Curriculum vitae

PERSONAL INFORMATION

Name: Dr. Kreshnik HAKRAMA
Address: Gjerasi Qirjazi Street, Selitë, Tirana, Albania
Mobile: +355 67 50 00 333 | +355 68 60 76 000
Email: kreshnikhakrama@gmail.com | k_hakrama@yahoo.com
LinkedIn: linkedin.com/in/kreshnik-hakrama-81466a38
ResearchGate: researchgate.net/profile/Kreshnik-Hakrama
ORCID: https://orcid.org/0009-0008-2439-9315
https://www.researchgate.net/profile/Kreshnik-Hakrama
Nationality: Albanian
Languages:
AL Albanian (native)
GB English (fluent)
IT Italian (intermediate)

Work Experience

2022 – 2025 Full-time Academic Staff
European University of Tirana (UET)
Department of Architecture and Informatics – Faculty of Mechanical Engineering
Led academic modules in quality infrastructure, measurement science, and energy systems. Supervised student research and initiated applied research on measurement uncertainty in critical sectors. Finalized academic engagement in 2025, while scaling the NPUL model nationally and building institutional bridges with EURAMET, PTB, and the European Commission in the context of smart governance, fiscal transparency, and data trust.

Key Roles and Experience

- Senior Lecturer in Metrology and Industrial Systems.
- Specialized in Quality Infrastructure and Technical Instrumentation
- Delivered courses in Measurement Science, Energy Systems, and Smart Manufacturing
- Supervised master's-level research in instrumentation and applied metrology
- Designed outcome-driven curricula linking technical precision with public governance

2019 – 2022 Technical Director / Quality Manager Full time NOA INSPECT CONCESSIONARY COMPANY
Department of Inspection of legally controlled measuring instruments through verification of Fuel and Liquefied Gas Dispensers full time

Key Roles and Experience

- Led the national program for the verification and inspection of fuel and liquefied gas dispensers under the Albanian legal metrology framework.
- Designed and implemented a traceable measurement verification system in compliance with EU MID/NAWI directives and ISO 17020 standards.
- Managed the technical team and quality control procedures, ensuring full conformity of inspection reports with EURAMET and CE guidelines.
- Oversaw digital integration of field data with central inspection databases, setting the groundwork for future AI-enabled metrology governance.
- Acted as institutional liaison with the General Directorate of Metrology and the Ministry of Infrastructure and Energy for regulatory alignment and reporting.

2006 – 2019 GENERAL DIRECTORATE OF METROLOGY- DPM Full time Responsible for the Electricity and Thermometry Sector

Key Roles and Experience

- Acted as the national contact point for EURAMET and regional metrology organizations, enhancing Albania's integration into the European Quality Infrastructure through technical diplomacy and institutional alignment.
- Coordinated national participation in international interlaboratory comparisons (ILCs) and proficiency testing schemes in electrical and thermometric measurements, strengthening technical credibility and international recognition of Albanian laboratories.

- Led the implementation of conformity assessment procedures for legally controlled measuring instruments, focusing on electricity meters and thermometers under EU and OIML frameworks.
- Contributed to the drafting and institutionalization of Albania's Consumer Protection Policy, with a focus on reliable measurements, data traceability, and fair market practices.
- Oversaw technical audits and calibration infrastructure for energy, healthcare, and industrial sectors, directly informing the design of the NPUL model for integrating measurement uncertainty into public governance.
- Provided expert contributions to EU Chapter 1 and Chapter 28 negotiations, linking legal metrology reforms with consumer protection and digital governance strategies.

STRATEGIC RESARCH& INNOVATION PROJECTS

2023 – ongoing

Lead Researcher & Policy Designer – NPUL Model (National Product Uncertainty Loss)

Designed and published the NPUL model as a novel instrument to quantify the economic impact of measurement uncertainty in GDP, public procurement, and AI governance.

- Applied in energy, healthcare, construction, and digital platforms in Albania.
- Integrated with UN SDGs (3, 9, 16) and EU Chapter 28 on Consumer Protection.
- Selected for peer review in World Development journal.
- 2025 – Candidate Project – My Data is Mine Award (Lisbon, Web Summit)

  Title: From Unverified Data to Verified Trust: NPUL–PETs for Privacy-Centric and Economically Accountable Governance

  Developed and submitted a strategic pilot framework that integrates the NPUL model (National Product Uncertainty Loss) with Privacy-Enhancing Technologies (PETs) to address data traceability gaps in AI-driven public governance. The project proposes Albania as a regional testbed for measurable, privacy-compliant, and fiscally accountable digital systems aligned with SDG targets, GDPR, and EU Chapter 28 on Consumer and Health Protection.
  This initiative builds on core findings currently under editorial review in World Development and positions the author as a strategic contributor to the architecture of trustworthy data governance in emerging economies.

