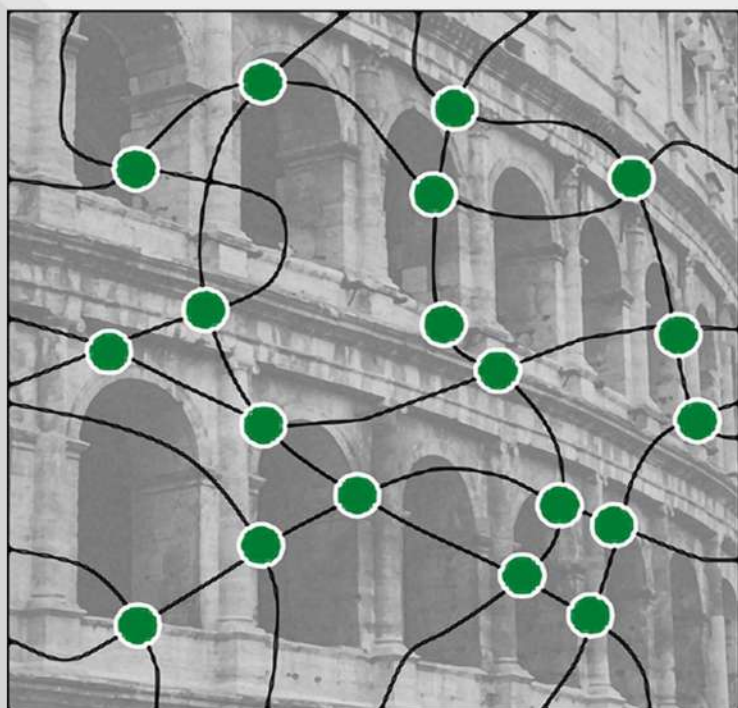




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PNG

2022

Polymer
Networks Group

Rome *Italy*

12-16 June 2022

Venue:

"Sapienza" University of Rome
Piazzale Aldo Moro 5 - Rome

Workshop Chair:

Prof. Gaio Paradossi
University of Rome
Tor Vergata

WORKSHOP PROGRAM

PNG2022ROME.EU

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Ester Chiessi
Yosra Toumia
Luciano Galantini

Special thanks to the Conference's hosts Prof. Luciano Galantini, Prof. Francesco Sciortino, Prof. Marcello Barbanera, Prof. Claudia Carlucci, and Prof. Shahram Rahatlou.

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Referee

Gaio Paradossi	<i>University of Rome Tor Vergata</i>
Fabio Domenici	<i>University of Rome Tor Vergata</i>
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Iolanda Francolini	<i>University of Rome Sapienza</i>

Plenary Speakers



Piero Baglioni

University of Florence, Italy

Piero Baglioni has contributed to many aspects of colloids. In his plenary, he will present some of the recent achievements of his research activity focused on the Conservation of Cultural Heritage, and in particular on the application of chemical gels to the conservation of modern and contemporary art.



Francesco Sciortino

Sapienza, University of Rome

Francesco Sciortino interests span from the thermodynamic of supercooled water to the physics of glassy systems to colloidal self-assembly, conjugating theoretical and experimental approaches. In the last decade, he has focused on colloidal gelation, exploring the possible routes to dynamic arrest. His plenary will report on the collective behavior of DNA-made nanoparticles, a model system for realizing in the laboratory empty liquids, equilibrium gels, re-entrant gels, swapping gels, and interpenetrating network.



Dror Seliktar

Israel Institute of Technology of Haifa, Technion, Israel

Dror Seliktar has worked to revolutionize regenerative medicine with the introduction of a novel "biosynthetic hybrid" hydrogel for 3D cell culture, cell-therapy, tissue engineering, and bioprinting. He is the inventor of Gelrin™ and founder of the company Regents Biomaterials Ltd. and heads a multi-national collaborative effort to apply biomaterial-based strategies for tissue regeneration and beyond. His plenary will be focused on the recent applications of gels in regenerative medicine, bioprinting, and medical diagnostics.



David Weitz

Harvard University, USA

Weitz received his PhD in physics from Harvard University and then joined Exxon Research and Engineering Company, where he worked for nearly 18 years. He then became a professor of physics at the University of Pennsylvania and moved to Harvard at the end of the last millennium as a professor of physics and applied physics. He leads a group studying soft matter science with a focus on materials science, biophysics, microfluidics, and flow in porous media. Several startup companies have come from his lab to commercialize research concepts.

Keynote Speakers

Kristi Anseth

University of Boulder, Colorado, USA

Topic: **Gels in action: Self-Assembly, Responsivity and Sensing**

Recently her research focused on the study on how cells respond to physiological and synthetic matrix environment. The tool box used for this studies includes the most advanced approaches of the polymer networks chemistry and physics.

Rachel Auzely

CERMAV, Université J. Fourier, Grenoble, France

Topic: **Nano- Micro- and Macro- Gels in Biomedicine**

Crosslinked biopolymers have huge potentials in several applications. The structural and dynamical properties of biopolymer hydrogels are used by Prof. Auzely to promote cell interactions.

David Diaz Diaz

Universidad de La Laguna, Spain and Universität Regensburg, Germany

Topic: **Miscellaneous**

His main research interests are in the development of advanced functional materials, through bio-inspired synthetic approaches, for biomedical, catalytic, sensing, coatings and energy applications.

