

Curriculum vitae

PERSONAL INFORMATION

Family name, First name: Simone, Elena

Researcher unique identifiers: 0000-0003-4000-2222 (ORCID), 55979572500 (Scopus ID)

Nationality: Italian, British

• EDUCATION

- July 2016 **PhD in Chemical Engineering** (Thesis title: *Application of process analytical technology (PAT) tools for the better understanding and control of the crystallization of polymorphic and impure systems*), School of Chemical Engineering, Loughborough University, UK
Supervisor: Professor Zoltan K. Nagy
- Dec. 2011 **Master (Laurea magistrale) in Chemical Engineering** (*110/110 cum laude*)
Department of Chemical Engineering, University of Pisa, Italy
- Jul. 2009 **Bachelor (Laurea Triennale) in Chemical Engineering** (*110/110 cum laude*)
Department of Chemical Engineering, University of Pisa, Italy

• CURRENT POSITION

- September 2021 - **Associate Professor**
Department of Applied Science and Technology (DISAT), Politecnico di Torino, Italy

• PREVIOUS POSITIONS

- 2016 – August 2021 **Lecturer & Leader of the Food Crystal Engineering Group at Leeds**
School of Food Science and Nutrition (SFSN), University of Leeds, UK
- 2020 – 2021 **Industrial Fellow of the Royal Society**
Nestlé & SFSN, University of Leeds, UK
- 2019 – 2021 **Industrial Fellow of the Royal Academy of Engineering**
Syngenta & SFSN, University of Leeds, UK
- 2015 – 2016 **Research Associate**
School of Chemical Engineering, Loughborough University, UK
- Mar. 2014 – **Visiting Scholar**
May 2014 School of Chemical Engineering, Purdue University, US

• FELLOWSHIPS AND AWARDS

- 2021 **Emerging Investigator** in Crystal Growth & Design (ACS journal) with the paper “Effect of crystallization conditions on the structural properties of oleofoams made of cocoa butter crystals and high oleic sunflower oil”
- 2019 **Royal Academy of Engineering Industrial Fellowship** (with Syngenta)
- 2019 **Royal Society Industrial Fellowship** (with Nestlé)
- 2018 **Public Engagement with Research Award, University of Leeds, UK**
- 2018 **Teaching Fellowship**, Higher Education Academy, UK
- 2017 **Excellence Award in Crystallization 2017**, *best PhD thesis for scientific impact, industrial relevance and innovation potential*, European Federation of Chemical Engineering (EFCE).
- 2014 **Poster award**, International School of Crystallization, Granada, Spain
- 2014 **Poster prize**, EuroPACT conference, Barcelona, Spain
- 2014 **John Guest Phillips Travelling Scholarship**, Loughborough University, UK (2 months research visit to Purdue University, US)
- 2013 **Poster award**, BIWIC 2013, Odense, Denmark
- 2013 **Poster prize**, ChemEngDay 2013, London, United Kingdom

• RESEARCH INCOME

In my first three years of lectureship I was awarded several pump-priming grants (total of **£26,800**) from funders including EPSRC (three Undergraduate Summer Scholarships) , Royal Society (International Exchanges 2016, IE160962) and the Science and Technology Facilities Council (STFC and UK Food Network)

to set-up my crystallization laboratory, build my research team and create external collaborations. I obtained two PhD Scholarships from the EPSRC Centres for Doctoral Training in Soft Matter and Functional Interfaces (match funded by Nestlé, UK) and Complex Particulate Products and Processes (match funded by Syngenta, UK) for a total amount of **£184k**. With Professor Megan Povey we received an industrial grant (Arla Foods, **£135k** value) to explore low power acoustics as a mean of controlling crystallization processes. In 2019 I was awarded two independent industrial fellowships from the Royal Society (INF\R2\192018) and the Royal Academy of Engineering (IF\192031) to carry out research with Syngenta and Nestlé (total combined value of **£127k**). In the same year I was also awarded funding (**£50k**) by the British Council to organize a workshop on global food safety in partnership with Jiangsu University in China. In July 2020 I was awarded a **European Research Council Starting grant** (CryForm) of a total value of **1.96m Euros**. I am also currently PI on a **150k Euros Starting Grant** from **Compagnia San Paolo**.

• SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

- Current team: **2 PhD** students as **main supervisor**, **4 PhD** students in the School of Food Science and Nutrition (SFSN) & School of Chemical and Process Engineering (SCAPE), University of Leeds. **2 Postdocs** in the Department of Applied Science and Technology (DISAT) at Politecnico di Torino.
- 2016 – 2021 **Main supervisor** for **2 PhD** students, **6 BSc** and **more than 20 MSc** final year research projects (2 from SCAPE), **2 Erasmus research projects** and **4 summer internships** (EPSRC and Royal Society funded). **Co-supervisor of 1 postdoc** and **1 PhD** student with Prof Megan Povey.
School of Food Science and Nutrition & SCAPE, University of Leeds, United Kingdom
- 2013 – 2016 **Co-supervision of 2 MSc students**
School of Chemical Engineering, Loughborough University, United Kingdom

• REVIEWING AND EDITORIAL ACTIVITIES

- 2021- **Topic Editor** for Crystal Growth and Design (ACS publications)
- 2019 – 2020 **Guest Editor** for Crystals (MDPI publications)
- 2019 – **Expert reviewer**, Leading Fellows Postdoc Programme, H2020-Marie Skłodowska Curie COFUND Programme
- 2018 – **Expert reviewer**, Post-Doctoral Fellowships in Advanced Manufacturing & Process Engineering, PROCESS FELLOWSHIP PROGRAMME co-funded by H2020-Marie Curie Skłodowska Actions
- 2017 – **PhD examiner**, University of Leeds (internal), Durham University, Manchester University and University of Hull (external), UK. Politecnico di Torino (external), Italy.
- 2017 – 2021 **Internal reviewer of PhD studentship proposals**, EPSRC CDT in Soft Matter and Interfaces, Universities of Leeds, Durham and Edinburgh, UK

• MEMBERSHIPS OF FORUMS AND SCIENTIFIC SOCIETIES

- 2021 – Member of the **Associazione Italiana Cristallografia (AIC)**
- 2017 – Committee member, **British Association of Crystal Growth (BACG)**, United Kingdom
- 2020 – 2021 **Member of the EPSRC early career forum in manufacturing**
- 2019 – 2021 Member, **Institute of Physics (IOP)**, United Kingdom
- 2015 – 2021 Associate Member, **Royal Society of Chemistry**, United Kingdom
- 2013 – 2021 Associate Member, **IChemE**, United Kingdom

• TEACHING ACTIVITIES

- 2022 – Lecturer in the Chemical Engineering School at Politecnico di Torino (chemical plants, food processing)
- 2019 – 2021 **Lecturer – EPSRC CDTs in Molecules to Products and Soft Matter and Interfaces**, Universities of Leeds, Durham and Edinburgh, UK
- 2018 – 2021 **MSc Research project supervisor**, School of Chemical and Process Engineering (SCAPE), University of Leeds, UK
- 2017 – 2021 **Module leader – Food Processing**, SFSN, University of Leeds, UK
- 2016 – 2021 **MSc and BSc research project supervisor**, SFSN, University of Leeds, UK
- 2016 – 2021 **Academic tutor** – SFSN, University of Leeds, UK

- 2015 – 2016 **Lecturer – EPSRC CDT for Continuous Manufacturing and Crystallisation (CMAC)**, Universities of Loughborough, Strathclyde, Bath and Cambridge, UK
- 2013 – 2016 **Demonstrator –First Year BSc Chemical Engineering laboratory**, Loughborough University, UK

• PUBLICATIONS IN PEER-REVIEWED JOURNALS

Below a list of my 5 most relevant publications (corresponding author indicated with *):

- 1) Pratama Y, **Simone E**, Rappolt M*. 2021. The Unique Crystallization Behaviour of Buffalo Milk Fat. *Crystal Growth and Design*, 2113–2127 21.4.
- 2) Metilli L, Lazidis A, Francis M, Marty-Terrade S, Ray J, **Simone E***. 2021. Effect of crystallization conditions on the structural properties of oleofoams made of cocoa butter crystals and high oleic sunflower oil. *Crystal Growth and Design*. 1562–1575 1.3.
- 3) Klitou P, Pask CM, Onoufriadi L, Rosbottom I, **Simone E***, 2020 Solid-State Characterization and Role of Solvent Molecules on the Crystal Structure, Packing, and Physiochemical Properties of Different Quercetin Solvates. *Crystal Growth & Design*. 6573 – 6584 20.10.
- 4) Klitou P, Rosbottom I, **Simone E***. 2019. Synthonic modelling of quercetin and its hydrates: explaining crystallization behaviour in terms of molecular conformation and crystal packing. *Crystal Growth & Design*. 4774-4783 19.8
- 5) **Simone E***, McVeigh J, Reis NM, Nagy Z. 2018. A high-throughput multi-microfluidic crystal generator (MMicroCryGen) platform for facile screening of polymorphism and crystal morphology for pharmaceutical compounds. *Lab on a Chip*. 2235-224515

