



Klaudio Peqini

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● ABOUT ME

With a decade-long dedicated experience in diverse domains of Physics research, I have honed my skills in task execution, results analysis, and identifying patterns for successful problem-solving strategies. My diverse interests allow me to apply physics principles in practical, modern world scenarios. As a professional, I am motivated by my belief that a good physicist can significantly contribute to society in various ways. I am keen to bring my dedication, enthusiasm, and philosophy-grounded approach anywhere I am.

● WORK EXPERIENCE

02/06/2014 – CURRENT Tirane, Albania

LEKTOR/KERKUES UNIVERSITETI I TIRANES

- Kerkim Shkencor ne Fizike
- Lekturim ne Fizike
- Udheheqje diplomash
- Aktivitete me karakter akademik dhe popullarizues per Fiziken

● EDUCATION AND TRAINING

01/04/2015 – 25/05/2018 Tirane, Albania

PHD Universiteti i Tiranes

24/10/2011 – 11/07/2013 Tirane, Albania

MASTER SHKENCOR Universiteti i Tiranes

13/10/2008 – 07/07/2011 Tirane, Albania

BACHELOR I SHKENCAVE Universiteti i Tiranes

● LANGUAGE SKILLS

Mother tongue(s): **SHQIP**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ANGLISHT	C2	C2	C2	C2	C2
ITALISHT	B2	B2	B2	B2	B2
FRENGJISHT	B1	B1	B1	B1	B1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● **DIGITAL SKILLS**

Programim (Python) | Linux dhe Windows | Matlab/Simulink | Keras Tensorflow | Matlab & Octave, OfficeOrg, Texmaker, Fritzing | Microsoft Office package: Microsoft Word, Excel, PowerPoint, Access

● **ADDITIONAL INFORMATION**

VIZITA SHKENCORE

21/07/2022 – 26/07/2022

Vizite Shkencore ne kuader te programit Erasmus+ mbi mobilitetin e stafit akademik me Politechnic University of Bari

Diskutime te vlefshme per zbatimin e teknikave Machine Learning ne studimin e sistemeve komplekse

20/11/2021 – 23/11/2021

Vizite ne Climate, Atmosphere and Water Resources Institute, i Akademise Bullgare te Shkencave (CAWRI- BAS)

Pune konkrete qe lidhin fushen magnetike me efektet klimen lokale

16/09/2018 – 30/09/2018

Vizite ne: International Center of Relativistic Astrophysics Network (ICRANet)

04/04/2017 – 07/04/2017

Vizite ne: Zentrale Anstalt für Geophysik und Geodynamik (ZAMG)

Vizite ne kuader te projekteve bilateral Austri-Shqiperi

COMMUNICATION AND INTERPERSONAL SKILLS

Soft-skills

- Data-oriented
- Mendim kritik dhe konstruktiv
- Pershtashmeri
- Pune ne grup
- I hapur ndaj ideve dhe qasjeve te reja
- Respektoj afatet
- I interesuar per te njohur kultura te tjera

HOBBIES AND INTERESTS

Ajo qe me pelqen

- Exercising, walking & hiking
- Muzete, Teatrot dhe Kinemaja
- 2D & 3D puzzles
- Driving

