

PERSONAL INFORMATION

Zinovia Eleme



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Gender Female | Date of birth 26/04/1992 | Nationality Hellenic

PROFESSION Physicist

EDUCATION AND TRAINING

- 10/2010 – 07/2015 **Bachelor in Physics**
Department of Physics, University of Ioannina, Ioannina (Greece), Overall Grade: **7.20/10**
- 10/2015 – 07/2017 **Master in Physics**
Department of Physics, University of Ioannina, Ioannina (Greece), Overall Grade: **8.67/10**
- 07/2017 – Present **PhD in Experimental Nuclear Physics**
Department of Physics, University of Ioannina, Ioannina (Greece)

THESIS

- Bachelor Thesis** Preparation of the $^{162}\text{Er}(n,2n)^{161}\text{Er}$ reaction study experiment at the neutron beam facility of NCSR "Demokritos", September 2014
- Master Thesis** Study of (n,x) reactions for Erbium isotopes at energies higher than 17 MeV, March 2017
- PhD Thesis** Measurement of the $^{241}\text{Am}(n,f)$ cross-section using Micromegas Detectors at EAR2 of the nTOF at CERN, ongoing

PARTICIPATION IN EXPERIMENTS

- 11.2013 High Purity Germanium Detectors' (HPGe) Efficiency tests at NCSR "Demokritos", Athens
- 02.2014 $^{162}\text{Er}(n,2n)^{161}\text{Er}$ neutron reaction cross-section measurement through the reaction $^2\text{H}(d,n)^3\text{He}$ at NCSR "Demokritos", Athens
- 06–07.2014 $^{162}\text{Er}(n,2n)^{161}\text{Er}$ neutron reaction cross-section measurement through the reaction $^3\text{H}(d,n)^4\text{He}$ at NCSR "Demokritos", Athens
- 10.2014 Neutron beam profile determination at nTOF EAR2 at CERN, Geneva
- 03.2015 CR-39 Solid State Nuclear Track Detectors Irradiation tests through the reaction $^2\text{H}(d,n)^3\text{He}$ at NCSR "Demokritos", Athens
- 09.2016 Comparative study of the neutron beam spatial profile at nTOF EAR1 and EAR2 using passive CR-39 track detectors at CERN, Geneva
- 06–07.2017 Tests for the optimization of the pulse shape width of the Micromegas Detectors within the framework of the $^{241}\text{Am}(n,f)$ cross-section measurement at nTOF EAR2 at CERN, Geneva
- 02.2018 Fission cross-section measurement of Uranium and Thorium Isotopes using micromegas detectors at NCSR "Demokritos", Athens
- 06.2018 Measurement of the fission cross-section of $^{241}\text{Am}(n,f)$ at EAR2 of nTOF-CERN using micromegas detectors, Geneva
- 07–08.2018 Measurement of the fission cross-section of $^{230}\text{Th}(n,f)$ at EAR1 and EAR2 of nTOF-CERN using micromegas detectors, Geneva
- 09.2018 First spectroscopy of the r-process nucleus ^{135}Sn , ISOLDE, CERN, Geneva

- 09.2018 Nuclear Shell Evolution in the Island of the Inversion Studied via the $^{28}\text{Mg}(t,^{30}\text{Mg})$ reaction, ISOLDE, CERN, Geneva
- 01.2019 Study of (n,2n) reactions for Dysprosium isotopes at NCSR "Demokritos", Athens

TEACHING EXPERIENCE

As a post-graduate student
 Institute Supervision of under-graduate students at the Computer Programming Languages course
 Department of Physics, University of Ioannina, Academic Years 2015-2017

RESEARCH INTERESTS

Experimental Nuclear Physics, Neutron Physics, Nuclear Astrophysics, Neutron Activation Analysis, Neutron-Induced Reactions, Nuclear Fission

PARTICIPATION AT RESEARCH PROGRAMS

Title CHANDA "Neutron beam profile at nTOF EAR2 using CR-39 passive neutron detectors"
 Primary Investigator Assistant Professor N.Patronis, University of Ioannina
 My Role Experimental setup and Data Analysis
 Dates 2014

