

SUNDAY, SEPTEMBER 22nd

18.00 -21.00 Icebreaker and registration in Piazza Sant'Oronzo.

MONDAY, SEPTEMBER 23rd - CASTELLO CARLO V

8.30. Registration opens

9.30-10.15-Opening Ceremony

10.15-10.50-Inaugural Concert

Time (11.00-12.00)	Keynote speech	
Chairperson		
11.00-12.00	W. Kutschera	Reading and interpreting the isotope language

Time (12.00-13.00)	Session M1: Methods (machine and sample preparation)	
Chairpersons	M. Naudeau-M. Huels-A. Cherkinsky-P. Ascough-M. Krapiec	
12.00-12.30	L. Kattein	A new system for Ramped pyrolysis-oxidation- ¹⁴ C analysis of sediments: Proof of concept and cross-lab comparison
12.30-12.50	M. A. Bolandini	Organic matter dynamics in thaw slumps: insights from online ramped oxidation- ¹⁴ C analysis
12.50-13.10	N. Tisnérat-Laborde	How to measure "active" samples without contaminating laboratory equipment

13.15-14.30-Lunch

Time (14.30-15.30)	Session M1: Methods (machine and sample preparation)	
Chairpersons	M. Naudeau-M. Huels-A. Cherkinsky-P. Ascough-M. Krapiec	
14.30-14.50	M. Fedi	The new sample preparation line in Italy for ¹⁴ C-AMS measurements on the carbonaceous fractions of atmospheric aerosol
14.50-15.10	H. Meijer	Inter-laboratory comparison for the ¹⁴ C-based measurement of the biogenic carbon fraction in biogas and blends of biogas and natural gas
15.10-15.30	R. Jou	Handling liquid biofuels samples for biogenic fraction determination at LAC-UFF

Time (15.30-16.10)	Session M1: Methods (machine and sample preparation)	
Chairpersons	M. Naudeau-M. Huels-A. Cherkinsky-P. Ascough-M. Krapiec	
15.30-15.50	M. Ochocki	Acid-Base-Acid with Stepped Combustion (ABA-SC) as a Pretreatment Method for Radiocarbon Dating of Charcoal
15.50-16.10	K. Nakajima	Pollen separation with flow cytometry: an emerging method for radiocarbon dating

16.10-16.30-Coffee break

Time (17.00-18.00)	Session P1: Past environment and climate	
Chairpersons	E. Boaretto-Y. Kuzmin-I. Hajdas-I. Svetlik-A- JT Jull	
16.30-16.50	A. Rajoriya	Radiocarbon dating, stable and strontium isotope data of human cist-burials from Spiti valley (Himachal Pradesh, India): implications for palaeo-diets, origin and ecology of human settlements in Trans-Himalayas
16.50-17.10	J. Pilch	the Bølling-Older dryas-allerød transition in multi-proxy paleo-record of two neighbouring landslide fens, kotoń and klaklowo, the outer western carpathians, s poland - regional similarities and local differences in plant succesion.
17.10-17.30	W. Margielewski	Palaeohydrological changes of polish peatlands during the holocene, inferred from subfossil pine (pinus sylvestris) and oak (quercus sp.) dendrochronology and peat multiproxy analysis

TUESDAY, SEPTEMBER 24th

Time (08.30-10.40)	Session A1: Atmosphere and terrestrial environment	
Chairpersons	L. Wacker/Q. Hua/N. Piotrowska	
08.30-09.00	F. Marzaioli invited talk	Lesson learned from 1055 AD ¹⁴ C anomaly: integration of experimental data with analysis and modelling tools to infer possible causes.
09.00-09.20	L. Wacker	Atmospheric ¹⁴ C concentrations over the last 5600 years in annual resolution
09.20-09.40	Q. Hua	Sources of methane emissions from wetland tree stems
09.40-10.00	E. Boaretto	The carbon isotopes in Israel trees in today and in past environment: discovering of the suitable archives for paleoclimatic reconstruction.
10.00-10.20	M. Huels	Carbon isotopes (¹⁴ C, ¹³ C) of Gatersleben plant tissues (Triticum aestivum L., Glycine max (L)) grown during the bomb spike.
10.20-10.40	M. Seiler	Tree-ring ¹⁴ C origin seen through the bombspike magnifying glass

10.40-11.00-Coffee break

Time (11.00-12.40)	Session M1: Methods (machine and sample preparation)	
Chairpersons	M. Naudeau-M. Huels-A. Cherkinsky-P. Ascough-M. Krapiec	
11.00-11.20	Daniele De Maria	Towards novel applications for high throughput AMS gas measurements
11.20-11.40	U. Ramsperger	LEA: a new compact 50 kv AMS system under a prolonged performance evaluation
11.40-12.10	Bin Yang	Development of an automated processing line for the extraction of dissolved inorganic carbon from underground water for radiocarbon analysis
12.10-12.40	Konrad Tudyka	μGRAPHILINE: a high-throughput, low-maintenance, fully automated ¹⁴ C graphitization system