Shtojca: Artikujt e publikuar

- 09.2023 **Peqini K.**, Koçi E., Osmanaj R., Prenga D., 2023. The Core-Mantle boundary velocity field in the recent decades. AIP Conf. Proc. 2872, 120063. **Impact factor: 0.437.**
- 09.2023 Osmanaj R., **Peqini K.**, Prenga D., 2023. Lanczos method applications in lattice QCD. AIP Conf. Proc. 2872, 120066. **Impact factor: 0.437.**
- 09.2023 Prenga D., Kushta E., **Peqini K.**, Osmanaj R., Hysenlli M., 2023. Analyzing influential factors on physics knowledge weakness in high school students due to the pandemic-imposed online learning and a discussion for enhancing strategies. AIP Conf. Proc. 2872, 020002. **Impact factor: 0.437.**
- 07.2023 Kilifarska N. A., **Peqini K.**, 2023. Impact of Forbush Decreases and Geomagnetic Storms on the Atmospheric Ozone Profiles. Earth and Space Science, 10, e2023EA002954. **Impact factor: 3.1.**
- 05.2022 Peti (Koçi) E., **Peqini K.**, and Sauli D., 2022. Mbi parashikimin e intervaleve të oshilacionit në zgjidhjet e ekuacioneve diferenciale lineare të rendit të dytë. *BSHN (UT)*, 31, 111-125. 07.2022
- 05.2022 Kilifarska N. A., **Peqini K.**, 2022. Geomagnetic control of cosmic radiation and its impact on the irregularly distributed lower stratospheric ozone. J. Phys.: Conf. Ser. 2255 012013
- 12.2021 **Peqini K.**, Prenga D., Osmanaj R., 2021. Scaling laws and phase space analysis of a geomagnetic domino model. J. Phys.: Conf. Ser. 2090 012030. Impact factor: 0.547.
- 12.2021 Prenga D., **Peqini K.**, Osmanaj R., 2021. The analysis of the dynamics of the electorate system by using q-distribution-a case study. J. Phys.: Conf. Ser. 2090 012073. Impact factor: 0.547.
- 12.2021 **Peqini K.**, Osmanaj R., 2021. A Computational Model of Maxwell's Distribution for Undergraduates. International Journal of Physics and Chemistry Education, 13(2), 33-45. 12.2021 Osmanaj R., **Peqini K.**, Hyka D., 2021. The Use of PhET Simulations in Teaching Modality in High Schools in Albania before and during COVID 19-Pandemic. European Journal of Education and Pedagogy, 2(6), 91-94.
- 05.2020 Muceku Y., Leka V., **Peqini K.**, Goskolli E., Jaupaj O., 2020. Ground Subsidence Triggered by Mining Activity in Urban and Rural Areas of Albania, Analysis and Geo-environmental Impacts. JNTS (Journal of Natural and Technical Sciences), 49 (XXIV), 49–72.
- 02.2020 Miço S., **Peqini K.**, Ifti M., Dhoqina P., Prenga D., 2020. Statistical properties of time series of air pollutants and meteorological data. Proceedings book of ICAP Conference; Published online: 28 February 2020.
- 12.2019 Luga E., **Peqini K.**, 2019. The Influence of Oxide Content on the Properties of Fly Ash/Slag Geopolymer Mortars Activated with NaOH. Periodica Polytechnica Civil Engineering, 63 (4), pp 1217–1244. <https://doi.org/10.3311/Ppci.14381>. **Impact factor: 0.905.**
- 11.2019 **Peqini K.**, Duka B., 2019. Small-scale velocity field at the Core-Mantle Boundary constructed from the gufml global model. AIP Conference Proceedings 2178, 030007; Published Online: 25 November 2019; 02.2019 **Peqini K.**, Duka B., 2019. The velocity field at the Earth's core–mantle boundary. AIP Conference Proceedings 2075, 120026; Published Online: 26 February 2019;

- 12.2018 **Peqini K.**, Duka B., 2018. Core-Mantle Boundary Velocity Field Recovering From a Four-Century Geomagnetic Field Model. JNTS (Journal of Natural and Technical Sciences), 46 (XXIII), 3–18.
- 09.2018 **Peqini K.**, Duka B., Egli R., Leichter B., 2018. Crustal geomagnetic field and secular variation by regional and global models for Austria. 111, 1, 048–063. doi: 10.17738/ajes.2018.0004. **Impact factor: 1.034.**
- 03.2018 **Peqini K.**, Duka B., 2018. Statistical indicators as potential early signals of transitions in time series obtained by a statistical model: geomagnetic field case. International Journal of Applied Statistics and Econometrics (IJASE) doi: 10.26384/IJASE1807https://esa.org.al/volume-1
- 03.2018 **Peqini K.**, Duka B., Dominici, G., 2018. Crustal field recovery and secular variation from regional and global models over Albania. ANNALS OF GEOPHYSICS, 61, 1, GM101, 2018. doi: 10.4401/ag-7419. **Impact factor: 1.374.**
- 07.2017 **Peqini K.**, Duka B., 2017. Statistical Indicators as Potential Early Signals of Transitions in Time Series Obtained by a Statistical Model: Geomagnetic Field Case. Proceedings book of the International Conference on Applied Statistics and Econometrics (ICASE 2017) 27-28 April 2017 Tirana, Albania.
- 06.2016 Duka B., Duka E., **Peqini K.**, 2016. Recovering external contribution from the monthly mean series of a given geomagnetic observatory. ANNALS OF GEOPHYSICS, 59, 3, G0321; doi:10.4401/ag-6971. **Impact factor: 1.374.**
- 01.2016 **Peqini K.**, Duka B., 2016. Insights into reversals mechanism of the geomagnetic field through stochastic models simulations. Proceedings Book of The International Physics Conference Tirana 2015. <https://sites.google.com/site/albanianphysics2015>
- 09.2015 **Peqini K.**, Duka B., De Santis A., 2015. Insights into pre-reversal paleosecular variation from stochastic models. Front. Earth Sci. 3:52. doi: 10.3389/feart.2015.00052. **Impact factor: 1.970.**
- 05.2015 Duka B., **Peqini K.**, De Santis A., Pavon-Carrasco F.J., 2015. Using “domino” model to study the secular variation of the geomagnetic dipolar moment. Phys. Earth. Planet. Inter. 242, 9–23. Impact factor: 2.480. <http://dx.doi.org/10.1016/j.pepi.2015.03.001>

Pjesemarrje ne Konferenca, Workshope, Seminare, etj.

