Adolfo, Poma

Place and date of birth: Lima (Perú), 6 Jan 1982
Website: http://pomalab.ippt.pan.pl/web

☎ +48-739 471 204
✉ apoma at ippt.pan.pl
Office 225
ul. Pawińskiego 5B, 02-106, Warsaw

Work Experience

2018–present **Assistant Professor**, *Institute of Fundamental Technological Research, Polish Academy of Sciences*, Poland.

2021–2022 **Junior Group Leader**, *Lodz University of Technology*, Poland.

2013–2018 **Post Doc.**, *Institute of Physics, Polish Academy of Sciences*, Poland.

2011–2013 **Post Doc**, *University of Rome, "La Sapienza"*, Italy.

Education

2008–2011 **PhD in Physics**, *Max-Planck-Institut für Polymerforschung*, Mainz, Germany.

— PhD Thesis

title *Coarse-graining and quantum-classical adaptive coupling in soft matter*

2005–2007 **MSc in Physics**, *State University of Campinas*, Sao Paulo, Brazil.

— Master Thesis

title *Atomistic Simulation of rare events using Transition Path Sampling*

1999–2003 **B.Sc. in Physics**, *National University of San Marcos* , Lima, Peru.

— Undergraduate Thesis

title *Delocalization of 3d-orbitals in surfaces of Au/Ag by Linear Muffin-Tin Orbital (LMTO).*

Grants

2023-present **OPUS-23**, *by NCN-Poland*, PI, Molecular biomechanics of the SARS-CoV-2 variants: The virus-host cell attachment and immune evasion.

2017-2021 **SONATA-13**, *by NCN-Poland*, PI, Self-assembly and nanomechanical characterization of cellulose microfibrils.

2020/04-2020/10 **Spikesarrscov2**, Principal Investigator, Poland.

Awards

March, 2022 **IPPT-PAN Prize**, *Outstanding research output by the Rector*, Lodz, Poland.

August, 2020 **IPPT-PAN Prize**, *First kind for outstanding group research*, Warsaw, Poland.

August, 2020 **IPPT-PAN Prize**, *First kind for outstanding research work*, Warsaw, Poland.

May, 2017 **First Prize**, *Outstanding Young Research Talk*, Cincinnati, USA.

Sep, 2010 **Third Prize**, *Max Planck Institute for Polymer Research - best poster*, Mainz, Germany.

2002–2003 **Banco Santander Hispano award**, *for academic excellence*, Lima, Peru.

Scholarships

2011-2013 **K.A.U.S.T. Scholarship**, Italy.

2009-2011 **DAAD Scholarship**, Germany.

2008–2009 **International Max Planck Research School Scholarship**, Germany.

2005–2007 **CNPq Fellowship**, Brazil.

Conferences/Workshop (as speaker)

Jan. 2022 **Invited talk for the Kick-off meeting of the MimmicLS project by Roza Sweda** , Wroclaw, Poland.

Jun. 2022 **Invited talk for the BIT-20->22** , Torun, Poland.

Dic. 2020 **Invited talk at the group seminar of Prof. Slawomir FIlipek Faculty of Biological and Chemical Research Centre – UW via zoom**, Warsaw, Poland.

Nov. 2020 **The Fifth Workshop of Vietnamese Students in Poland**, *zoom COVID-19 session*, Warsaw, Poland.

Nov. 2019 **European Summit of Industrial Biotechnology (ESIB2019**, *Flash talk*, Graz, Austria.

Oct. 2019 **Soft Matter and Statistical Physics Seminar–Uniwersytet Warszawski**, Warsaw, Poland.

Mar. 2019 **APS march meeting**, Boston, USA.

Feb. 2019 **Seminarium z fizyki biologicznej i Bioinformatyki**, Warsaw, Poland.

Sep. 2018 **CECAM/CSM/IRTG School 2018: Machine Learning in Scientific Computing**, Nierstein, Germany.

Mar. 2018 **Seminario de Fisica de la Materia Condensada at the UNMSM**, Lima, Peru.

Nov. 2017 **Invited talk at the group seminar of Prof. Slawomir FIlipek Faculty of Biological and Chemical Research Centre – UW**, Warsaw, Poland.

Sep. 2017 **The Second Wokshop of Vietnamese Students in Poland**, Warsaw, Poland.

Sep. 2017 **8^{th} Colloquium Micro-Tribology**, Warsaw, Poland.