12.45-14.00-Lunch

Time (14.00-15.40)	Session P1: Past environment and climate	
Chairpersons	E. Boaretto-Y. Kuzmin-I. Hajdas-I. Svetlik-A- JT Jull	
14.00-14.20	Daniel Loponte	Radiocarbon dating and bayesian modeling of pre-columbian occupations in the paraná delta, argentina
14.20-14.40	Simone Mantellini	Late medieval samarkand oasis: new evidence from the site of kafir kala
14.40-15.00	Natalia Piotrowska	High resolution ¹⁴ C and OSL chronology of the aeolian–soil succession in the Łaskarzew site, East Poland.
15.00-15.20	Alexander Cherkinsky	Comparative ¹⁴ C Analysis of Different Materials in Lake Sediments
15.20-15.40	Y. Kuzmin	Spatiotemporal patterns of existence and extinction for woolly mammoth in Siberia in the last 50,000 years

Time (15.40-16.40)	Session P1: Past environment and climate	
Chairpersons	E. Boaretto-Y. Kuzmin-I. Hajdas-I. Svetlik-A- JT Jull	
15.40-16.00	J. Palli	Radiocarbon dating and tree longevity: state of the art with a focus on Italian case studies
16.00-16.20	N. Budantseva	AMS radiocarbon age of the Holocene ice wedges near Yarynskaya settlement and reconstructed mean January paleotemperature in the north-eastern part of Europe
16.20-16.40	Alla Vasil'chuk	Past environment and January paleotemperature during upper sand formation of Batagay megaslump

16.40-17.00-Coffee break

Time (17.00-18.00)	Poster Session I
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Time (18.00-19.00)	Special Lecture	
18.00-19.00	P. Arthur	“What’s in a wall? A Brief story of Lecce’s medieval fortifications”

Time (19.00-20.00)	Lecce City Tour
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WEDNESDAY, SEPTEMBER 25th

Time 8.30	Bus transfer to Hotel Costa Brada-Gallipoli Meeting point: Main gate of the Castello Carlo V
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Time (10.00-11.00)	Special session: Alternative Methods to AMS	
Chairpersons	W. Kutschera	
10.00-10.20	Saverio Bartalini	The impact of ¹⁴ C quantification by Saturated-absorption Cavity Ring-down (SCAR) spectroscopy for environmental applications.
10.20-10.40	Wei Jiang	Atom Trap Trace Analysis of ⁴¹ Ca
10.40-11.00	Tamás Varga	A novel, laser-based saturated-absorption cavity ring-down technology for precise biobased content analysis of plastic samples

11.00-11.30-Coffee break

Time (11.30-13.10)	Marine M1: Marine environment	
Chairpersons	B. Resenheim-C. Hatté-J. Baresic	
11.30-11.50	S. Lindauer	Marine Shells as indicators for environmental changes in SE Arabia
11.50-12.10	B. M. Netto	Age discrepancies among co-existing planktonic foraminifera: species, shell size and sample size problems
12.10-12.30	Naiana Dias	Impact of oil spill on mangrove sediments: study of $\Delta^{14}\text{C}$ and $\delta^{13}\text{C}$ in the laboratory
12.30-12.50	Andrea Göhring	Sea spray and physiologically induced effects on ^{14}C composition in modern coastal plants uncovered by a greenhouse experiment
12.50-13.10	Maria Zucchi	Development of a protocol to measure radiocarbon by AMS in water samples at LAPAC-UFBA, Brazil

13.15-14.30-Lunch

Time (14.30-17.30)	Discussions OTB
17.30-20.30	Gallipoli Old City tour
20.30	Return to Lecce

THURSDAY, SEPTEMBER 26th

Time (08.30-10.40)	Session A2: Anthropogenic effects	
Chairpersons	M. Molnar/P. Povinec/J. Olsen/A. Rakowsky	
08.30-09.00	S. Hammer <i>Invited Talk</i>	Ingeborg Levin's Legacy in Atmospheric ^{14}C Research: A Retrospective of Her Scientific Life
09.00-09.20	I. Hajdas	Bomb Peak Fading – a memoir written in leaves
09.20-09.40	M. Molnar	Advances in atmospheric methane ^{14}C analyses at HEKAL AMS Facility
09.40-10.00	S. Bjarheim	The potential of blue mussel shells for retrospective analysis of marine ^{14}C discharges from nuclear power plants
10.00-10.20	K. Eriksson Stenström	Radiocarbon in the marine environment of Ringhals nuclear power plant, Sweden
10.20-10.40	K. Silva	Radiocarbon dating and the Schreger pattern as essential tools in combating elephant ivory trafficking in Brazil

