



NICOSIA Alessia, PhD

Experimental Physicist

Trilingual (Italian, French, English)

Nationality: Italian
Marital status: Married with one son
Scopus ID: [56884168600](#)
Orcid ID: [000-0002-7082-2347](#)
WOS-res ID: [2053454](#)
Google Scholar [link](#)

Professional experience

- Sep 2020 to now **Full Time Permanent Researcher**
Italian National Research Council (CNR)
Institute of Atmospheric Sciences and Climate (ISAC)
Macroarea: Atmospheric composition, climate forcing and air quality
Via Gobetti 101, 40129, Bologna, Italy
Project: [ASINA, H2020-EU 862444](#)
Project: [Observatory "O. Vittori" at Mt. Cimone](#)
Project: Italy's National Antarctic Program, [PNRA](#)
- Apr 2019 to Aug 2020 **Researcher - Professor**
Kanazawa University
Institute of Nature and Environmental Technology
Kakumamachi, Kanazawa, 920-1192, Japan
Project: [NOTO GROUND BASED RESEARCH OBSERVATORY](#)
- Sep 2017 to Dec 2018 **Researcher and Development Engineer**
French National Center for Scientific Research (CNRS)
Laboratoire de Météorologie Physique (LaMP)
Group "Physical, Chemical and Biological processes"
4 Avenue Blaise Pascal, 63178, Aubière, France
Project: [Sea2Cloud, ANR-17-ERC2-0034](#)
Project: [Pollution in the ARctic System \(PARCS\)](#)
Project: [Marine Aerosol impact on Clouds in the Arctic \(MACA\)](#)
Project: [ProcEss studies at the Air-sEa Interface after dust deposition in the MEditerranean sea \(Peacetime\)](#)
- Jan 2014 to Aug 2017 **Research Fellow**
Italian National Research Council (CNR)
Institute of Atmospheric Sciences and Climate (ISAC)
Group "Clouds and Precipitation Physics" (CAPE)
Via Gobetti 101, 40129, Bologna, Italy
Project: [AIR-SEA LAB](#)
Project: [Project BACCHUS, 603445, FP7-NMP](#)
Project: [Project SMILEY, 310637, FP7-NMP](#)
- Aug 2013 to Dec 2013 Parental leaving

Mar 2013 to Jul 2013 **Research Fellow**
National Research Council of Italy (CNR)
Institute of Atmospheric Sciences and Climate (ISAC)
Via Gobetti 101, 40129, Bologna, Italy
[Project SMILEY, 310637, FP7-NMP](#)

Mar 2012 to Jul 2012 **Purchaser Executive**
TravCorp - Tracoin Services Ltd Division
Grosvenor Place, London SW1X 7HH, United Kingdom

Nov 2009 to Aug 2010 **Master 2 Internship**
Institute for Radiological Protection and Nuclear Safety
Aerosol Physics and Metrology Laboratory (LPMA)
91191 Gif-sur-Yvette Cedex, Paris Area, France
[Project FANA experimental setup for nanoparticles](#)

Education

Oct 2015 to Dec 2018 Doctor of Philosophy in **Physics**
University of Ferrara, Italy

Oct 2015 to Dec 2018 Doctor of Philosophy in **Geology:**
Meteorology, Physical Oceanography of the Environment
University of Clermont Auvergne, France

Oct 2015 to Dec 2018 **Doctor Europaeus** (label awarded)
Joint PhD of Ferrara University and Clermont Auvergne University

Nov 2016 Cambridge **First Certificate**, Level B2 **English**
Cambridge English Language Assessment of Cambridge University

Jun 2016 **Summer School on Aerosol-Cloud Interactions** ([link](#))
International Centre for Theoretical Physics (ICTP)
ICTP - Strada Costiera 11, 34151 Trieste Italy

Oct 2014 13th **Summer School On Scientific Visualization** ([link](#))
Cineca, Via Magnanelli 6/3, 40033, Bologna, Italy

Sep 2007 to Jul 2011 **Master 2 degree in Applied Physics**
University of Bologna Alma Mater Studiorum
Physic Department, Via Irnerio 46, 40126, Bologna, Italy

Sep 2006 French Language Certificate Delf B2
Alliance Française, Via de Marchi 4, 40123 Bologna, Italy

Field Research Expeditions (as participant)

27th Feb to the 27th Mar 2017 Marine Aerosol impact on Clouds in the Arctic (MACA), [link](#).
Ny-Ålesund town, island of Spitsbergen in Svalbard, Norway.

