

DR. SULEIMAN M. BARAKA

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PROFESSIONAL SUMMARY

Dedicated and driven **STEM professional with 20+ years of experience**. Expert in **computer modelling** and **data analytics**. Developed and utilized world-renowned global 3D Particle in Cell (PIC) code to model complex systems and interactions. Expertise in a wide range of software tools including **Python** & Fortran. Expert in efficient **data analysis & visualization**. Published scientist with **papers** released in or submitted to peer-reviewed journals. Avid **science communicator** who has delivered **> 15 invited + conference talks**, and made STEM-outreach media appearances on **TV** and in **online news**.

EDUCATION

- **Ph.D.** in Astrophysics and Space Physics | Université de Pierre et Marie Curie | Paris, France | 2007
- **M.Sc.** in Theoretical Physics | Islamic University | Gaza, Palestine | 2003
- **Graduate Diploma** in Public Administration & Negotiations | Penn State University | 1998
- **B.Sc.** in Physics | Al-Quds University | East Jerusalem | 1987

TECHNICAL SKILLS

- High-performance **scientific computing in Fortran 77**
- Fluent programmer in **Python, MATLAB, IDL, & gnuplot**
- **Data processing & visualization** including using specialized libraries like **PySPEDAS**
- Expert in document typesetting using **LaTeX/BibTeX, JabRef, Zotero, & MS Office** suite.
- **Visualization** tools including Vapor, SDvision, CISM, & **R** software
- Professional at general computing in **Windows, Linux, & Mac OS**

GENERAL SKILLS

- Excellent written & oral **communication skills**
- **Leadership & mentoring** including supervising early-career STEM professionals
- **Public speaking** esp. for career advice and inspiration: additional **motivational speaking** example
- **Teamwork** including working in complex technical collaborations (have worked with 12+ collaborators)
- **Initiative** including taking steps to kickstart & revitalize STEM research & education in Palestine.
- **Public outreach/engagement** (including on STEM inquiries/issues), **public administration, & negotiations**

WORK EXPERIENCE (RECENT)

- **Physics Researcher** | University of Alberta | Edmonton, AB, Canada | Oct.- 2021-June-2023
- **Senior Research Scientist** | National Institute of Aerospace | Hampton, VA, USA | July-2019-Present
- **Fulbright Visiting Scholar** | Dept. of Elec. & Computer Engineering, Virginia Tech | VA, USA | 2018-2019

AWARDS

Recipient of various international grants totalling €65,000 including:

- **Winner, 2018 Renata Borlogne Award** | Florence, Italy | Feb. 2018
- Joint Franco-Palestinian Research Grant | 2016-2018
- Invited Professor Grant | UPMC, LPP | Paris, France | Oct. 2015
- Erasmus Mundus IRFU | Uppsala University | Sweden | Sep. 2015

PROFESSIONAL SOCIETY MEMBERSHIPS

- CAP, APS, IAU, EGU, AUASS, & AGU

References Available Upon Request