Title CHANDA "Comparative study of the neutron beam spatial profile at nTOF EAR1 and EAR2 using CR-39 passive neutron detectors"
 Primary Investigator Assistant Professor N.Patronis, University of Ioannina
 My Role Experimental setup and Data Analysis
 Dates 2016

PERSONAL SKILLS AND COMPETENCES

Languages Mother Tongue: **Greek**, Other Languages: **English** (C2), **French** (B2)

Computer Skills and Competences

- **Operating Systems:** Linux/Unix and Windows
- **Programming Languages:** C and C++
- **Applications:** Latex, Mathematica, Spreadsheet, Editing and Presentation software
- **Data Analysis and Nuclear Reactions Simulation toolkits:** ROOT, NeuSDesc, ImageJ, Origin, TALYS
- **Gamma-ray Spectroscopy Analysis Software:** "tv" (lkp-Koeln), Maestro

PARTICIPATION IN CONFERENCES AND SCHOOLS

- June 20-21, 2014 23rd Hellenic Nuclear Physics Society Symposium, AUTH, Thessaloniki, Greece
- May 22-23, 2015 24th Hellenic Nuclear Physics Society Symposium, UOI, Ioannina, Greece
- June 03-04, 2016 25th Hellenic Nuclear Physics Society Symposium, NCSR "Demokritos", Athens, Greece
- July 10-17, 2016 9th International Balkan School on Nuclear Physics, Ovidius University, Constanta, Romania
- Oct. 18-21, 2016 EPS Divisional Conference, Leuven, Belgium
- May 05-06, 2017 4th Workshop of the Hellenic Institute of Nuclear Physics on New Aspects and Perspectives in Nuclear Physics, UOI, Ioannina, Greece
- June 09-10, 2017 26th Hellenic Nuclear Physics Society Symposium, HCMR, Anavyssos, Greece
- Nov. 06-10, 2017 NRA Neutron Resonance Analysis School, EC-JRC Geel, Belgium
- Jan. 15-19, 2018 3rd nTOF Winter School, Zermatt, Switzerland

- July 10-11, 2018 Analysis Meeting nTOF, CERN, Preveessin, France
- Nov. 27-28, 2018 Collaboration Meeting nTOF, Granada, Spain
- April 08-10, 2019 Analysis and Detectors Meeting nTOF, CERN, Preveessin, France
- May 19-24, 2019 International Conference on Nuclear Data for Science and Technology (ND2019), China National Convention Center, Beijing
- May 31-June 1, 2019 28th Hellenic Nuclear Physics Society Symposium, AUTH, Thessaloniki, Greece

**PUBLICATIONS IN
PEER-REVIEWED JOURNALS**

E. Georgali, Z. Eleme, N. Patronis et al., "Study of the (n,2n) reaction on the lightest erbium isotope (^{162}Er) from the reaction threshold up to 19 MeV", *Physical Review C* 98, 014622 (2018), DOI: [10.1103/PhysRevC.98.014622](https://doi.org/10.1103/PhysRevC.98.014622)

**PUBLICATIONS IN CONFERENCE
PROCEEDINGS**

Nikolas Patronis, Xenofon Aslanoglou, Michael Axiotis, Zinovia Eleme, Varvara Foteinou, Sotirios Harissopoulos, Antigoni Kalamara, Michael Kokkoris, Anastasios Lagoyannis, George Provatas and Roza Vlastou: Neutron reaction studies in the rare earth region: First results for the $^{162}\text{Er}(n,2n)^{161}\text{Er}$ physics case, "23rd Hellenic Nuclear Physics Society Symposium", Aristotle University of Thessaloniki, Thessaloniki, 20-21/05/2014

Z. Eleme, M. Alexandropoulou, A. Georgiadou, K.G. Ioannidis, M. Kokkoris, N. Patronis and the nTOF Collaboration: Determination of the Neutron Beam Spatial Profile at nTOF EAR2 using CR-39 Track Detectors, "24th Hellenic Nuclear Physics Society Symposium", University of Ioannina, Ioannina, 22-23/05/2015

