



Zuhir Bona

 **Work** : Nicosia, Cyprus

 **Email**: z.bona@cyi.ac.cy

EDUCATION AND TRAINING

[Jun 2025 – Current]

PhD in Atmospheric Sciences

The Cyprus Institute

City: Nicosia | **Country**: Cyprus | **Field(s) of study**: Atmospheric Sciences

MSCA DUST-DN Project - DC3 "Global dust estimation from novel space missions"

[Sep 2021 – May 2025]

Master of Science

Faculty of science - Mansoura University

City: Mansoura | **Country**: Egypt | **Field(s) of study**: Theoretical Physics | **Thesis**: Study of the Fractional Coagulation Equation in Aerosols

Supervisors: Prof. Mohamed Madkour, Prof. Abeer Hassan and Associate Prof. Ashraf M. Tawfik

[Sep 2016 – May 2021]

Bachelor of Science

Faculty of science - Mansoura University <https://www.mans.edu.eg/en>

City: Mansoura | **Field(s) of study**: Physics | **Final grade**: 2.95/5 (79.5%) (Very Good, Second in Class) | **Thesis**: Fractional Calculus and Applications

Advisor: Associate Prof. Ashraf M. Tawfik.

WORK EXPERIENCE

Faculty of Science, Mansoura University

City: Mansoura | **Country**: Egypt

[May 2022 – May 2025]

Physics Teaching Assistant (Permanent Academic position)

·TA for Physics Labs (Mechanics, Optics, and Electric Circuits) Teaching students the theoretical, and experimental concepts and supervising the experiments they do.

·TA for second-year undergraduate course Foundations of Energy – giving problem-solving tutorials on the subject and helping students better grasp it.

·Allowed to have study leave for MSc and PhD abroad.

LANGUAGE SKILLS

Mother tongue(s): Arabic **Other language(s)**: English

SKILLS

Microsoft Office | Latex | Programming (Fortran, Python) | Mathematica | English(Level-C1) (IELTS-7.0)

PUBLICATIONS

[2024]

[Analytical study of the time-fractional Smoluchowski coagulation equation in light of different integrodifferential operators](#)

Reference: Zuhir M. Bona, M.A. Madkour, Abeer A. Mahmoud, Ashraf M. Tawfik. Nonlinear Dyn (2024).

HONOURS AND AWARDS

Marie Skłodowska-Curie Actions Doctoral Network Fellowship. Horizon Europe program · Grant No. 101168425.

CONFERENCES AND SEMINARS

[9 Sep 2024 – 11 Sep 2024]

The 2nd International Conference on Pure and Applied Physics (ICPAP2024) The British University in Egypt

Poster Presentation titled: "**Solution of fractional Smoluchowski coagulation equation with product kernel**".

Link: <https://sites.google.com/view/ncp-bue-icpap2024/>

[20 Jun 2024 – 2 Aug 2024] **Climate Change AI Virtual Summer School 2024**

Link: www.climatechange.ai/events/summer_school2024

[16 Aug 2023 – 31 Aug 2023] **1st ArPS summer school on Advanced Physics** Mansoura University, Egypt

Link: www.arabphysicalsociety.org/advancedPhysics

[24 Jul 2023 – 3 Aug 2023] **3rd Summer School and Internship** Centre for Theoretical Physics (CTP) at the British University, Egypt

Link: <https://www.egyplasma.com/ctp/>

[8 Jul 2019 – 4 Aug 2019] **Cairo University Summer School for gifted students in mathematics** Cairo University, Egypt

Collaborated with three colleagues Mahmoud Sharaf, Mariam Eltoha and Mohamed Abdelkareem on a research project titled under the title: "**Navier-Stokes Equations: Derivation, Properties and some Elementary Solutions**" which we documented using LaTeX under the supervision of Prof Tarek Elgindi.

[18 Sep 2018 – 20 Sep 2018] **1st Mansoura conference of Postgraduate Research in Physics** Mansoura University, Egypt

Participated in the conference organization among SUPER Team.

[11 Mar 2018 – 14 Mar 2018] **Third School in Plasma Physics** Port Said, Egypt

Link: <https://www.egyplasma.com/school/?c=3rdSPSP>

[17 Jul 2018] **Eighth Scientific Symposium for Young Researchers** Faculty of Science, Mansoura, Egypt

Giving an Oral presentation about "**gravitational waves**".

[Nov 2017] **Sixth Astronomy Conference** American University in Cairo, Egypt

VOLUNTEERING

[Sep 2017 – May 2020] **Co-founder and leader of the SUPER team** Mansoura University, Egypt

- Publishing a Scientific Wall Journal that was updated every 3 months from 2017 to 2021.
- Organized the 1 Mansoura Conference of Postgraduate Research in Physics, Faculty of Science, Mansoura University, 18-20 Sep 2018, In Cooperation with the University of Pitesti & Institute for Nuclear Research, Romania.
- Helping new students get into academic life by organizing workshops where we invite speakers to guide students for life in and after college, averaging one workshop per year.

ONLINE COURSES

[21 Mar 2024] **C++ Workshop**

- Learn about the basics of C++: Operators, Strings and Functions, Control Flow, Pointers and Arrays.
- Provided by EME | Sector B5 in collaboration with Egypt Scholars.

[Jan 2023 – Apr 2023] **MOOC Machine Learning in Weather & Climate**

- Organized by the European Center for Medium-Range Weather Forecasts (ECMWF) in partnership with the International Foundation Big Data and Artificial Intelligence for Human Development (IFAB).

Link: <https://learning.ecmwf.int/pages/index.html>