

# Cosmic Chemical Evolution

## A conference in honour of Francesca Matteucci

Grand Hotel San Pietro, Palinuro, Italy, June 24–28, 2024

(All talks are invited talks)

MONDAY 24 JUNE, 2024	
8:50–9:00	<i>Welcome</i>
9:00–9:20	<b>Toshitaka Kajino</b> <i>“Roles of neutrinos in Galactic Chemical Evolution; from Big-Bang to Supernova”</i>
9:20–9:40	<b>Paolo Molaro</b> <i>“Rb and Li isotopes in the SMC: the cosmological Li problem is still a problem and s-process occurred at low metallicities”</i>
9:40–10:00	<b>Xiaoting Fu</b> <i>“Lithium evolution in low mass stars: stellar nature and connection to the cosmological lithium problem”</i>
10:00–10:20	<b>Georges Meynet</b> <i>“Possible chemical feedbacks of the first massive, very massive and supermassive stars”</i>
10:20–11:00	<b>COFFEE AND TEA BREAK</b>
11:00–11:20	<b>Marco Limongi</b> <i>“Evolution, explosion and nucleosynthesis of stars in the mass range 9-13 Msun”</i>
11:20–11:40	<b>Sergio Cristallo</b> <i>“Neutron capture elements in our Galaxy: the importance of stellar yields”</i>
11:40–12:00	<b>Thanh Nguyen</b> <i>“PARSEC low- and intermediate-mass models: Rotation and thermohaline mixing”</i>
12:00–16:30	<b>BUFFET LUNCH &amp; SUNBATHING BREAK</b>
16:30–16:50	<b>Elisabetta Caffau</b> <i>“Chemical diversity at low metallicities”</i>
16:50–17:10	<b>Piercarlo Bonifacio</b> <i>“Life on the fast lane: the surprising properties of Galactic high speed stars”</i>
17:10–17:30	<b>Alejandra Recio-Blanco</b> <i>“The Galactic disc stellar populations with high precision Gaia/RVS chemo-physical parameters”</i>
17:30–19:00	<b>WELCOME COCKTAIL</b>

TUESDAY 25 JUNE, 2024	
9:00–9:20	<b>Samir Nepal</b> <i>“From metal-poor to metal-rich - new insights on MW disc history with machine learning and Gaia”</i>
9:20–9:40	<b>Mariagrazia Franchini</b> <i>“Carbon and Oxygen in the Galactic disks”</i>

9:40–10:00	<b>Patrick de Laverny</b>	<i>“Exploring the Galactic content in s-process elements with space and ground-based spectroscopic surveys”</i>
10:00–10:20	<b>Raffaele Gratton</b>	<i>“Stellar and planetary companions to stars”</i>
10:20–11:00	<b>COFFEE AND TEA BREAK</b>	
11:00–11:20	<b>Beatriz Barbuy</b>	<i>“A census of globular clusters in the Galactic bulge”</i>
11:20–11:40	<b>Sergio Ortolani</b>	<i>“Ages of old metal poor bulge stars nearby the Sun”</i>
11:40–12:00	<b>Mike Rich</b>	<i>“The Blanco Decam Bulge Survey: Implications for the chemical enrichment history of the bulge”</i>
12:00–16:30	<b>BUFFET LUNCH &amp; SUNBATHING BREAK</b>	
16:30–16:50	<b>Carme Gallart</b>	<i>“Chronology of our Galaxy from Gaia color-magnitude diagram fitting (ChronoGal): spatially and kinematically resolved star formation histories of the Milky Way disk and halo”</i>
16:50–17:10	<b>Anna Queiroz</b>	<i>“Unveiling the Formation of the Milky Way Disk: A Comprehensive Exploration of the old disk Star Formation History”</i>
17:10–17:30	<b>Nils Ryde</b>	<i>“Chemical Characterization of the Galactic Center”</i>
17:30–17:50	<b>Brian Thorsbro</b>	<i>“Surprising results from spectroscopic analysis of stars close the supermassive black hole”</i>