Efstathia Georgali, Zinovia Eleme, Nikolas Patronis, Xenofon Aslanoglou, Michael Axiotis, Mary Diakaki, Varvara Foteinou, Anastasia Georgiadou, Sotirios Harissopoulos, Antigoni Kalamara, Michael Kokkoris, Anastasios Lagoyannis, Nikolaos Nikolis, George Provatas, Atylianos Stoulos, Andreas Tsinganis, Eleni Vagena, Roza Vlastou and Stergianni-Marina Vogiatzi: Study of the $^{162}\text{Er}(n,2n)^{161}\text{Er}$ reaction from the reaction threshold up to 19 MeV neutron beam energy, "26th Hellenic Nuclear Physics Society Symposium", Institute of Oceanography and The Department of Physics, Anavyssos Athens, 09-10/06/2017

Z. Eleme, S. Georvasili, N. Patronis, E. Georgali, K.G. Ioannidis, A. Kalamara, M. Kokkoris, C. Papachristodoulou, T. Stamatopoulos, A. Tsinganis, R. Zanni-Vlastou and the nTOF Collaboration: Neutron Beam Spatial Profile at nTOF using CR-39 Nuclear Track Detectors, "26th Hellenic Nuclear Physics Society Symposium", Institute of Oceanography and The Department of Physics, Anavyssos Athens, 09-10/06/2017

Z. Eleme, N. Patronis, A. Stamatopoulos, A. Tsinganis, M. Kokkoris, V. Michalopoulou, M. Diakaki, R. Vlastou, L. Tassan-Got, N. Colonna, J. Heyse, M. Barbagallo, M. Mastromarco, D. Macina, E. Chiaveri and the nTOF Collaboration: First results of the $^{241}\text{Am}(n,f)$ cross-section measurement at the Experimental Area 2 of the nTOF facility at CERN, "International Conference on Nuclear Data for Science and Technology (ND2019)", China National Convention Center, Beijing, 19-24/05/2019

Z. Eleme, N. Patronis, A. Stamatopoulos, A. Tsinganis, M. Kokkoris, V. Michalopoulou, M. Diakaki, R. Vlastou, L. Tassan-Got, N. Colonna, J. Heyse, M. Barbagallo, M. Mastromarco, D. Macina, E. Chiaveri and the nTOF Collaboration: Cross-section measurement of $^{241}\text{Am}(n,f)$ reaction at the Experimental Area 2 of the nTOF facility at CERN: First Results, "28th Hellenic Nuclear Physics Society Symposium", Aristotle University of Thessaloniki, Thessaloniki, 31/05-1/06/2019

ORAL PRESENTATIONS

- HNPS 2015 Determination of the Neutron Beam Spatial Profile at nTOF EAR2 using CR-39 Track Detectors
- HNPS 2017 Neutron Beam Spatial Profile at nTOF using CR-39 Nuclear Track Detectors
- nTOF 2018 Status of the $^{241}\text{Am}(n,f)$ Experiment at EAR2
- nTOF 2018 Status of the $^{241}\text{Am}(n,f)$ Measurement at EAR2
- nTOF 2019 Status of the $^{241}\text{Am}(n,f)$ reaction using Micromegas Detectors at EAR2
- ND 2019 First results of the $^{241}\text{Am}(n,f)$ cross-section measurement at the Experimental Area 2 of the nTOF facility at CERN
- HNPS 2019 Cross-section measurement of $^{241}\text{Am}(n,f)$ reaction at the Experimental Area 2 of the nTOF facility at CERN: First Results

POSTER PRESENTATIONS

- IBSNP 2016 Geant4 Monte Carlo Simulations of a 100 relative efficiency HPGe detector
- EPS 2016 Measurement of the $^{162}\text{Er}(n,2n)^{161}\text{Er}$ reaction cross-section