

## CV

1. **Surname:** Lesha
2. **First Name:** Virtyt
3. **Date of Birth:** 17.06.1990
4. **Profession:** Electronics Engineer                      **Nationality:** Albanian
5. **Education:**

***March 2019 – Present***

Doctoral Studies on “Information Sciences”  
Faculty of Organization and Informatics  
University of Zagreb  
[www.foi.unizg.hr](http://www.foi.unizg.hr)

***October 2012 – April 2016***

Master of Science on Electronics Engineering  
Faculty of Information Technology  
Polytechnic University of Tirana  
[www.fti.edu.al](http://www.fti.edu.al)

***October 2008 – March 2012***

Bachelor on Electronics Engineering  
Faculty of Information Technology  
Polytechnic University of Tirana  
[www.fti.edu.al](http://www.fti.edu.al)

**6. Membership of Professional Associations:**

- Memberships on Scientific Boards of International Journals and Conferences:
  - i) Advances in Science, Technology and Engineering Systems Journal
  - ii) PURKH Journal
  - iii) International Virtual Conference on Advanced Scientific Results
  - iv) Research Conference in Technical Disciplines
  - v) The “QUAESTI” Scientific Conference – Multidisciplinary Studies and Approached
  
- Memberships on Editorial Boards of International Journals:
  - i) International Journal of Trend in Scientific Research and Development
  - ii) Science Technology Publishing Journal

## 6. Other Training:

### 1.1 26 May 2017

#### **Training on “Methodology of Writing High-Quality Scientific Papers”**

The Association of Economists and Managers of the Balkans, Belgrade (Serbia)

[www.udekom.org.rs](http://www.udekom.org.rs)

### 1.2 25 November 2016

#### **Training on “Academic Research Skills”**

The Association of Economists and Managers of the Balkans, Belgrade (Serbia)

[www.udekom.org.rs](http://www.udekom.org.rs)

*These two trainings aim to provide information on a range of skills that are essential to develop a career in scientific research. The above trainings are linked together and are independent of any academic subject, focusing more on the philosophy needed to make a successful career in research, whatever the subject.*

*A career in science is largely built on the (perceived) quality of publications that a researcher (or a team of researchers) offers his or her colleagues. If these publications are numerous and high quality, they lead to research funding and employment.*

*The training’s outcomes are:*

- a. *Understand what the objective of the research should be*
- b. *Understand principles of good experimental design*
- c. *Understand the importance of considering all the factors*
- d. *Understand the importance of thinking before doing*
- e. *Learn how to reduce sources of error*
- f. *Appreciate the importance of data quality control*
- g. *Recognise when you have good quality science*
- h. *Understand that papers must have international interest*
- i. *Understand the requirements for different types of papers*
- j. *Learn how to follow the journal instructions*
- k. *Learn how to present information and results logically*
- l. *Learn how to improve the text*

### 2. May 2015

#### **Training on “Fundamentals of Programmable of Logic Controllers”**

Harry Fultz Institute, Tirana, Albania

[www.harryfultz.edu.al](http://www.harryfultz.edu.al)

*During this training there was unfolded a general overview of fundamentals of planning, installing, configuring, maintaining and troubleshooting automatic/robotic control systems designed through **Siemens Simatic Step7 300/400/1200** programmable logic controllers.*

### 3. November 2014

#### **Training on “Fundamentals of Matlab Programming”**

Harry Fultz Institute, Tirana, Albania

[www.harryfultz.edu.al](http://www.harryfultz.edu.al)

*During this training there was unfolded a general overview of fundamentals Matlab Simulation Programming Platform with focus on **digital signal processing and machine learning**. The general items treated were:*

- Importing and displaying images
- Converting between image types
- Exporting images
- Pre-processing Images
- Pre-process images by filtering and using contrast adjustment to simplify or allow for image analysis steps.