10th May to the 10th Jun 2017 ProcEss studies at the Air-sEa Interface after dust deposition in the
Mediterranean sea (PEACETIME), [link](#).
Oceanographic campaign in the Mediterranean Sea.

From Nov 2021

Antarctic winter-over campaign DC18, [link](#).
Concordia research station
Italy's National Antarctic Program, [PNRA](#)

Teaching Experience

November 2020

Frontal Teaching of Two Modules (total of **4 hours**)
University of Bologna Alma Mater Studiorum
Physic Department, Via Irnerio 46, 40126, Bologna, Italy
Master 2 in Physic of The Earth System (cod. 8626)
Cloud Physics Course: Lessons on Atmospheric Aerosol and Ice Nuclei

Supervising and Mentoring

Apr 2019 to Apr 2020

Supervising, training and mentoring students at the Institute of Nature and Environmental Technology, Kanazawa, Japan.

Sep 2018 to Dec 2018

Training students of Clermont Auvergne University, France.

Sep 2014 to Jul 2016

Mentoring students of Bologna University, Italy.

Prizes and Awards

August 2021

Certificate of Excellence in reviewing
Asian Journal of Research and Reviews in Physics
Contact: Dr. M Basumondal, Chief Managing Editor

Apr 2018

Roland Schlich travel support
Funding organism: European Geosciences Union (Wien, Austria)
Grant: **500 euro**
Contact: egu2018@copernicus.org

Apr 2017

Long Stay Mobility Grant Year 2017
Funding organism: Ferrara University
Grant: **2400 euro**
Contact: lena.fabbri@unife.it

Society Affiliation

From 2020 to now

member of The Italian Aerosol Society, [link](#).

PhD Dissertation

- Nicosia A. (2018). *Experimental investigation of heterogeneous nucleation of ice in remote locations*. The University of Ferrara and the University of Clermont Auvergne, PhD defended on December the 14th 2018.

Articles

- Sellegri, K., Nicosia, A., Freney, E. et al. (2021). *Surface ocean microbiota determine cloud precursors*. Scientific Reports 11, 281.

