

## Short CV Emanuela Zaccarelli

### Academic degrees:

2002 Ph. D. in Physical Chemistry, University College Dublin, Ireland

1999 Laurea cum Laude in Physics, Sapienza University of Rome, Italy

### Professional positions:

2018-present Research Director, National Research Council (CNR)- Institute for Complex Systems (ISC, Rome, Italy)

2010-2018 Senior Researcher CNR-ISC, Rome, Italy

2009-2019 Researcher (tenured) CNR-ISC, Rome, Italy

2004-2009 Tenure-Track Researcher INFN, CRS-SOFT, Rome, Italy

2002-2004 Postdoctoral fellow, Sapienza University, Rome, Italy

### Awards and honors:

2015 Recipient of ERC Consolidator Grant

2015 Selected as a Member of the Physical Sciences Committee of Science Europe

2014 Italian Habilitation for Full Professor in Theoretical Condensed Matter Physics (02/B2)

2012 Awarded a Futuro in Ricerca Grant by MIUR

2009 Soft Matter Lectureship, received from Soft Matter Journal, RSC, UK

### Editorial activities:

2020-present Associated Editor of Soft Matter, Royal Society of Chemistry (RSC), UK

2020-present Guest Editor of a Special Issue on Depletion Interactions for Journal of Chemical Physics, American Institute of Physics, US

2017-2020 Member of the Editorial board of Soft Matter, RSC, UK

2016 Editor of Proceedings of International School of Physics 'Enrico Fermi', Course 193 on 'Soft Matter Self-Assembly', IOS, Amsterdam; SIF, Bologna

2011-2017 Member of the Editorial board of Molecular Physics, Taylor and Francis, UK

### Visiting positions:

07/2014 Visiting scientist, Lund University, Sweden

03-06/2013 Visiting scientist, University of Edinburgh, Scotland

05/2008 Visiting scientist, University of Edinburgh, Scotland

11/2006 Visiting scientist, University of Duesseldorf, Germany

11/2003 Visiting scientist, University of Duesseldorf, Germany

### Funding and grants:

#### Research grants:

1) 2021-2023 PI: LAZIO INNOVA grant MICROARTE: "Nuovi microgel per la conservazione dei beni artistici" 149994 EUR

2) 2020-2023 PI: EU Marie Curie ITN SUPERCOL "Rational design of super-selective and responsive colloidal particles for biomedical applications" funded amount 261499EUR (Grant Agreement 860914)

3) 2018-2021 PI: MIUR FARE project SOFTART "Enhancing microgel potentialities: ultrasoftness and application to cultural heritage" 145108 EUR

- 4) 2018-2020 PI: LAZIO INNOVA grant GELARTE: Microgel e arte: una nuova tecnologia per la conservazione dei beni cartacei” 149989 EUR
- 5) 2015-2022 PI: ERC Consolidator 2015 MIMIC "Modeling microgels: from microscopic design to macroscopic description" funded amount 1314375EUR (Grant Agreement 681597)
- 6) 2015-2018 PI: EU Marie Curie Initial Training Network 2014 COLLDENSE: Hybrid Colloidal Systems with Designed Response, funded amount 516123 EUR (Grant Agreement 642774)
- 7) 2014-2017 Local Coordinator: MIUR PRIN 2012 SMART: Nuovi gel 'intelligenti' dalla materia soft Euro 83541
- 8) 2013-2016 PI: MIUR FIRB 2012 Anisotropies and non equilibrium in soft matter: routes to the self assembly of advanced materials (ANISOFT) (codice RBF125H0M) Euro 224965
- 9) 2009-2013 PI: EU Marie Curie ITN COMPLOIDS The physics of complex colloids: Equilibrium and Driven (Nov 2009-Oct 2013) funded amount 415kEUR (Grant Agreement 234810)

#### Organisation grants:

- 1) 2015 Grant from CECAM (Centre Européen de Calcul Atomique et Moléculaire) and from NSF, USA for the workshop on “The Physics of Protein Self-Assembly”, Lausanne, Switzerland June 22-24, 2015 (14400 CHF from CECAM and 30500 US\$ from NSF, US).
- 2) 2006 Grant from CECAM for the Workshop "Patchy Colloids, Proteins and Network-Forming Liquids", Lyon, France, June 26-28 (8000 EUR).

#### Beam time allocation:

- 1) 2018 ILL, Grenoble Proposal: 9-11-1866 Title: Low-temperature dynamical transition in polymeric aqueous environments; Instrument: IN13 Beam time allocation (in days): 6
- 2) 2018 ILL, Grenoble Proposal: 9-11-1864 Title: Investigation of supercooled waterdynamics by confinement in dense microgel suspensions; Instrument: IN16B Beam time allocation (in days): 5 Instrument: IN5 Beam time allocation (in days): 5
- 3) 2016 ILL, Grenoble Proposal: 9-11-1770 Title: Dynamics of PNIPAM microgels at high concentrations and low temperatures; Instrument: IN5 Beam time allocation (in days): 4
- 4) 2015 ILL, Grenoble Proposal: 9-11-1736 Title: Fast and slow dynamics in PNIPAM microgels; Instrument: IN13 Beam time allocation (in days): 6