Bruce Eichinger

University of Washington, Seattle, USA

Topic: **Network dynamics, mechanics and simulations**

His main activity concerns theoretical aspects of macromolecular science with a genuine and authentic approach to pivotal questions. He will report on the most recent results on sulfur polymerization.

Ferenc Horkay

National Institutes of Health, Bethesda, MD, USA

Topic: **Nano- Micro- and Macro- Gels in Biomedicine**

His research interests involve several physical and chemical aspects of polyelectrolyte gels, in connection with the modeling of the extracellular matrix and other bio-soft matter systems.

Ivan Bela

Institute of Materials and Environmental Chemistry, Research Centre For Natural Sciences, Hungary

Topic: **Networking methods and structure design**

He will highlight the main aspects of novel polymer conetworks as brand new results of his activity in the field of polymers and networks synthetic and characterization methods.

Sergio Paoletti

Department of Life Science, University of Trieste

Topic: **Network dynamics, mechanics and simulations**

His activity on polysaccharides, polyelectrolytes, gels and biomaterials is renowned and has been carried out in collaboration all over the world. He was formerly President of the Science and Technology Park of Trieste and President of the University of Trieste. Presently he is Emeritus in that University.

Program at a glance

SUNDAY, JUNE 12TH

15:30-
-18:00

REGISTRATIONS

18:00-
-20:30

WELCOME COCKTAIL

MONDAY, JUNE 13TH

	AMALDI ROOM	LA GINESTRA ROOM	CONVERSI ROOM
09:00- -10:00		Plenary Session: David Weitz	
10:00- -11:00	Network dynamics, mechanics and simulations 1	Gels in action: Self-Assembly, Responsivity and Sensing 1	Miscellaneous 1
11:00- -11:30	Coffee break Parravano Room		
11:30- -13:00	Network dynamics, mechanics and simulations 2	Gels in action: Self-Assembly, Responsivity and Sensing 2	Miscellaneous 2
13:00- -14:45	Lunch Parravano Room		
14:45- -15:30	Keynote speaker: Bruce Eichinger	Keynote Speaker: Kristi Anseth	Keynote Speaker: Rachel Auzely
15:30- -16:30	Network dynamics, mechanics and simulations 3	Gels in action: Self-Assembly, Responsivity and Sensing 3	Miscellaneous 2
16:30- -17:00	Coffee break Parravano Room		
16:30- -18:00	Poster session Cannizzaro building, Marconi building		
19:00- -21:00	Cultural Tour: Roman Theatres		

TUESDAY, JUNE 14TH

	AMALDI ROOM	LA GINESTRA ROOM	CONVERSI ROOM
09:00- -10:00		Plenary Session: Dror Seliktar	
10:00- -11:00	Network dynamics, mechanics and simulations 4	Nano- Micro- and Macro- Gels in Biomedicine 1	Networking methods and structure design 1
11:00- -11:30	Coffee break Parravano Room		
11:30- -13:00	Network dynamics, mechanics and simulations 5	Nano- Micro- and Macro- Gels in Biomedicine 2	Networking methods and structure design 2
13:00- -14:45	Lunch Parravano Room		
14:45- -15:30	Network dynamics, mechanics and simulations 6	Keynote speaker: Ferenc Horkay	Keynote speaker: Ivan Bela

Program at a glance

	AMALDI ROOM	LA GINESTRA ROOM	CONVERSI ROOM
15:30- -16:30	Network dynamics, mechanics and simulations 7	Nano- Micro- and Macro- Gels in Biomedicine 3	Networking methods and structure design 4
16:30- -17:00	Coffee break Parravano Room		
17:00- -18:00	Network dynamics, mechanics and simulations 8	Nano- Micro- and Macro- Gels in Biomedicine 4	Networking methods and structure design 5
19:00- -23:00	SOCIAL DINNER		

WEDNESDAY, JUNE 15TH

	AMALDI ROOM	LA GINESTRA ROOM	CONVERSI ROOM
09:00- -10:00		Plenary Session: Piero Baglioni	
10:00- -11:00	Network dynamics, mechanics and simulations 9	Gels in action: Self-Assembly, Responsivity and Sensing 4	Gels for Cultural Heritage 1
11:00- -11:30	Coffee break Parravano Room		
11:30- -13:00	Network dynamics, mechanics and simulations 10	Gels in action: Self-Assembly, Responsivity and Sensing 5	Gels for Cultural Heritage 2
13:00- -14:45	Lunch Parravano Room		
14:45- -15:30	Keynote speaker: Sergio Paoletti	Gels in action: Self-Assembly, Responsivity and Sensing 6	Keynote speaker: David Diaz Diaz
15:30- -16:30	Network dynamics, mechanics and simulations 11	Gels in action: Self-Assembly, Responsivity and Sensing 8	Gels for Cultural Heritage 3
16:30- -17:00	Coffee break Parravano Room		
17:00- -18:00	Nano- Micro- and Macro- Gels in Biomedicine 5	Gels in action: Self-Assembly, Responsivity and Sensing 7	Gels for Cultural Heritage 4
20:30- -23:00	Cultural Tour: Jewish Ghetto		

THURSDAY, JUNE 16TH

		LA GINESTRA ROOM	
09:00- -10:00		Plenary Session: Francesco Sciortino	
10:00- -11:00		Network dynamics, mechanics and simulations 12	
11:00- -11:30	Coffee break Parravano Room		
11:30- -13:00		Gels in action: Self-Assembly, Responsivity and Sensing 8 + Farewell	

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