

# Elina Charatsidou MSc

Physicist & Nuclear Engineer

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## Education

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Ph.D. in Physics and Nuclear Engineering, KTH Royal Institute of Technology, Sweden	2021 - Present
MSc in Nuclear Energy Engineering, KTH Royal Institute of Technology, Sweden	2018 - 2020
BSc in Physics, AUTH Aristotle University of Thessaloniki, Greece	2013 - 2017

## Experience

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Member of the outreach group, KTH, Sweden	Oct. 2024 - Present
Coordinator of the Female Faculty Network, KTH, Sweden	Feb. 2024 - Present
MSc Thesis Supervisor, KTH, Sweden	Dec. 2022 - Present
Teacher, KTH, Sweden	Oct. 2022 - Present
Science Communicator, YouTube, Elina Charatsidou - <a href="#">Your Friendly Nuclear Physicist</a>	June 2022 - Present
Workgroups Manager at the Ph.D. Chapter Board of Directors, KTH, Sweden	July 2022 - July 2023
Ph.D. Student Representative for the Physics Department, KTH, Sweden	Jan. 2022 - Jan. 2023
Newsletter Editor at the School of Science, KTH, Sweden	May 2020 - Jan. 2023
MSc Thesis at Westinghouse Electric Company, Västerås, Sweden	Jan. 2020 - June 2020
Student Ambassador for the Nuclear Energy Engineering MSc, KTH, Sweden	Sept. 2018 - June 2020
Mentor for students with disabilities, KTH, Sweden	Sept. 2018 - June 2020

## Invited Speaker

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Nuclear energy and Thorium Technologies, Silva Borealis AS, Norway (could not attend)	21 - 22 Nov. 2024
American Nuclear Society 2024 meeting, Florida, USA (plenary)	17 - 21 Nov. 2024
NuMat: The Nuclear Materials Conference, Singapore (2 plenaries)	14 - 17 Oct. 2024
European Researchers' Night, ForskarFredag, Stockholm, Sweden	27 Sept. 2024
CET 2024 Conference, Oskarshamn, Sweden (panel)	18 - 20 Sept. 2024
Science Today – Event on Energy, Nobel Prize Museum, Sweden	23 Feb. 2024
JRC Hackathon in Innovative Communication Tools, Karlsruhe, Germany (plenary)	1 Feb. 2024
French - Swedish Research Day on Future Nuclear Energy, KTH, Sweden	9 - 10 Oct. 2023
KTH Alumni Lecture on the Modern Nuclear Technology, KTH, Sweden	1 Sept. 2023
Girls in STEM Day 2023, KTH, Sweden	18 May 2023
Lecture in CO <sub>2</sub> Neutral Energy and Transport System, MSc course, KTH, Sweden	15 May 2023
Presentation on Nuclear Education at KTH in Sweden, AUTH, Thessaloniki, Greece	19 Dec. 2022
28 <sup>th</sup> Hellenic Nuclear Physics Society Symposium, AUTH, Thessaloniki, Greece	31 May - 1 June 2019
Presentation on Nuclear Education at KTH in Sweden, AUTH, Thessaloniki, Greece	25 Oct. 2022

## Events Organization

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Field visits for KTH master students, STUDESVIK, Äspo Lab, Sweden	21 - 29 Nov. 2023
Sports Events for PhD students, KTH, Sweden	28 Apr. 2023
CET 2022 Conference, Oskarshamn, Sweden	21 - 23 Sept. 2022
SUNRISE project technical workshop, KTH, Sweden	14 - 15 June 2022
Gender Equality seminar for PhD students, KTH, Sweden	16 June 2022

## Training

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ESNMS European School on Nuclear Materials Science, IESC, Corsica, France	28 Oct. - 1 Nov. 2024
ESNMS European School on Nuclear Materials Science, IESC, Corsica, France	7 - 11 Nov. 2022
MeV Summer School ORNL, Tennessee, USA	18 - 29 July 2022
FJOH Summer School on Nuclear Reactors, Physics, Fuels, and Systems, Karlsruhe, Germany	21 - 21 Aug. 2019
Geological Storage of Spent Nuclear Fuel, Summer School, Oskarshamn, Sweden	8 - 20 June 2019
ISIS Reactor Training Course, CEA/INSTN Saclay, Paris, France	4 - 7 Dec. 2018

