

## CURRICULUM VITAE

### PERSONAL INFORMATION

Name, surname	Olta Çakaj
Home address	Rruga “Prokop Mima”, nd. 35, h. 9, ap. 9, 1044, Selitë, Tirana, Albania
Cell phone	00355673018630
E-mail	olta.cakaj@fshn.edu.al , oltacakaj@gmail.com
Nationality	Albanian
Birth date	22 June 1985

### EDUCATION

2000 - 2004	General High School “Qemal Stafa” Tirana, Albania.
2004 - 2009	Faculty of Natural Science, specialization Physics 5-years, graduated Physicist, Tirana, Albania. Thesis: “Study of elements composition and microstructure of some antique copper alloy objects”. Supervisor: Prof. Dr. Nikolla Civici.
January 2010 - October 2011	Master of Second Level in the Faculty of Natural Science, University of Tirana, Albania, specialization Physics - Chemistry of Materials. Thesis: “Synthesis, Characterization, and Thermal Analysis of $\text{LiMn}_2\text{O}_4$ as Cathode Material for Li-ion Batteries”, Supervisor: Prof. Dr. Hans Seifert, Dr. Damian Cupid, Prof. Dr. Teuta Dilo.
May 2010 - August 2010	Master Thesis done at the Faculty of Materials Science and Materials Technology, Technical University Bergakademie of Freiberg, Germany. Scholarship of the German Academic Exchange Service (DAAD).
May 2012 - June 2017	PhD degree at the Faculty of Natural Science, University of

	<p>Tirana, Albania, specialization Material Sciences.          Thesis: “Characterization and study of the production technology of copper alloy antique objects found in Albania”.          Supervisor: Prof. Dr. Teuta Dilo.</p>
September - October 2014	<p>Experimental measurements of the PhD thesis performed at the Faculty of Mechanical, Process and Energy Engineering, Technical University Bergakademie of Freiberg, Germany. Scholarship of the German Academic Exchange Service (DAAD).</p>
September - October 2015	<p>Experimental measurements of the PhD thesis performed at the Faculty of Mechanical, Process and Energy Engineering, Technical University Bergakademie of Freiberg, Germany. Scholarship of the German Academic Exchange Service (DAAD).</p>
<b>WORK EXPERIENCE</b>	
June 2014 - present	<p>Full time physics lecturer at the Department of Physics, Faculty of Natural Science, University of Tirana, Albania.</p>
January 2011 - May 2014	<p>Full time physics lecturer at the Department of Physics, Faculty of Engineering Mathematics and Engineering Physics, Polytechnic University of Tirana, Albania.</p>
October 2009 - May 2014	<p>Part time physics lecturer at the Department of Physics, Faculty of Natural Science, University of Tirana, Albania.</p>
October 2010 - December 2010	<p>Full time physics lecturer at the Department of Engineering Science, Faculty of Professional Studies, Aleksandër Moisiu University Durrës, Albania.</p>
October 2010 - December 2010	<p>Part time physics lecturer at the Department of Physics, Faculty of Engineering Mathematics and Engineering Physics, Polytechnic University of Tirana, Albania.</p>
<b>TRAININGS AND ACTIVITIES</b>	
2004 - 2009	<p>Senate member at the Student Government, Faculty of Natural Science, Albania.</p>
April 2006	<p>Training “Student representation, management of campaigns and public speaking” in Tirana, supported by the United States Embassy and the Royal Embassy of the Netherlands, conducted</p>

	by the Albanian Student Government.
12 - 18 June 2006	Training “The role of student representatives, style of leadership, decision making, cooperation, negotiation and determination of goals” in Tirana, supported by the United States Embassy and the Royal Embassy of the Netherlands, conducted by the Albanian Student Government and Steve Wymer.
2008 - 2009	Member of the Council of the Faculty of Natural Sciences, University of Tirana, Albania.
14 - 25 July 2008	Summer School “Mechanical behavior of materials” in Vlora, funded by the DAAD, organized by the University of Vlora and Technical University Bergakademie of Freiberg, obtained a certificate of 4 credits ECT system (European Credit Transfer).
23 - 26 November 2008	Lectures “Science and technology of materials” in Tirana, funded by the DAAD, organized by the University of Tirana and Technical University Bergakademie of Freiberg.
13 - 24 July 2009	Summer School “Selected topics about materials characterization” in Tirana, funded by DAAD, organized by the University of Tirana and Technical University Bergakademie of Freiberg, obtained a certificate of 4 credits ECT system (European Credit Transfer).
2 - 4 October 2009	Training “Climate change and energy” in Tirana organized by EDEN environmental centers and CEE Bankwatch Network.
14 - 18 May 2012	Regional training course “Advanced characterization of Cultural Heritage artefacts using nuclear analytical Techniques” in Tirana, organized by the International Atomic Energy Agency (IAEA) and the Centre of Applied Nuclear Physics.
8 - 9 October 2012	Presentation of the Master thesis, conducted in Germany, “Synthesis, characterization and thermal analysis of $\text{LiMn}_2\text{O}_4$ cathode material for Li-ion batteries” in the VIII Network Symposium of Materials Science and Technology in Prishtina, Kosovo. Funded by DAAD, organized by the University of Prishtina, Technical University Bergakademie of Freiberg and the University of Applied Sciences Mittweida.
30 May - 3 June 2016	Training course "OpenLab Albania 2016" for crystallography, organized and funded by the Polytechnic University of Tirana, IUCr-UNESCO and Bruker.