- **K. Peqini**, T. Porja, E. Kafexhiu: "Estimating the meteorological based drought indicators to better manage its negative impact". Oral presentation at the Annual EMS Meeting, held in Bratislava and on-line, Slovakia, 03-08.09.2023.
- T. Porja, E. Kafexhiu, **K. Peqini**: "Extreme rainfall of short duration at local scale: case study of Shkodra". Oral presentation at the Annual EMS Meeting, held in Bratislava and on-line, Slovakia, 03-08.09.2023.
- **K. Peqini**: “The multifractality of the internal geomagnetic field”. Oral presentation at the 12th International Conference on Mathematical Modeling in Physical Sciences, held in Belgrade and on-line, Serbia, 28-31.08.2023.
- **K. Peqini**, E. Kafexhiu: “The main geomagnetic field is multifractal”. Oral presentation at the Second International Conference of National Institute of Physics, held in Tirana, Albania, 28-29.04.2023.

- E. Kafexhiu, **K. Peqini**, E. Koçi, E. Karamani, K. Vlashi, N. Kodhelaj: “Modelimi i rezervuareve të naftës në fushën e Patos-Marinzës”. Oral presentation at the Second International Conference of National Institute of Physics, held in Tirana, Albania, 28-29.04.2023.
- R. Osmanaj, D. Xhako, **K. Peqini**: "Teaching Based Ranking of Departments Using PageRank". Oral presentation at ICPICP 2022: International Conference on Physics, Information and Computational Physics, held in Lisbon, Portugal, 20-21.09.2022.
- N. Kilifarska, **K. Peqini**: “Ozone response to short-lasting changes in galactic cosmic rays”. Oral presentation at the XXII International Congress of the Carpathian-Balkan Geological Association, held in Plovdiv, Bulgaria, 07-11.09.2022.
- **K. Peqini**, E. Koçi, D. Prenga, R. Osmanaj: “The Core-Mantle Boundary velocity field in the recent decades”. Oral presentation in the 11th International Conference on Mathematical Modeling in Physical Sciences, held online, 05-08.09.2022.
- R. Osmanaj, **K. Peqini**, D. Prenga: “Lanczos method applications in Lattice QCD”. Oral presentation in the 11th International Conference on Mathematical Modeling in Physical Sciences, held online, 05-08.09.2022.
- D. Prenga, M. Hysenli, **K. Peqini**, R. Osmanaj, E. Kushta: “Analyzing influential factors on physics knowledge shortcomings for high school student’s during Covid closure and estimation of the opportune strategies to improve it”. Oral presentation in the 11th International Conference on Mathematical Modeling in Physical Sciences, held online, 05-08.09.2022.
- **K. Peqini**, N. Kilifarska: “Response of geomagnetic field related to atmospheric composition”. Oral presentation in the 11th Congress of the Balkan Physical Society, held in Belgrade, Serbia, 28.08-01.09.2022.
- D. Prenga, **K. Peqini**, R. Osmanaj: “Preliminary results on the multifractal nature of the main geomagnetic field”. Poster presentation in the 11th Congress of the Balkan Physical Society, held in Belgrade, Serbia, 28.08-01.09.2022.
- D. Prenga, **K. Peqini**, R. Osmanaj: “The study of the dynamics for electorate system by using q-distributions-a case study”. Oral presentation in the International Conference of Mathematical Modelling in Physical Sciences (IC-MSQUARE 2021), held virtually but planned in Budapest, Hungary, 06-09 September 2021.
- **K. Peqini**, D. Prenga, R. Osmanaj: “Scaling laws and phase space analysis of a geomagnetic domino model”. Oral presentation in the International Conference of Mathematical Modelling in Physical Sciences (IC-MSQUARE 2021), held virtually but planned in Budapest, Hungary, 06-09 September 2021.
- J. Hoxha, **K. Peqini**, A. Uka: “Forecasting dipolar geomagnetic field from palaeo-models and synthetic models using neural networks”. Oral presentation in the Joint Scientific Assembly IAGA – IASPEI 2021, held virtually but planned in Hyderabad, India, 21-27 August 2021.
- A. Uka, **K. Peqini**, J. Hoxha: “FORECASTING VELOCITY FIELD AT THE CORE-MANTLE BOUNDARY USING NEURAL NETWORKS”. Oral presentation in the Joint Scientific Assembly IAGA – IASPEI 2021, held virtually but planned in Hyderabad, India, 21-27 August 2021.
- R. Osmanaj, **K. Peqini**, D. Hyka: “QCDLAB2, A Learning Tool for Students in Lattice QCD”. Oral presentation in the Annual International Conferences on Sciences & Engineering, held virtually but planned in Athens, Greece, 19-22 July 2021.