10.40-11.00-Coffee break

Time (11.00-13.00)	Session A1: Atmosphere and terrestrial environment	
Chairpersons	L. Wacker/Q. Hua/N. Piotrowska	
11.00-11.20	P. Ascough	Insights into the Residence Time and Stability of Soil Organic Carbon through Ramped Oxidation and Radiocarbon Analysis
11.20-11.30	C. Heusser	Molecular-level Soil Carbon Turnover Unveiled with Amino Acid-Specific ^{14}C
11.30-11.50	C. S. Hadden	Radiocarbon age offsets in post-bomb terrestrial snails from south Florida, USA
11.50-12.10	T. M. Y. Rhyner	Radiocarbon signatures in Swiss Rivers under hydrological extremes

12.10-12.30	E.Zazovskaya	Radiocarbon age and properties of organic matter of supraglacial organomineral formations
12.30-12.50	L. Scott Cummings	Dead Carbon in Living Individuals

13.00-14.00-Lunch

Time (14.00-16.00)	Session A1: Atmosphere and terrestrial environment	
Chairpersons	L. Wacker/Q. Hua/N. Piotrowska	
14.00-14.20	A. Smith	Using ANSTO's micro- ¹⁴ C capability to improve understanding of the atmospheric methane budget
14.20-14.40	I. Kontul	Seasonal variation of fossil and non-fossil fractions of carbonaceous aerosols in an urban area of Slovakia
14.40-15.00	Z. Niu	Temporal and vertical measurements of atmospheric CO ₂ and ¹⁴ CO ₂ at the Northern foot of the qinling mountains in China
15.00-15.20	P. Ciffroy	Combining microscopic and macroscopic diffusion theories to evaluate ¹⁴ C transfers at the water-atmosphere interface downstream of a nuclear plant
15.20-15.40	I. Chanca	Estimation of the fossil-fuel fraction of CO ₂ measured in Paris based on radiocarbon, and co-emitted species (NO _x , CO, BC)
15.40-16.00	A. Panzitta/ D. Sanghez	Comparative study of waste analysis methods for biogenic fraction quantification in waste-to-energy plants

16.00-16.30-Coffee break

Time (16.30-17.30)	Poster Session II
Time (17.30-19.30)	Transfer to Brindisi-Visit of CEDAD laboratories
Time (20.00-23.00)	CONFERENCE DINNER AT CASTELLO MONACI

FRIDAY, SEPTEMBER 27th

Time (08.30-10.40)	Session T1: Tropical Environments	
Chairpersons	K. Macario-G. Macedo dos Santos	
08.30-09.00	C. Carvalho <i>Invited Talk</i>	Biomonitoring Fossil Fuel Contamination on an Eutrophic Coastal Estuary: The RADICAL Project
09.00-09.20	K. Macario	Itaipu Region in Niterói, Brazil: Cultural and Natural Heritage Under Threat from Land Speculation
09.20-09.40	I. Chanca	How long does carbon stay in a near-pristine central amazon forest? an empirical estimate with radiocarbon
09.40-10.00	G. M. Santos	Lower latitudes atmospheric post-AD 1950 high-precision tree ring ¹⁴ C records: challenges and surprises
10.00-10.20	J. Griffin	Evaluating a simplified α-cellulose extraction procedure on pantropical woods via FTIR characterization for use in atmospheric ¹⁴ C reconstructions
10.20-10.40	J. Sarpa	Radiocarbon and isotopic analysis of wetland soil's of litoral North of Bahia, Brasil



**4TH INTERNATIONAL
RADIOCARBON IN THE
ENVIRONMENT CONFERENCE**



**UNIVERSITÀ
DEL SALENTO**
The University of the two seas

10.40-11.00-Coffee break

Time (11.00-12.30)	Marine M1: Marine environment	
Chairpersons	B. Resenheim-C. Hatté-J.Baresic	
11.00-11.20	M. Ruben	The age predicament in microbial organic matter degradation
11.20-11.30	B. Philippsen	Human-environmental interactions in a prehistoric fjord
11.30-11.50	N. Wang	Radiocarbon character in amphipod exoskeletons from hadal trenches
11.50-12.10	M. Al-Sid-Cheikh	Nanoplastic Uptake Dynamics in Mussels: Unveiling first Sub-ppb toxicokinetics
12.10-12.30	H Grotheer	High resolution mapping of DIC, DOC and POC radiocarbon distribution in the Northwest African Upwelling system off Mauritania

Time (12.30-13.00)	Summary and closing remarks	
12.30-13.00	T. AJ Jull	Summary and closing remarks