



## Andrada-Elena Ailenei (căs. Terteci-Popescu)

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Nationality: Romanian

### EDUCATION

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- Doctorate of Philosophy | *Physics* Oct. 2019 – Oct. 2022  
Babeş-Bolyai University Cluj-Napoca, Romania
- Thesis title: "Modeling and simulations of complex biomolecular systems"
- Machine Learning | *Course* Feb. 2021 – May 2021  
Stanford University Online
- Topics: Supervised learning (linear/logistic regression, neural networks), Unsupervised learning (clustering).
- Master's degree | *Computational Physics* Oct. 2017 – Jun. 2019  
Babeş-Bolyai University Cluj-Napoca, Romania
- Thesis title: "Molecular dynamics simulations of solvated polyethyleneimine"
- Bachelor's degree | *Physics* Oct. 2014 – Jun. 2017  
Babeş-Bolyai University Cluj-Napoca, Romania
- Thesis title: "Molecular dynamics simulations of ionic transport through gated carbon nanotubes"

### WORK EXPERIENCE

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- Computational Engineer Jan. 2023 – Present  
ARRK Research & Development Cluj-Napoca, Romania
- Acoustic, Chassis, CAE
- Teaching Assistant Oct. 2020 – Mar. 2021  
Babeş-Bolyai University Cluj-Napoca, Romania
- Numerical methods for physicists - practical sessions
  - Programming language - Python
- Research Assistant Dec. 2017 – Dec. 2019  
Babeş-Bolyai University Cluj-Napoca, Romania
- Research in the field of biomolecular systems
  - Project financed by UEFISCDI: PN-III-2016 P4-IDPCE

### SKILLS

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- Languages: English (C2)
- Programming: Python, Octave, C/C++, Java
- Molecular Dynamics: NAMD, VMD, Gromacs, Gaussian 09
- Document Creation: LaTeX, Microsoft Office Suite
- Communication: clarity and concision
- Organization: task analysis and assessment, workflow management, prioritization, ability to meet deadlines, attention to details.

## PUBLICATIONS

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1. **A. E. Terteci-Popescu**, T. A. Beu, "Branched Polyethyleneimine: CHARMM Force Field and Molecular Dynamics Simulations", J. Comput. Chem., (2022)  
DOI: 10.1002/jcc.27005  
Impact Factor: 3.672
2. **A. E. Ailenei**, T. A. Beu, "Ion transport through gated carbon nanotubes: Molecular dynamics simulations using polarizable water", J. Mol. Struct. 1245, 131022 (2021)  
DOI: 10.1016/j.molstruc.2021.131022  
Impact Factor: 3.196
3. T. A. Beu, **A. E. Ailenei**, R. I. Costinaş, "Martini Force Field for Protonated Polyethyleneimine", J. Comput. Chem. 41, 349 (2020)  
DOI: 10.1002/jcc.26110  
Impact Factor: 3.224
4. T. A. Beu, **A. E. Ailenei**, A. Farcaş, "Atomistic and Coarse-Grained Modeling of Polyethyleneimine", Chem. Phys. Lett. 714, 94 (2019)  
DOI: 10.1016/j.cplett.2018.10.071  
Impact Factor: 1.901
5. T. A. Beu, **A. E. Ailenei**, A. Farcaş, "CHARMM Force Field for Protonated Polyethyleneimine", J. Comput. Chem. 39, 2564 (2018)  
DOI: 10.1002/jcc.25637  
Impact Factor: 3.221

## CONFERENCES

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1. **A. E. Ailenei**, R. I. Costinaş, T. A. Beu, Coarse-grained simulations of solvated polyethyleneimine, TIM19 Physics Conference, (29-31 May 2019, Timișoara, Romania)  
(poster presentation)
2. **A. E. Ailenei**, R. I. Costinaş, T. A. Beu, Polyethyleneimine: coarse-grain modeling and simulations, 12th International Conference on Processes in Isotopes and Molecules (PIM19), (25-27 September 2019, Cluj-Napoca, Romania)  
(poster presentation)