ACADEMIC BACKGROUND

2000 – 2005 Polytechnic University of Tirana. Faculty of Mechanical Engineering Department of Production Management, specializing in Metallurgy and Materials Engineering.

2006 – 2009 Postgraduate Polytechnic University of Tirana. Faculty of Mechanical Engineering. Post-graduate studies in "Metrology"

20011-2016 Polytechnic University of Tirana. Faculty

2013 – 2022 | PhD in Metrology and Industrial Systems. Polytechnic University of Tirana

Doctoral Dissertation: ***Development of Standardized Methods for Investigating Textile Structures through Advanced Analytical Techniques: FT-IR ATR, DSC, SEM/EDX***

The doctoral research involved the systematic validation of advanced analytical techniques for nanostructured textile materials, bridging the gap between experimental science and standardized methodologies applicable in complex operational contexts. By calibrating and cross-verifying the precision of FT-IR ATR, DSC, and SEM/EDX instruments across multiple testing environments, the study established traceable, reproducible benchmarks that go beyond descriptive characterization, enabling quantifiable assessments of material behavior.

This work reflects not only technical mastery in material metrology but also the capacity to translate laboratory-level accuracy into governance-relevant frameworks. It implicitly demonstrates the author's ability to construct architectures of verification and traceability, foundational for any system where data quality is central to decision-making. Through a rigorous, decade-long engagement with interdisciplinary validation, the research offers transferable competencies for the design and deployment of data-critical infrastructures, particularly those requiring both scientific robustness and institutional applicability.

ACADEMIC TEACHING EXPERIENCE (WITH EUROPEAN RELEVANCE)

Engaged in part-time academic instruction within the Department of Production Management, Faculty of Mechanical Engineering (2008–2014), delivering seminar-based modules on 'Metallic Materials' to undergraduate students. The pedagogical focus extended beyond foundational metallurgical properties to include the scientific basis of alloy behavior, microstructural integrity, and material performance under industrial and regulatory conditions. This early academic involvement reflects a sustained contribution to fostering technical literacy, standardization culture, and material validation competencies in line with evolving European higher education and quality infrastructure agendas.

REFERENCA AND PUBLICATIONS

Conference Proceedings with ISBN (Peer-Reviewed Abstracts or Full Papers):

Presented and published research contributions in internationally recognized scientific conferences, accepted upon prior peer-review and published in official proceedings with registered ISBN. These contributions reflect active engagement with the academic community and alignment with European research dissemination standards.

1. **Kreshnik HAKRAMA ,** Genti GUXHO, Akli FUNDO, "4th International Conference of textile" " *Problemet Specifike të Kalibrimit të Aparateve Matës të Lagështisë në Mjediset Tekstile*", ISBN: 978-99956-94-46-3; 19 Nëntor 2010, Tirane, Albania.

2. **Kreshnik HAKRAMA,** Genti GUXHO, Eldi LIÇO "Konferenca Kombëtare e Shkencave të Aplikuara", "*Standardet Kombëtare, Krijimi, Mirëmbajtja dhe Krahasimet Laboratorike*", Punim Poster 025, **ISBN: 978-9928-4217-9-1** (pg 137), 21 Nëntor 2015, Tirane, Albania.

3. **Kreshnik HAKRAMA,** Genti GUXHO, Eldi LIÇO "7th International Conference of Textile", "*Structure Investigation of the Industrial rubber with the Vibration Infra Red Spectroscopy Method, Equipped with ATR system*", ISBN: 978-9928-171-54-2 (pg 277 - 281), 10-11 Nëntor 2016, Tirana, Albania.

4. **Kreshnik HAKRAMA,** Indrit VOZGA , "1 st International Scientific Conference on Profesional Sciences", " *Micro -Elektro-Mechanical Systems Production and Application* ", Punimi ISBN: 978-928-4381-5-7 (pg 198), 25-26 Nentor 2016 , Durres Albania

5. **Kreshnik HAKRAMA,** Genti GUXHO, Indrit VOZGA, "8th International textile Conference" "Invetigation of rubber granules used in artificial turf systems with DSC and SEM methods" Punimi ISBN: 978-9928-171-83-2 (Pg184). 18-19 Nëntor, 2018, Tirana, Albania.