• BOOK CHAPTERS CONTRIBUTIONS

- 1) Simon LL, **Simone E**, Abbou Oucherif K. 2018. “Crystallization process monitoring and control using process analytical technology”. In: *Computer Aided Chemical Engineering, Process Systems Engineering for Pharmaceutical Manufacturing*. Published 2018 (citations=15)
- 2) Simon LL, **Simone E**. 2020. “Process analytical technology in continuous crystallization”. In *Royal Society of Chemistry, Handbook of Continuous Crystallization*. (<https://www.amazon.com/The-Handbook-of-Continuous-Crystallization/dp/1788012143>).
- 3) **Simone E**. 2020. “Crystal Engineering Approaches for the Food Industry”. IOP Science books edited by Megan J Povey, Melvin J Holmes, Sameera Rafiq, **Elena Simone**, Michael Rappolt and Mat Francis.

• OUTREACH

Local (**Bradford Science Festival, Be Curious**) and national (**New Scientist Live 2018 and 2019**) outreach events with the Food Physics Group at Leeds. This engagement with the public was recognised by the University of Leeds with a **Public Engagement with Research Award**.

• ORGANISATION OF SCIENTIFIC MEETINGS

- 2022 Online British Association of Crystal Growth Conference
- 2021 Online Newton Fund Researcher Links Workshop in Global Food Safety and Security organised in partnership with **Jiangsu University** (China)
- 2019 **Scientific committee member** (abstract review), ICheaP 2019, Italy
- 2018 **Scientific committee member** (abstract review), Food Colloids 2018, UK
- 2017 –2018 **Scientific committee member** (abstract review), ESCAPE 27 and 28 conferences

• KEYNOTE AND PLENARY PRESENTATIONS

Date	Title	Location	International
September 2022	9 th World Conference of Particle Technology	Madrid (Spain)	International
July 2022	2 nd Edible Soft Matter Workshop	Wageningen (the Netherlands)	International
June 2022	Gordon Research Conference Crystal Engineering	Newry (US)	International
February 2022	Physics in Food Manufacturing Conference	Online	International
December 2020	McBain symposium	Online	International

January 2020	Physics in Food Manufacturing Conference	Leeds (UK)	International
January 2020	Crystallisation Science and Engineering course	Leeds (UK)	National
September 2019	Crystallization Process Development with PAT tools symposium	Basel (Switzerland)	International
March 2019	Royal Society of Chemistry Formative Formulation Early Career Meeting	Cambridge (UK)	National
November 2018	Young Scientist Forum in Food Science and Nutrition	Hangzhou (China)	International
May 2018	International Forum on Crystal Engineering & Smart manufacturing (CESM2018)	Tianjin (China)	International
November 2017	Food Industry Forum.	Hangzhou (China)	International
September 2017	International Symposium of Industrial Crystallization (ISIC20).	Dublin (Ireland)	International

• **INVITED TALKS**

Date	Title	Location	International /national
November 2021	Invited talk at the EuroPACT conference 2021	Online	International
September 2021	Invited workshop speaker at the International Symposium of Industrial Crystallization ISIC21	Online	International
October 2020	Invited seminar	Manchester University (UK)	n.a.
September 2020	Invited seminar	Strathclyde University in Glasgow (UK)	n.a.
November 2018	Invited seminar.	Palmerston North (New Zealand)	International
June 2018	Invited seminar	A*STAR research institute, Singapore	n.a.
April 2018	Invited lectures at the Summer School of Process Analytical Technology	Manchester University (UK)	International
November 2017	Invited seminar	Tianjin University (China)	n.a.
April 2017	Invited seminar	South China University of Technology (China)	n.a.

Torino, 2/06/2022

Elena Di Mauro