a past participant in the CCQM Isotope Ratio Working Group (IRWG) at the BIPM.

Jocelyn Turnbull (NOAA) - *Radiocarbon as a tracer for the source and fate of fossil fuel carbon dioxide emissions*

Jocelyn Turnbull holds joint appointments at GNS Science, New Zealand the University of Colorado, USA. She leads the GNS Science Rafter Radiocarbon Laboratory, which maintains expertise in a wide range of radiocarbon applications. Jocelyn's research investigates the modern carbon cycle, particularly fossil fuel derived CO₂. She uses radiocarbon and related tracers to understand the sources and sinks of greenhouse gases at the local, urban and regional scales. Current projects include: Carbon Watch-NZ evaluating New Zealand's natural and anthropogenic carbon budget; INFLUX, the Indianapolis Flux Project evaluating urban greenhouse gas emissions; and SOAR Southern Ocean Atmospheric Radiocarbon investigating Southern Ocean carbon exchange.

Emmanuelle Delqué-Količ (CNRS) - *Radiocarbon dating for archaeology and cultural heritage: a modern tool for old times*

Emmanuelle Delqué-Količ is a research engineer at the CNRS, manager of the sample preparation laboratory in the National Platform for ¹⁴C measurement (Laboratoire de Mesure du Carbone 14/LSCE-UMR 8212 – Paris-Saclay University). Her work focuses on radiocarbon dating of archaeological and cultural heritage specific materials (mortars, pottery, iron...). She is mainly involved in several international projects: IRANGKOR project “the role of iron in the expansion of the Khmer Empire, Cambodia” (¹⁴C dating of iron), CASIMODO project “Medieval climatic optimum and socio-economic development through the study of Notre-Dame de Paris wood frame”.