6. **Kreshnik HAKRAMA,** Genti Guxho, Klodian Dhoska " VII INTERNATIONAL SCIENTIFIC CONFERENCE MATERIAL SCIENCE , NONEQUILIBRIUM PHASE TRANSFORMATIONS" "*Investigation of rubber granules used in artificial turf systems with FTIR Spectroscopy with ATR system and DCS*" ISSN: (Print) 2535-0218 ISSN: (Online) 2535-0226 06-09 SEPTEMBER, 2021, VARNA, BULGARIA

7. **Kreshnik Hakrama,** Genti Guxho " VII INTERNATIONAL SCIENTIFIC CONFERENCE MATERIAL SCIENCE,, NONEQUILIBRIUM PHASE TRANSFORMATIONS", "*Morphological study of rubber granules used in artificial turf systems with SEM and DSC methods*" ISSN: (Print) 2535-0218 ISSN: (Online) 2535-0226 06-09 SEPTEMBER, 2021, VARNA, BULGARIA

Scientific Publications in National and International Journals

Published scholarly articles in peer-reviewed scientific journals, both nationally and internationally. These contributions reflect sustained academic engagement and research activity across interdisciplinary themes, with a focus on measurement science, quality infrastructure, material validation, and their socio-technical applications. The publications have contributed to strengthening the scientific discourse on evidence-based governance, industrial innovation, and metrology-driven development models.
Representative journals include, but are not limited to:

1. **Kreshnik Hakrama,** Genti Guxho , "Interanational Journal of Innovative Research in Science, Engineering and Technology, IJIRSET", " *DSC Analyses of Rubber Granules used in Artificial Truf System*" ISSN (Online): 2319- 8753 dhe ISSN (Print): 2347 -6710 Volume 7, Issue , 4 Aprile 2018 India.

2. **Kreshnik Hakrama,** Genti Guxho, JNTS Journal of Natural and technical sciences (Pubished by Academy of Scences of Albania), "*Structure Analyses of Recycled Rubber by using Vibrationinfra red Spectroscopy method, equipped with ATR system*", Publikimi JNTS No 44 / 2017 (XXII) ISSN 2074-0867 (pg159), 2017, Tirane, Albania.

3. **Kreshnik Hakrama,** Genti GUXHO, Eldi LIÇO, Zastita Materijala 58 Broj 2 "*Morphological and chemical study of recycled synthetic rubber tire crumbs by using Scanning Electron Microscopy and Energy Dispersive Analysis*", ISSN 0351-9465, E-ISSN 2466-2585 (pg 222 - 227), 2017, Beograd, Serbia.

4. **Kreshnik Hakrama,** Genti Guxho, Klodian Dhoska "VII INTERNATIONAL SCIENTIFIC CONFERENCE MATERIAL SCIENCE „NONEQUILIBRIUM PHASE TRANSFORMATIONS", *"Structure studding of recycling rubber materials through Infrared ëith ATR, DSC and scanning electron microscopy and energy dispersive analysis (SEM)*" ISSN: (Print) 2367-749X ISSN: (Online) 2534-8477 SEPTEMBER, 2021, VARNA, BULGARIA

5. **Kreshnik Hakrama,** Indrit Vozga, Kreshnik Hakrama, JNTS Journal of Natural and technical sciences (Pubished by Academy of Scences of Albania), "Nanocages and nanotubes: organic / inorganic hybrides in biosensors", Publikimi JNTS No 43 / 2017 (XXII) ISSN 2074-0867 (pg163-174), 2017, Tirane, Albania.

6. Otjela Lubonja, Kreshnik Hakrama |Journal article *Conceptualization, Formal analysis, Data curation* DOI: 10.47750/QAS/24.192.41 The Connection Between Urbanization, Energy Consumption, Foreign Direct Investments and Their Impact on the Environment in Albania. Calitatea (Quality – Access to Success), 2023-12-10

7. Hakrama K. (2025, under review). Integrating Measurement Uncertainty into GDP through the NPUL Model. World Development.

MEMBERSHIP IN TECHNICAL AND SCIENTIFIC COMMITTEES (NATIONAL & INTERNATIONAL)

- Member, Technical Committee for Inspection Bodies
  General Directorate of Accreditation, Albania (2020–2021)
- Chair, Technical Standards Committee on Bolts and Fasteners
- General Directorate of Standards, Albania (2012–2019)
- Member, EURAMET Technical Committee for Magnetic Fields – Albania Representative (2013–2020)
- Member, EURAMET Technical Committee for Dimensional Metrology – Albania Representative (2006–2010)
- Member, EURAMET Technical Committee for Scientific and Industrial Metrology – Albania Representative (2013–2020)

ACADEMIC ROLES & LEADERSHIP ROLES

- Senate Member, European University of Tirana (2022–2025)
- Contributed to strategic academic governance, institutional policy-making, and long-term development planning. Participated in decisions related to research priorities, accreditation, and quality assurance frameworks.
- Member, Council of Professors, European University of Tirana (2024–2025)
- Participated in institutional academic decision-making, curriculum review, and faculty development discussions.
- Head of Subject Group, Measurement Science and Quality Infrastructure (2023–2024)
- Coordinated interdisciplinary modules and supported academic innovation in metrology, smart infrastructure, and EU alignment.
- External Technical Evaluator, General Directorate of Accreditation (2021–ongoing)
- Conducted peer reviews and technical assessments under ISO/IEC 17025 and 17020 across national inspection and testing bodies.
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