- Adjusting image contrast
- Reducing noise in an image by filtering
- Handling inhomogeneous background
- Applying custom functions block by block
- Spatial Transformation and Image Registration
- Objective: Compare images with different scaling and orientation by aligning them.
- Geometric transformations
- Image registration using point mapping
- Image registration using phase correlation
- Automating Image Registration with Image Features
- Objective: Detect, extract, and match sets of image features to automate image registration.
- Detecting and extracting features
- Matching features
- Estimating geometric transformations between images
- Edge and Line Detection
- Segmenting object edges
- Detecting straight lines
- Performing batch analysis over sets of images
- Detecting circular objects
- Colour and Texture Segmentation
- Objective: Segment objects based on colour or texture. Use texture features for image classification.
- Colour space transformation
- Colour segmentation
- Texture segmentation
- Texture-based image classification
- Feature Extraction
- Objective: Analyse and modify the objects' shape to improve segmentation results. Count the detected objects and calculate object features like area or centroids.
- Counting objects
- Measuring shape properties
- Using morphological operations
- Performing watershed segmentation
- Categorical data
- Data preparation
- Finding Natural Patterns in Data
- Unsupervised learning
- Clustering methods
- Cluster evaluation and interpretation
- Building Classification Models
- Supervised learning
- Training and validation
- Classification methods

**7. Countries of Work Experience:**

- Albania

**8. Languages: Albanian – native language**

**English** – Excellent reading; Excellent speaking; Excellent writing

**Italian** – Excellent reading; Good speaking; Good writing

**9. Employment Record:**

**From:** 1 October 2018 - Present

**Employer:** "Metropolitan" University of Tirana

**Position Held:** Internal Professor, Vice  
Head of Department of Electrical and Electronics  
Engineering

**Summary:** The subjects lectured: Elektronike Analoge dhe Dixhitale, Sistmet Elektrike te Fuqise, Elektroteknike,

**From:** 1 October 2018 – 14 February 2020

**Employer:** "Luarasi" University

**Position Held:** Internal Professor

**Summary:** Full Lecturer and co-Editor of the "International Scientific Conference of "Integrated Policy on Research and Innovations" Proceedings. The subjects lectured: Computer Architecture, The Organization of Computer Systems and Operative Systems, Ethics and Technology, Organizational Ethics. Member of Career Development Office

**From:** 25 December 2017 – 21 September 2018

**Employer:** Kürüm International

**Position Held:** Head of Automatic Control System of the Rolling Mill Plant/ Member of Occupational Health and Safety Assessment Council According to OHSAS 18001:2007

**Summary:** Maintaining, supervision and updating the automatic control system of the rolling from **in the most effective time perspective regardless the different problems in each case.**

**From:** 23 September 2017 – 14 November 2017

**Employer:** Sioner S.r.l

**Position Held:** Photovoltaic Plant Projecting Consultant

**Summary:** -Preparation of Feasibility Report for a certain solar project  
-Solar Irradiance Analysis and Project Financial Feasibility Report  
-Application submission  
- Expression of Interest to Government agencies  
-Preparation of Detailed Project Report  
-Project Detailing  
-Assistance in Project Tendering  
-Project Commissioning Support Maintaining

**From:** 28 November 2016 – 13 May 2017

**Employer:** Seven Consulting

**Position Held:** -**Radio Frequency Optimization & Planning Engineer**

**Summary:** -Analysis and optimization of Electromagnetic Impact and preparation of health reports  
-Simulation of electromagnetic field and data processing using EMLab tools  
-Implementation of the 4G technology and technological upgrading of telecommunication systems

## 10. List of publications

### 10.1 Lectures Held as Invited Speaker/ Presentations

- "The Effects of Using Internet Regarding Environment Pollution", The 25th Central European Conference on Information and Intelligent Systems, Student Online Section, Varaždin, Croatia (17.09.2014 – 19.09.2014)
- "The Advantages and Disadvantages of the Use of Multimedia In Education", Researching Paradigms of Childhood and Education, Opatija, Croatia (13.04.2015 – 15.04.2015)
- "A simulation model of the performance of a network structured according to the OSPF protocol", The 26th Central European Conference on Information and Intelligent Systems, Student Online Section, Varaždin, Croatia (23.09.2015 – 25.09.2015)
- "The enhancement of the one-dimensional signal through Kalman filtering", The 3rd International Conference on "Research and Education – Challenges Towards the Future, Shkodra, Albania (23.10.2015)
- "The execution speed increasing if image scaling through bi-linear interpolation method" The 27th Central European Conference on Information and Intelligent Systems, Varaždin, Croatia (21.09.2016 - 23.09.2016)
- "The simulation of edge detection through Matlab of a binary image" The 27th Central European Conference on Information and Intelligent Systems, Varaždin, Croatia (27.09.2017 – 29.09.2017)
- "The designing of a simulation model through Matlab of fingerprint recognition" The 28th Central European Conference on Information and Intelligent Systems, Varaždin, Croatia (27.09.2017 – 29.09.2017) - Invited Speaker
- "Retinal bio-metric recognition in the context of preliminary development to actual applicative systems/(Simulation model under Matlab)" The 29th Central European Conference on Information and Intelligent Systems, Varazhdin, Croatia (19.09.2018 – 21.09.2018) - Invited Speaker
- "Gait recognition improvement based on spatial-domain energy deviation image" The "Research Applications and Educational Methods" Conference, Korca, Albania(12.05.2019)
- "The moving object reflected on Matlab test-bench /(Simulation model through built-in functions)" The 29th Central European Conference on Information and Intelligent Systems, Varaždin, Croatia (19.09.2018 – 21.09.2018) - Invited Speaker
- "The Improvement of Face Recognition Using the Principal Component Analysis Algorithm"
- The 30th Central European Conference on Information and Intelligent Systems, Varaždin, Croatia (02.10.2019 – 04.10.2019)
- "The Implementation of an Improved Adaptable Fingerprint Minutiae Extraction Algorithm Based on Machine Learning Perspective" The 30th Central European Conference on Information and Intelligent Systems, Varaždin, Croatia (02.10.2019 – 04.04.2019)