## **PARTICIPATION IN PROJECTS**

2008 - 2016

Active member of the network “*Materials Science and Technology*”, funded by DAAD, with members: Technical University Bergakademie Freiberg, Germany; University of Prishtina, Kosovo; Polytechnic University of Tirana, Albania; University of Tirana, Albania; University of Vlora, Albania; University of Tetova, Macedonia and University of Elbasan, Albania.

2012 - 2014

Member of the project “*Fundamental research and excellence*”, of the Ministry of Education and Science, entitled: “Study with optical microscopy, X-ray fluorescence and X-ray diffraction of different objects composed of copper and iron alloys”, as a full-time lecturer of the Department of Physics, Faculty of Engineering Mathematics and Physical Engineering, Polytechnic University of Tirana.

## **SCIENTIFIC ARTICLES AND CONFERENCES**

September 2009

T. Dilo, N. Civici, F. Stamati, O. Çakaj: “Archaeometallurgical characterization of some ancient copper and bronze artefacts from Albania”. 7th International Conference Balkan Physical Union in Alexandroupolis, Greece (9 - 13 September 2009), conference paper referred by Teuta Dilo. Article published in the journal American Institute of Physics, ISBN 978-0-7354-0740-4.

January 2010

O. Çakaj, T. Dilo, N. Civici, F. Stamati: “Elements composition and microstructure of a sword and a bronze antique shield”. Article published in the Bulletin of Natural Science, no. 8 (2009), the Faculty of Natural Sciences, University of Tirana, Albania.

3 March 2011

Damian M. Cupid, Toni Lehmann, Olta Çakaj, Hans J. Seifert: “Phase Stabilities and Equilibria in the Lithium-Manganese-Oxygen System”. 140-Conference “The Minerals, Metals & Materials Society” (TMS) in San Diego, California (27 February - 3 March 2011). Abstract published in Journal of Electronic Materials 2011, conference paper referred by Damian M. Cupid.

28 October 2011

Olta Çakaj, Damian M. Cupid, Hans J. Seifert: “The effect of cooling rate in the lattice parameter of the spinel structure  $\text{LiMn}_2\text{O}_4$  prepared according to the sol-gel method”. National Conference “Advanced studies in Engineering Mathematics,