- Trueblood, J. V., **Nicosia, A.**, Engel, A., Zäncker, B., Rinaldi, M., Freney, E., Thyssen, M., Obernosterer, I., Dinasquet, J., Belosi, F., Tovar-Sánchez, A., Rodriguez-Romero, A., Santachiara, G., Guieu, C., and Sellegri, K. (2021). *A two-component parameterization of marine ice-nucleating particles based on seawater biology and sea spray aerosol measurements in the Mediterranean Sea*. *Atmos. Chem. Phys.*, 21, 4659–4676, 2021.
- Freney, E., Sellegri, K., **Nicosia, A.**, Trueblood, J. T., Rinaldi, M., Williams, L. R., Prévôt, A. S. H., Thyssen, M., Grégori, G., Haëntjens, N., Dinasquet, J., Obernosterer, I., Van-Wambeke, F., Engel, A., Zäncker, B., Desboeufs, K., Asmi, E., Timmonen, H., and Guieu, C. (2020): *Mediterranean nascent sea spray organic aerosol and relationships with seawater biogeochemistry*. *Atmos. Chem. Phys. Discuss.* [preprint], in review.
- Rinaldi M., **Nicosia A.**, Santachiara G., Piazza M., Paglione M., Gilardoni S., Sandrini S., Cristofanelli P., Marinoni A., Bonasoni P., Facchini M.C., Belosi F. (2019). *Ground level ice nucleating particles measurements at Capo Granitola, a Mediterranean coastal site*. *Atmospheric Research*, 219, 57-64.
- Hiranuma N., Adachi K., Bell D., Belosi F., Beydoun H., Bhaduri B., Bingemer H., Budke C., Clemen H.-C., Conen F., Cory K., Curtius J., DeMott P., Eppers O., Grawe S., Hartmann S., Hoffmann N., Höhler K., Jantsch E., Kiselev A., Koop T., Kulkarni G., Mayer A., Murakami M., Murray B., **Nicosia A.**, Petters M., Piazza M., Polen M., Reicher N., Rudich Y., Saito A., Santachiara G., Schiebel T., Schill G., Schneider J., Segev L., Stopelli E., Sullivan R., Suski K., Szakáll M., Tajiri T., Taylor H., Tobo Y., Weber D., Wex H., Whale T., Whiteside C., Yamashita K., Zelenyuk A., Möhler O. (2019). *A comprehensive characterization of ice nucleation by three different types of cellulose particles immersed in water: lessons learned and future research directions*. *Atmospheric Chemistry and Physics*, 19, 4823-4849.
- DeMott P.J., Möhler O., Cziczó D.J., Hiranuma N., Petters M.D., Petters S.S., Belosi F., Bingemer H.G., Brooks S. D., Budke C., Burkert-Kohn M., Collier K. N., Danielczok A., Eppers O., Felgitsch L., Garimella S., Grothe H., Herenz P., Hill T.C.J., Höhler K., Kanji Z., Kiselev A., Koop T., Kristensen T.B., Krüger K., Kulkarni G., Levin E.J.T., Murray B.J., **Nicosia A.**, [...], Zenker J. (2018). *Overview of results from the Fifth International Workshop on Ice Nucleation Part 2 (FIN-02): Laboratory intercomparisons of ice nucleation measurements*. *Atmospheric Measurement Technique*, 11 (11), 6231-6257.
- **Nicosia A.**, Manodori L., Trentini A., Ricciardelli I., Bacco D., Poluzzi V., Di Matteo L., Santachiara G., Belosi F. (2018). *Field study of a soft X-ray aerosol neutralizer in combination with an electrostatic classifier for nanoparticle size distribution measurements*. *Particuology*, 37, 99-106.
- Belosi F., Piazza M., **Nicosia A.**, Santachiara G. (2018). *Influence of supersaturation on the concentration of ice nucleating particles*. *Tellus, Series B: Chemical and Physical Meteorology*, 70 (1), 1454809.
- Rinaldi M., Santachiara G., **Nicosia A.**, Piazza M., Decesari M., Gilardoni S., Paglione M., Cristofanelli P., Marinoni A., Bonasoni P., Belosi F. (2017). *Atmospheric Ice Nucleating Particle measurements at the high mountain observatory Mt. Cimone (2165 m a.s.l., Italy)*. *Atmospheric Environment*, 171, 173-180.
- Belosi F., Rinaldi M., Decesari S., Tarozzi L., **Nicosia A.**, Santachiara G. (2017). *Ground level ice nuclei particle measurements including Saharan dust events at a Po Valley rural site (San Pietro Capofiume, Italy)*. *Atmospheric Research*, 186, 116-126.
- Santachiara G., Prodi F., **Nicosia A.**, Belosi F. (2017). *Discrepancy between Ice Particles and Ice Nuclei in Mixed Clouds: Critical Aspects*. *Atmospheric and Climate Sciences*, 7 (3).
- **Nicosia A.**, Piazza M., Santachiara G., Belosi F. (2017). *Heterogeneous nucleation of ice in the atmosphere*. *J. Phys.: Conf. Ser.*, 841 012028 841 (012028), 1-6.
- Santachiara G., Belosi F., **Nicosia A.**, Prodi F. (2016). *Surface Snow, Firn and Ice Core Composition in Polar Areas in Relation to Atmospheric Aerosol and Gas Concentrations: Critical Aspects*. *Atmospheric and Climate Sciences*, 06 (01), 89-102.
- **Nicosia A.**, Keppler T., Müller F.A., Vazquez B., Ravegnani F., Monticelli P., Belosi F. (2016). *Cellulose acetate nanofiber electrospun on nylon substrate as novel composite matrix for efficient, heat-resistant, air filters*. *Chemical Engineering Science*, 153, 284-294.
- Alexandrescu L., Syverud K., **Nicosia A.**, Santachiara G., Fabrizi A., Belosi F. (2016). *Airborne Nanoparticles Filtration by Means of Cellulose Nanofibril Based Materials*. *Journal of Biomaterials and Nanobiotechnology*, 07 (01), 29-36.