<b>WEDNESDAY 26 JUNE, 2024</b>		
9:00–9:20	<b>Mathias Schultheis</b>	<i>“Nuclear stellar disc”</i>
9:20–9:40	<b>Mattia Sormani</b>	<i>“The Milky Way’s nuclear stellar disc”</i>
9:40–10:00	<b>Marica Valentini</b>	<i>“The Milky Way assembly history: insights from solar-like oscillating Red Giants”</i>
10:00–10:20	<b>Giuseppe Bono</b>	<i>“Once upon a time variable stars”</i>
10:20–11:00	<b>COFFEE AND TEA BREAK</b>	
11:00–11:20	<b>Giuliana Fiorentino</b>	<i>“Pulsation and evolutionary properties of variable stars to constrain galaxy formation”</i>
11:20–11:40	<b>Valentina D’Orazi</b>	<i>“The chemical tales told by RR Lyrae star”</i>
11:40–12:00	<b>Alessio Mucciarelli</b>	<i>“The chemical DNA of the Magellanic Clouds”</i>
12:00–16:30	<b>BUFFET LUNCH &amp; SUNBATHING BREAK</b>	
16:30–16:50	<b>Luca Pasquini</b>	<i>“Chemical Evolution &amp; Multi Object Spectrographs (MOS) at ESO”</i>
16:50–17:10	<b>Zhi-Yu Zhang</b>	<i>“Measuring CNO isotopic gradients in molecular gas of the Milky Way”</i>

17:10–17:30	<b>Luca Ciotti</b>	<i>“SNIa and AGN feedback in early-type galaxies”</i>
17:30–17:50	<b>Silvia Pellegrini</b>	<i>“Heavy elements in the hot ISM of early-type galaxies”</i>

<b>THURSDAY 27 JUNE, 2024</b>		
9:00–9:20	<b>Alvio Renzini</b>	<i>“The Main Sequence of Star-Forming Galaxies and their Chemical Evolution”</i>
9:20–9:40	<b>Claudia Maraston</b>	<i>“Stellar Population Models”</i>
9:40–10:00	<b>Patricia Tissera</b>	<i>“The link between the chemical abundances relations and the history of formation of galaxies”</i>
10:00–10:20	<b>Daniel Thomas</b>	<i>“iMaNGA: a virtual IFU survey based on Illustris hydro-dynamical simulations”</i>
10:20–11:00	<b>COFFEE AND TEA BREAK</b>	
11:00–11:20	<b>Nikos Prantzos</b>	<i>“Secular evolution of the Milky Way disk and the role of recent star formation episodes”</i>
11:20–11:40	<b>Eda Gjergo</b>	<i>“Probing the origin of heavy isotopes in dwarf galaxies with a variable initial mass function”</i>
11:40–12:00	<b>Arianna Vasini</b>	<i>“2D chemical evolution model for <math>^{26}\text{Al}</math> and <math>^{60}\text{Fe}</math>”</i>
12:00–16:30	<b>BUFFET LUNCH &amp; SUNBATHING BREAK</b>	
16:30–16:50	<b>Ivan Minchev</b>	<i>“The Galactic disk is frisky: ringing, wiggling, streaming, and mixing”</i>
16:50–17:10	<b>Marta Molero</b>	<i>“Chemical evolution of the Galactic bulge with different stellar population”</i>
17:10–17:30	<b>Emanuele Spitoni</b>	<i>“The presence of diverse infalls of gas unveiled by APOGEE DR17 and Gaia DR3”</i>
17:30–17:50	<b>Gabriele Cescutti</b>	<i>“MINCE survey: neutron capture elements in Gaia-Enceladus”</i>

<b>FRIDAY 28 JUNE, 2024</b>		
9:00–9:20	<b>Chiaki Kobayashi</b>	<i>“Chemodynamical simulations of the Galaxy and galaxies”</i>
9:20–9:40	<b>Dyna Ibrahim</b>	<i>“Chemical enrichment from the first stars in cosmological simulations”</i>
9:40–10:00	<b>Federico Rizzuti</b>	<i>“The contribution of rotating massive stars to the chemical evolution of the Galaxy”</i>
10:00–10:20	<b>Marco Palla</b>	<i>“Mapping radial abundance gradients with Gaia-ESO open clusters: evidence of late gas accretion in the Milky Way disk”</i>
10:20–11:00	<b>COFFEE AND TEA BREAK</b>	
11:00–11:20	<b>Donatella Romano</b>	<i>“Isotopic gradients along the Milky Way disc”</i>

11:20–11:40	<b>Cristina Chiappini</b>	<i>“Future Challenges in Galactic Archaeology”</i>
11:40–12:00	<b>Francesca Matteucci</b>	<i>Concluding speech</i>

**Session 1: Big Bang Nucleosynthesis**

Session 2: Stellar Evolution and Nucleosynthesis

Session 3: Stars in fields and clusters of the Milky Way and nearby galaxies

Session 4: Moving outside of the Local Group

Session 5: Modeling galactic chemical enrichment (and not only)