	Physics and Chemistry”, Faculty of Engineering Mathematics and Physics, Polytechnic University of Tirana. Abstract published in the Conference Summary Book, ISBN 978-9928-124-28-9. Conference paper referred by Olta Çakaj.
December 2011	<u>O. Çakaj</u> , D. M. Cupid, H. J. Seifert, T. Dilo: “Thermal analysis with the heating rate 2K/min and characterization of the spinel structure $\text{LiMn}_2\text{O}_4$ with X ray diffraction and scanning electronic microscope”. Article published in the Bulletin of Natural Science, no. 12 (2011), the Faculty of Natural Science, University of Tirana, Albania, ISSN 2224-1779.
17 - 20 April 2012	J. Marku, I. Dumi, E. Liço, T. Dilo, <u>O. Çakaj</u> : “The characterization and the utilization of cement kiln (CKD) as partial replacement of Portland cement in mortar and concrete production”. XIV International Conference “Exchanging experiences in the fields of corrosion, materials and environmental protection” in Tara, Serbia. Abstract and article published in the Book of Abstracts and Proceedings, ISBN: 978-86-82343-16-5. Conference paper referred by Jozefita Marku.
3 - 6 May 2012	Disha Valbona, Kongo Pavli, Aliaj Fatbardha, Dilo Teuta, <u>Çakaj Olta</u> , Elezi Dervish, Petrela Elizana, Buba Majlinda: “Coronal micro leakage of three restorative materials after pulpotomy with MTA - an in vitro study”. BaSS in 2012, the 17th Conference of the Balkan Association of Dentistry in Tirana, Albania (3 - 6 May 2012). Conference paper referred by Valbona Disha.
29 - 30 October 2012	<u>O. Çakaj</u> , E. Duka, Z. Tafilica, F. Stamati, N. Civici, T. Dilo: “Preliminary investigation of some copper alloy medieval objects from the northern Albania”, The Third Balkan Symposium on Archaeometry “The Unknown Face of the Artwork”, 29-30 October 2012, Bucharest, Romania, ISBN: 13 978-973-88109-9-0, pp. 58-64. Oral presentation of the paper at the Conference: Olta Çakaj.
29 - 30 October 2012	E. Duka, <u>O. Çakaj</u> , Z. Tafilica, I. Gjipali, F. Stamati, N. Civici, T. Dilo: “Preliminary study of various iron slags from northern and central Albania”, The Third Balkan Symposium on Archaeometry “The Unknown Face of the Artwork”, 29-30 October 2012, Bucharest, Romania, ISBN: 13 978-973-88109-9-0, pp. 58-64. Conference paper referred by Edlira Duka.
22 - 23 November 2012	T. Dilo, N. Civici, F. Stamati, O. Bilani, <u>O. Çakaj</u> , E. Duka, E. Qoku, Sh. Vangjeli: “Archaeological studies of antique metallic objects from Albania - Review”. National Conference “FSHN on

	the 100th anniversary of the Independence Declaration” in Tirana, Albania. Article published in the Bulletin of Natural Sciences no. 16 (2013), the Faculty of Natural Sciences, University of Tirana, Albania, ISSN: 2305-882X.
November 2013	<u>Olta Çakaj</u> , Edlira Duka, Zamir Tafilica, Frederik Stamati, Nikolla Civici, Teuta Dilo: “Elements characterization with X ray fluorescence of three antique objects found in Shkodra, Gajtan and Koman”. International Conference “2nd International Conference Research and Education in Natural Sciences” in Shkoder, Albania. Article published in the Book of Proceedings, ISBN: 987-9928-4135-5-0. Presentation of the paper at the Conference: Olta Çakaj.
November 2013	Edlira Duka, <u>Olta Çakaj</u> , Zamir Tafilica, Frederik Stamati, Nikolla Civici, Teuta Dilo: “X ray fluorescence analysis of three iron working tools of III - II century BC found in Shkodra, Melgushë and surrounding area”. International Conference “2nd International Conference Research and Education in Natural Sciences” in Shkoder, Albania. Article published in the Book of Proceedings, ISBN: 987-9928-4135-5-0. Presentation of the paper at the Conference: Edlira Duka.
December 2013	Valbona Disha, Pavli Kongo, Fatbardha Aliaj, Teuta Dilo, <u>Olta Çakaj</u> , Dervish Elezi, Elizana Petrela, Majlinda Buba: “Coronal microleakage of three restorative materials after pulpotomy with MTA-AN in vitro study”. Article published in the Bulletin of Medical Sciences, no. 2, volume 44, 2013, ISSN: 2304-2354.
March 2014	Edlira Duka, <u>Olta Çakaj</u> , Zamir Tafilica, Frederik Stamati, Nikolla Civici, Teuta Dilo: “Study of iron objects discovered on the outskirts of Shkodra”. Article published in the Scientific Journal of Alb - Science Institute AKTET (2014).
April 2014	Edlira Duka, <u>Olta Çakaj</u> , Zamir Tafilica, Frederik Stamati, Nikolla Civici, Teuta Dilo: “Study of six antique head spears found in Shkodra”. Article published in the Bulletin of Natural Sciences no. 17 (2014) of the Faculty of Natural Sciences, University of Tirana, Albania, ISSN: 2305-882X.
July 2014	<u>Olta Çakaj</u> , Edlira Duka, Zamir Tafilica, Frederik Stamati, Nikolla Civici, Teuta Dilo: “Characterisation of copper alloy antique ornamental accessories found in Northern Albania”. Article published in the Open Journal of Archaeometry, vol. 2, no. 2, 2014, ISSN 2038-1956.