## Conference Participation

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TMS 2025 Conference, Las Vegas, Nevada, USA	23 - 27 Mar. 2025
TMS 2024 Conference, Orlando, Florida, USA	3 - 7 Mar. 2024
NuFuel 2023 Conference, Marseille, France	7 - 9 Nov. 2023
31 <sup>st</sup> Hellenic Nuclear Physics Society Symposium, NTUA, Athens, Greece	29 - 30 Sept. 2023
ICONE30 2023 30 <sup>th</sup> International Conference on Nuclear Engineering, Kyoto, Japan	22 - 26 May 2023
TMS 2022 Conference, Anaheim, California, USA	27 Feb. 2022 - 3 Mar. 2022
GeDiMIRT: Gender Dimension in Physics and Math, Lund, Sweden	21 - 23 June 2022

## Publications

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- [1] Y. Mishchenko, S. Patnaik, E. Charatsidou, J. Wallenius, D.A. Lopes, Potential accident tolerant fuel candidate: Investigation of physical properties of the ternary phase U<sub>2</sub>CrN<sub>3</sub>, J. Nucl. Mater. 568 (2022) 153851. <https://doi.org/10.1016/j.jnucmat.2022.153851>.
- [2] E. Charatsidou, M. Giamouridou, A. Fazi, G. Nagy, D.R. Costa, S.N. Katea, M. Jolkkonen, G. Westin, M. Thuvander, D. Primetzhofer, P. Olsson, Proton irradiation-induced cracking and microstructural defects in UN and (U,Zr)N composite fuels, J. Materiomics (2024). <https://doi.org/10.1016/j.jmat.2024.01.014>.
- [3] E. Charatsidou, P. Olsson, W. A. Alexander, Book: Chemistry of Uranium, chapter: An Introduction to Uranium Use, Waste Management and Advanced Reactors (in print 2024)
- [4] A novel methodology for assessing near-surface diffusion in nuclear materials, N. Wikstrom, M. Giamouridou, E. Charatsidou, P. Olsson, J. Oscarsson, D. Primetzhofer, R.J.W. Frost (submitted)

## Outreach

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3 <sup>rd</sup> place in Grand Prix Competition, Stockholm, Sweden	27 Sept. 2024
Member of the Women in Nuclear Global Young Generation	Jan. 2024 - Present
Official Nominator at the VinFuture Prize	Dec. 2023 - Present
Event on Future of Nuclear Power, Technology Museum, Stockholm, Sweden	Oct. 2023
Incorporating KTH in Gender Equality Network in the European Research Area Project	Dec. 2022 - Present
Nuclear Fuel Lab visits for students and external participants, KTH, Sweden	Oct. 2022 - Present
GeDiMIRT Gender Dimension in STEM Conference, Lund, Sweden	21 - 23 June 2022
Member of the WoP (Women PhDs), KTH, Sweden	June 2022 - Present
Scientific YouTube <a href="#">channel</a> on public awareness of nuclear power	June 2022 - Present

## Languages

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Greek, Native | Russian, Native | English, Fluent | Swedish, Intermediate | Ukrainian, Elementary | French, Elementary | German, Elementary

## Skills

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**Experimental:** Microscopy (LOM, SEM, EBSD, AFM) | Elemental Analysis (EDS, LECO) | Spark Plasma Sintering (SPS) | XRD | Irradiation & Implantation | Nano Indentation | Laser Flash Analysis (LFA) | TEM | APT | TGS

**Computational:** Python | MS Office | Machine Learning | DFT | ATAT SQS | MCNP | Matlab/Simulink | Serpent | Apros | Mathematica

### **Certificates**

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CPR Certificate in first aid for infants, children, and adults

17 May 2022

Driving License, Category B

2017 - 2032