- "The Analysis of Modified Fuzzy Logic Speech Recognition Simulation Model" The 30th Central European Conference on Information and Intelligent Systems, Varaždin, Croatia (02.10.2019 – 04.04.2019)

### **10.2 Monographs**

- "The stability analysis of the hydro-power plant - Case of Vau-Dejes" LAP - Lambert Publishing House (3.02.2016), ISBN – 978 – 659 – 84719 – 6
- "On Multimedia and Digital Culture – Case of Albania" LAP - Lambert Publishing House (22.03.2016), ISBN – 978 – 3 – 659 – 86520 – 6
- "The Noise Pollution in Albania –A Regression Analysis Approach" LAP - Lambert Publishing House, (08.04.2016), ISBN – 978 – 3 – 659 – 87253

### **10.3 Scientific Articles Published in International Conferences**

- "The Evaluation of Information Security in Organizations, Using the CVSS scoring System", The 1st Internet & Business Conference, IBC 2012, Rovinj, Croatia(27.06.2012 – 28.06.2012), ISSN-1848-5278
- "Reflections Regarding Website Security and Its Credibility", The 1st Internet & Business Conference, IBC 2012, Rovinj, Croatia (27.06.2012 – 28.06.2012), ISSN - 1848-5278
- "A comparative analysis, through different case studies, of two routing protocols, RIPv1 and RIPv2, regarding route summarization", The 1st International Conference on "Research and Education - Challenges Towards the Future, Shkodra, Albania (24.05.2013 – 25.05.2013)
- "A Comparative and Performace Analysis Between Hearing Aids with Three Channels and Six Channels", The 1st International Conference on "Research and Education – Challenges Towards the Future, Shkodra, Albania (24.05.2013 – 25.05.2013)
- "Internet and its Impact on Youth Culture", International Conference National and Universal Culture in Central Europe, Slavonski-Brod, Croatia (16.04.2015 – 18.04.2015)
- "The Simulation in Matlab of the Dependency of the Electrical Parameters in a Hydropower Plant ", Enterprise Research and Innovation Conference, Kotor, Montenegro (10.09.2015 – 11.09.2015), ISSN 1849 – 7969
- "The stability analysis of an aggregate of Vau-Dejes hydropower plant", The 4th Virtual International Conference on Advanced Research in Scientific Areas, Zilina, Slovakia, (9.11.2015), ISSN: 2453-6962,, CD ROM ISSN: 1338-9831, ISBN: 978-80-554-1126-2, DOI: 10.18638/arsa.2015.4.1
- "Customer-bank relationship in commercial banks operating in Albania", The 8th International Conference on Social Sciences, Sofia, Bulgaria, (4.3.2016 – 5.3.2016)
- "The noise pollution in Albania: A regression analysis through Matlab", The 7<sup>th</sup> International Conference "Information Systems and Technology Innovations: the New Paradigm for a Smarter Economy", Tirana, Albania, (17.06.2016 – 18.06.2016)