May 2017 **From Computational Biophysics to Systems Biology CBSB2017**, Cincinnati, USA.

May 2017 **Biomolecules and Nanostructures 6**, Podlesice, Poland.

Jan. 2017 **COST FP1205 Nanocellulose Characterisation**, Postdam, Germany.

Nov. 2016 **TRR-146 Multiscale Simulation Methods for Soft Matter Systems**, Mainz, Germany.

Oct. 2016 **CellulosomePlus, Last General Meeting**, Roscoff, France.

Jul. 2016 **Sinapsis 2016**, *First encounter of peruvian scientists in Europe*, Paris, France.

Mar. 2016 **Cellulose Energy Material Nanotecnology**, Taipei, Taiwan.

Oct. 2015 **4th EPNOE International Polysaccharide Conference**, Warsaw, Poland.

May 2015 **Biomolecules and Nanostructure 5**, Krakow, Poland.

Oct. 2010 **Multiscale Modeling and Simulation: Bridging Scales and Disciplines**, Warth, Switzerland.

Oct. 2010 **The Fifth International Conference on Multiscale Materials Modeling**, Freiburg, Germany.

Jan. 2004 **National Student Meeting in Hard Condensed Matter**, Trujillo, Peru.

Nov. 2003 **VII National Symposium of Physics**, *Trujillo, Peru.*

Teaching

2017 **Lecturer**, *Biophysics*, Institute of Physics PAN.
- Teach Winter course for PhD – A general course of molecular Simulation.

2010 **Teaching Assistant**, *Department of Physics*, Johanes Gutenberg University.
- Teach discussion sections – Electrodynamics.

2010 **Teaching Assistant**, *Department of Physics*, Johanes Gutenberg University.
- Teach discussion sections – Statistical Mechanics.

2009 **Teaching Assistant**, *Department of Physics*, Johanes Gutenberg University.
- Teach discussion sections – Quantum Field Theory.

Professional Affiliation

2015–Present **Membership**, *Biophysical Society*.

2012–Present **Membership**, *American Physical Society*.

2016–Present **Membership**, *Polish Physical Society*.

Languages

Spanish	Native	English	Fluent
Portuguese	Fluent	Italian	Fluent
German	Basic	Polish	Basic

Computer skills

OS	Linux/Unix, Windows, DOS	programming	Python,MPI, Tcl, f77/f90
MD package	NAMD, Gromacs, ESPResSO	QM package	CPMD, pimc++

Scientific Interests

- Study of large conformational changes in protein complexes
- Nanomechanics of the virus-host interactions: SARS-CoV-2
- Development of coarse-grained methods: Gō-Martini approach

Expert as Evaluator

- The Foundation for Polish Science (FNP since 2019)
- The National Science Centre (NCN since 2021)
- Polish National Agency for Academic Exchange (NAWA 2019-2021)
- National University of San Marcos (UNMSM since 2017)

Top Relevant Publications

[Full-list] Visit the following ,`https://www.scopus.com/authid/detail.uri?authorId=57206326030` .

[1] *Molecular insights into receptor binding energetics and neutralization of SARS-CoV-2 variants,*, Koelher M., Ray A.,Moreira R.A., Juniku B., Poma AB*, Alsteens D* *Nat. Commun.*, 12, 6977 (2021).

[1] *Quantitative determination of mechanical stability in the novel coronavirus spike proteins*, R. Moreira, M. Chwastyk, J.L. Baker, H.V. Guzman and A. B. Poma, *Nanoscale*, (2020). ***As a Communication***

[2] *Novel 2019 Coronavirus Structure, Mechanism of Action, Antiviral drug promises and rule out against its treatment*, S. Boopathi, A. B. Poma and P. Kolandaivel, *J. Biomol. Struc. Dyn.*, 1-12, (2020). ***Citations*** $\approx$ ***300***

[3] *Combining the MARTINI and structure-based coarse-grained approaches for the molecular dynamics studies of conformational transitions in proteins*, A. B. Poma, M. Cieplak and P. E. Theodorakis, *J. Chem. Theory Comput.* **13**, 1366 (2017). ***Citations>80***

Editorial work

- Reviewer for: ACS, RSC, MDPI, Frontiers, Elsevier
- Editor of Journal of Structural Biology (JSB/JSBX)
- Editor of Frontiers in Chemistry and Materials in MDPI

Hobbies & others

- Dances: Reggaeton, Bachata, Salsa, Samba de Gafieira

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