- **Nicosia A.**, Gieparda W., Foksowicz-Flaczyk J., Walentowska J., Wesolek D., Vazquez B., Prodi F., Belosi F. (2015). *Air filtration and antimicrobial capabilities of electrospun PLA/PHB containing ionic liquid*. Separation and Purification Technology, 154, 154-160.
- Vazquez B., Monticelli P., **Nicosia A.**, Santachiara G., Belosi F. (2015). *Evaluation of Heat and Moisture Exchanger Performance with Two Different Methods in the Same Test Apparatus*. NCSLI Measure: The Journal of Measurement Science, 10 (2), 62-65.
- **Nicosia A.**, Belosi F., Vazquez B. (2014). *Application of the Soft X-Ray TSI Advanced Aerosol Neutralizer to Aerosol Measurements Made by a Grimm SMPS*. Atmospheric and Climate Sciences, 4, 636-641.
- Vazquez B., **Nicosia A.**, Belosi F., Santachiara G., Monticelli P., Sandri M., Savini E., Tampieri A. (2014). *Natural Polymers as Heat and Moisture Exchange Devices for Medical Applications*. Advances in Science and Technology, 96, 39-44.

Conference Oral Presentation

- Nicosia A., Picard D., Villani P., Dupuy R., [...], Guieu C., and Sellegri K. (2018). **Ice nucleating properties of primary marine aerosols observed from an Arctic and a Mediterranean field campaign**. EGU General Assembly 2018 20 (EGU2018-1106).
- Nicosia A., Santachiara G., Belosi F. (2016). **Heterogeneous Nucleation of Ice in the Atmosphere**. Oral Presentation at 7th Young Researcher Meeting YRM, 24-26 October 2016, Turin, Italy.
- Nicosia A., F. Belosi, B. Vazquez, G. Santachiara, F. Prodi (2014). **Soft X-Ray Advanced Aerosol Neutralizer**. National Conference "PM2014", 20-23 May 2014, Genova, Italy.

Journal Reviewer

2021	Asian Journal of Research and Reviews in Physics Book Publisher International Manuscript Number: AJR2P_70740 Editor: "Ms. Ruma Bag" reviewer.certificate1@gmail.com
2020	ACS Applied Materials & Interfaces Manuscript Number: AM-2020-18309F Associated Editor: "Prof. Tao Xie" xie-office@ami.acs.org
2019	Cellulose Manuscript Number: CELS-D-19-00584R2 Editor-in-Chief: "Alfred D. French" em@editorialmanager.com
2017	Nanotechnology for Environmental Engineering Manuscript number: NTEE-D-17-00052R1 Associate Editor: "Roberto Rosal" em@editorialmanager.com
2017	Fibers and Polymers Manuscript number: FIPO-D-17-00856 Associated Editor: "Ji Ho Youk" youk@inha.ac.kr
2016	Chemical Industry and Chemical Engineering Quarterly Manuscript number #4287 Editor-in-Chief: "Vlada Veljkovic" ciceq@ache.org.rs