- "The implementation, in Matlab, of three digital image processing algorithms to evaluate the change of parameters of two consecutive images", Enterprise Research and Innovation Conference, Rovinj, Croatia (08.09.2016 – 09.09.2016)
- "The analysis of electromagnetic field impact of mobile communication antennas: The case study of Lombardy, Italy", Enterprise Research and Innovation Conference, Rovinj, Croatia (07.09.2017 – 09.09.2017)
- "The enhancement of the signal through digital predistortion", The 3d International Scientific Conference, Belgrade, Serbia" (14.12.2017)
- "Simulation of acoustic noise elimination to an audio profile generated by urban environment in Tirana, Albania – Modelling via Matlab/Simulink", The 12th Scientific/Research Symposium with International Participation: Metallic and Non-Metallic Materials, Zenica, Bosnia-Herzegovina" (19.04.2018)
- "The technical analysis of on-grid photo-voltaic power plant implementation: case study of Elbasan, Albania", Enterprise Research and Innovation Conference, Split, Croatia, (06.09.2018–08.09.2018)
- "The moving object reflected under Matlab test-bench (Simulation model through built-in functions)", The 7th International Conference on Computer Science and Communication Engineering, Pristina, Kosovo, (26.10.2018 – 28.10.2018)
- "The modelling of facial recognition process in prospective of simulation techniques (A methodical elaboration through the built-in modules of Matlab)", The 9th International Symposium Graphic Engineering and Design, Novi-Sad, Serbia (08.11.2018 – 10.11.2018)
- Improvement of Object Tracking Performance Using Kalman Filtering (Simulation Model Through Matlab Built-In Functions) International Conference of "Integrated Policy on Research and Innovations, Tirana, Albania," (08.05.2019)
- The Speech Recognition Performance Improvement Considering the Sampling Range of the Sound (Simulation Modeling Through Matlab) International Conference of "Integrated Policy on Research and Innovations, Tirana, Albania," (08.05.2019)
- "Improvement of Gender Recognition using the Cosfire Filter Framework (Simulations Platform of Shape-Preserving Regression – PCHIP)", The 8th International Conference on Computer Science and Communication Engineering, Pristina, Kosovo (25.10.2019 – 27.10.2019)

#### **10.4 Scientific Articles Published in International Journals**

- Customer loyalty in commercial banks in Albania", European Journal of Business, Economics and Accountancy, (Vol. 3, No. 7, 2015), Rochester, United Kingdom, ISSN 2056 – 6018, page. 44 – 52
- "Lagrange approximation between generator's and transformer's parameters of Vau-Dejes Hydro-power-plant", The journal of Multidisciplinary Engineering, Science and Technology, Berlin, Germany, (Vol. 2 ,No. 12, 2015), ISSN 3159 – 0040, page. 3603 –3612

- "The Trend of Penetration of Multimedia in Education: A Case of Albania" European Journal of Business, Economics and Accountancy, (Vol.4, No.1, 2016), Rochester, United Kingdom, ISSN 2348 – 0386, page. 412 – 419
- "The Trend of Penetration of Digital Culture: A Case of Albania", European Journal of Business, Economics and Accountancy, (Vol.4, No.1, 2016), Rochester, United Kingdom, ISSN 2348 – 0386, page. 412 – 419
- "The performance evaluation of an algorithm for fingerprint biometric recognition ", American Journal of Engineering Research, (Vol. 5, No. 2, 2016), e-ISSN: 230-0847, p-ISSN 2320-0936, page.248-253
- "The Enhancement of Speech Recognition Using Particle Swarm Optimization", The journal of Multidisciplinary Engineering, Science and Technology, Berlin, Germany (Vol.3 , No. 3, 2016), ISSN: 2458-9403, page. 4259 - 4263
- "The Explanation of Matlab Simulations of Published Biomedical Engineering Papers", International Journal of Trend in Research and Development, Ahmedabad, India, (Vol. 4, No. 1), ISSN 2394-9333

## 11. Honours and Awards

**"Young Researcher Entrenova Award"** for the scientific paper

"The regression analysis through Matlab of the Electrical Parameters in a Hydropower Plant", Enterprise Research and Innovation Conference, Kotor, Montenegro (10.09.2015 – 11.09.2015), ISSN 1849 – 7969

## 12. Projects

1. Developing an algorithm using Matlab software that calculates the MOS, PSNR, and SSIM levels of two successive frame changes in a video file.

[www.upwork.com](http://www.upwork.com)

2. Developing an Algorithm through Matlab Software to Improve Voice Identification by Using Artificial Intelligence Networks.

[www.upwork.com](http://www.upwork.com)