#### Conference organization:

- 2020 Member of the Scientific Committee of International Soft Matter Conference, 12-16 December 2021, Osaka Japan
- 2020 Organiser of the 4th Italian Soft Days online meeting, 22-25 September, Bari, Italy
- 2019-present Member of the Scientific Committee of Liquid Matter
- 2019 Member of the Scientific Committee of International Soft Matter Conference Edinburgh
- 2019 Member of the Scientific Committee of European Colloid and Interface Science conference, Leuven 2019 Member of the Scientific Committee of Andalo Workshop on Complex Systems
- 2018 Organizer of the 3rd Italian Soft Days meeting, Padova, Italy
- 2016 Local Organizer of the 30th European Colloid Interface Society (ECIS) conference, Rome
- 2016 Organizer of the 2nd Italian Soft Days meeting, Milan, Politecnico

2016 Member of the Program Committee of the 4th International Soft Matter Conference (ISMC) Grenoble, France  
2015 Scientific Secretary of the Summer School “Soft Matter Self-Assembly”, Scuola Italiana di Fisica, Varenna, Italy  
2015 Organizer of CECAM workshop: The Physics of Protein Self-Assembly, Lausanne  
2015 Member of Scientific Committee of 4th International Workshop on Viscous Liquids, Montpellier, France  
2014 Organizer of the 1st Italian Soft Days meeting, Rome, La Sapienza  
2013 Vice-Chair and Member of the Program Committee of the 3rd International Soft Matter Conference (ISMC) Rome, Sapienza University, 15-19 September.  
2011 Organizer of 3rd International Workshop on Viscous Liquids, Rome, Accademia dei Lincei, March 30-April 2 2011.

Publication Metrics 09/2021

h-index = 46 (Web of Science, WOS), 51 (Google Scholar, GS);

Sum of times cited = 8200 (WOS), 10700 (GS)

Total number of publications = 152

including the following high impact articles: 1 Nature, 2 Nature Materials, 1 Nature Physics, 5 Nature Communications, 3 PNAS, 1 Science Advances, 1 Physical Review X, 1 ACS Nano, 1 Nature News and Views, 20 Physical Review Letters plus 1 Book Chapter and 4 review articles.

Invited Talks:

More than 35 Invited talks at International Conferences and 7 at International Summer Schools.

Selected Invited Talks:

2020 Elasticity and effective interactions of microgels in bulk and at liquid-liquid interfaces  
Simons Collaboration Webinar

2019 Smart materials from the soft matter world, SIF Passion for Science, Bologna, Italy

2019 In silico synthesis of microgel particles: swelling, elasticity and effective interactions,  
Materials Day, ETH Zurich, Switzerland

2019 In silico synthesis of microgel particles: swelling, elasticity and effective interactions,  
CECAM 50, Lausanne, Switzerland

2018 Investigation of microgel particles: combining computer simulations and neutron  
scattering experiments (Plenary Lecture) ILL&ESS European User Meeting, Grenoble, France

2017 In silico synthesis of microgel particles (Keynote Lecture) 10th Liquid Matter  
Conference, Ljubjana, Slovenia

2017 Effective interactions in Soft Matter (Plenary Lecture) XXI Spanish Statistical Physics  
Conference (FISES), Sevilla, Spain

2017 Anomalous slow dynamics in soft matter (Plenary Lecture) MECO 42, Lyon, France

2016 Anomalous dynamics of intruders in crowded environments (Keynote Lecture)  
STATPHYS 26, Lyon, France

2012 Phase Diagram and Arrested States of Laponite in aqueous solutions (Keynote  
Speaker) 26th European Colloid and Interface Science (ECIS) conference Malmo, Sweden

2010 Laponite as a complex colloid: aggregation, gel and glass formation (Keynote Lecture)  
International Soft Matter Conference 2010 Granada, Spain  
2007 Equilibrium Routes to Colloidal Gelation (Plenary Lecture) Thermodynamics 2007

Teaching and services:

Courses and teaching activities:

2016-2020 Master course on Physics of Liquids, Univ. Sapienza and ATOSIM Erasmus Mundus Program

2006-2017 PhD course on Theory and Phenomenology of Structural Glasses

Mentoring activities:

Supervision (and co-supervision) of 8 Postdoctoral researchers, 7 PhD students e 12 undergraduate students.

Member of 2 Habilitation committees and 6 PhD thesis committees.

Referee for journals:

Physical Review Letters, Soft Matter, Proceedings National Academy of Sciences US, Nature Communications, Nature Materials, Reviews of Modern Physics, Nature Scientific Reports, Physical Review X, Physical Chemistry Chemical Physics, Physical Review E, Journal of Chemical Physics, ACS Nano, ACS Applied Materials and Interfaces, Physical Review Materials, Journal of Colloid and Interface Science, NPG Asia Materials, Journal Physics: Condensed Matter, Macromolecules, Journal Physical Chemistry B, Europhysics Letters, Molecular Physics, Langmuir, Journal of Statistical Mechanics

Referee for proposals:

National Science Foundation (US), ACS Petroleum (US), NWO (NL), MIUR (IT), FNR (Luxembourg), Austrian Science Fund (AT), DFG (Germany), AFR (France), SNS (Switzerland), EU projects: ERC grants, H2020-MSCA grants.