- **K. Peqini** and B. Duka: “Small-scale velocity field at the core-mantle boundary constructed from the gufm1 global model”. Oral presentation in the 35th International Physics Congress of the Turkish Physical Society, held in Bodrum, Turkey, 03-08 September 2019.
- **K. Peqini**, M. Ifti and S. Miço: “Hurst exponent and magnitude distribution from palaeomagnetic and model generated time series”. Oral presentation in the 1st International Conference on Applied Physics (ICAP), held in Tirana, Albania, 20-22 November 2019.
- S. Miço, M. Ifti, P. Dhoqina, D. Prenga, **K. Peqini**: “Statistical properties of time series of air pollutants and meteorological data”. Oral presentation in the 1st International Conference on Applied Physics (ICAP), held in Tirana, Albania, 20-22 November 2019.
- **K. Peqini**, M. Ifti and B. Duka: “Statistical and Hurst Analysis of Palaeomagnetic Data”. Poster Presentation in the annual conference of EGU held in Vienna (07-12 April 2019).
- **K. Peqini**: “Velocity field at the core-mantle boundary and jerks”. Oral presentation in the First International Conference on Research, Application and Educational Methods, RAEM, held in Korça, Albania, 24 May 2019.
- **K. Peqini**: “Flow at the Core-Mantle Boundary and Jerks”. Oral presentation in the III International Workshop on recent LHC Physics results and related topics held in Tirana, Albania (10-12 October 2018).
- **K. Peqini** and B. Duka: “The Velocity Field at the Earth’s Core-Mantle Boundary”. Oral presentation in the BPU (Balkan Physics Union) 10th Conference held in Sofia, Bulgaria (26-30 August, 2018).
- **K. Peqini**, B. Duka and B. Leichter: “Jerks and the velocity field at the CMB recovered using gufm1 model”. Poster presentation in the annual conference of EGU held in Vienna (08-13 April 2018).
- **K. Peqini** and B. Duka: “Time variation of the velocity field in core-mantle boundary (CMB)”. National conference KSNTEK, Tirana, 17-18 November, 2017.
- B. Duka and **K. Peqini**: “Regional geomagnetic field modeling”. Oral presentation at the XII Annual Meeting of ALBSHKENCA, Prishtina, Kosovo (01-03 September 2017).
- **K. Peqini** and B. Duka: “Geomagnetic Crustal field Anomalies over small countries (Austria and Albania) according to regional and global models”. Poster presentation in the annual conference of EGU held in Vienna (23-28 April 2017).
- **K. Peqini**, B. Duka and A. Uka: “Statistical indicators as potential early signals of transitions in time series obtained by a statistical model: Geomagnetic field case”. Oral presentation at the 1st International Conference on Applied Statistics and Econometrics (ICASE) 2017, held at Epoka University (27-28 April 2017).
- **K. Peqini** and B. Duka: “Recovering the crustal and unmodelled external contributions to the geomagnetic field of the European area”. Oral presentation in the annual conference of EGU held in Vienna (17-22 April 2016).
- **K. Peqini**: Recent results on recovering the non-modeled external magnetic field and crustal magnetic field from the confrontation of regional and global models of the geomagnetic field. Oral presentation in The Second International Workshop on recent LHC results and related topics held in Tirana (26-27 September 2016).
- E. Filippi, A. De Santis, F. J. Pavon-Carrasco, B. Duka, **K. Peqini**: “Some evidence for a Turbulent Diffusion in the Geodynamo from geomagnetic global models of the last few millennia”. Poster presentation in the IUGG Conference 2015 held in Prague (22 June-2 July 2015).

- **K. Peqini** and B. Duka: “Insights into reversals mechanism of the geomagnetic field through stochastic models simulations”. Oral presentation in The International Physics Conference held in Tirana (13-14 November 2015).
- **K. Peqini** and B. Duka: “Comparison of the dipolar magnetic field generated by two Ising-like models”. Poster presentation in the annual conference of EGU held in Vienna (12-17 April 2015).
- **K. Peqini** and B. Duka: “Applying “domino” model to study dipolar geomagnetic field reversals and secular variation”. Poster presentation in the annual conference of EGU held in Vienna (27 April-2 May 2014).