1 - 3 June 2015	<u>Olta Çakaj</u> , Teuta Dilo, Gert Schmidt, Nikolla Civici, Edlira Duka, Frederik Stamati, Zamir Tafilica: “Bronze sword from the XIV-XIII century B.C. found in northern Albania, war weapon or monetary exchange tool?” International Conference “Archaeometallurgy in Europe IV” in Madrid, Spain. Contribution published in the Abstract Book. Oral presentation of the paper at the Conference: O. Çakaj.
13 - 14 November 2015	<u>Olta Çakaj</u> , Damian M. Cupid, Hans J. Seifert, Teuta Dilo: “The effect of the heating rate on the chemical reaction of spinel structure $\text{LiMn}_2\text{O}_4$ ”. International Physics Conference Tirana in Albania. Contribution published in the Abstract and Proceedings Book. Poster presentation of the paper at the Conference: O. Çakaj.
March 2016	<u>Olta Çakaj</u> , Teuta Dilo, Gert Schmidt, Nikolla Civici, Frederik Stamati: “Fibula and snake bracelet from Albania. A case study by OM, SEM-EDS and XRF”. Article published in the Scientific Culture Journal, Vol. 2, No. 2, (2016), pp. 9-18. DOI: 10.5281/zenodo.44895. ISSN (online): 2407-9529.
July 2016	<u>Olta Çakaj</u> , Teuta Dilo, Gert Schmidt, Nikolla Civici, Frederik Stamati, Edlira Duka: “Studimi me $\mu$ -FRX, MO dhe MES-SDEX i një medalioni antik nga Durrësi”. Article published in the Bulletin of Natural Science BSHN no. 21 / 2016, ISSN 2305-882X.
25 - 29 September 2016	Edlira Duka, Ilir Gjipali, Frederik Stamati, Nikolla Civici, Teuta Dilo, <u>Olta Çakaj</u> , Elsa Qoku, Gert Schmidt: Case study of ancient iron slag founded in Eastern and Northwest of Albania. Fifth Balkan Symposium of Archaeometry, Sinaia, Romania. Oral presentation of the paper at the Conference: Edlira Duka.
October 2016	<u>Olta Çakaj</u> , Teuta Dilo, Nikolla Civici, Gert Schmidt, Frederik Stamati: “Study of eight Albanian-Dalmatian axes (XIII-XII B.C.) and six celts (XI-X B.C.) found in northern Albania, by $\mu$ -XRF, OM, SEM-EDS”. Article published in the Journal of Archaeological Science: Reports, Elsevier, vol. 9, pages 219-225, ISSN: 2352-409X.
25 – 26 November 2016	Edlira Duka, Nikolla Civici, Teuta Dilo, <u>Olta Çakaj</u> : “Elements characterization with X ray fluorescence of three iron working tools of III-I century BC found in Durrës”. 1st International Scientific Conference on Professional Sciences, Durrës, Shqipëri. Oral presentation at the Conference: Edlira Duka.

25 - 28 August 2017	Edlira Duka, Frederik Stamati, Nikolla Civici, Teuta Dilo, <u>Olta Çakaj</u> , Gert Schmidt, Zamir Tafilica: Study of ancient iron working tool founded in Shkodra, with XRF, SEM-EDS and OM. The International Scientific Congress of Materials and Polymers, Ohrid, Macedonia. Oral presentation of the paper at the Conference: Edlira Duka.
16 - 17 November 2017	<u>Olta Çakaj</u> , Teuta Dilo, Nikolla Civici, Gert Schmidt, Elsa Qoku, Edlira Duka, Frederik Stamati: "Archaeometallurgical study of medieval nails excavated in Durrës". 2 <sup>nd</sup> International Conference on Applied Sciences and Engineering (ICEAS 2017). Oral presentation of the paper at the Conference: Olta Çakaj.
16 - 17 November 2017	Edlira Duka, Zamir Tafilica, Frederik Stamati, Nikolla Civici, <u>Olta Çakaj</u> , Teuta Dilo, Gert Schmidt: "Study of two sickles of the medieval period found in Shkodër, Albania". 2 <sup>nd</sup> International Conference on Applied Sciences and Engineering (ICEAS 2017). Oral presentation of the paper at the Conference: Edlira Duka.
17 - 18 November 2017	<u>Olta Çakaj</u> , Teuta Dilo, Nikolla Civici, Edlira Duka, Frederik Stamati: "Rast studimi me $\mu$ -XRF i disa objekteve zbukurimi, vegla pune dhe fragmente objektesh antike të zbuluar në Durrës". Conference of Natural Sciences and Technology, Faculty of Natural Sciences, University of Tirana. Oral presentation of the paper at the Conference: Olta Çakaj. Article published in the Bulletin of Natural Science BSHN no. 24 / 2017, ISSN 2305-882X.
17 - 18 November 2017	Edlira Duka, Zamir Tafilica, Nikolla Civici, Frederik Stamati, <u>Olta Çakaj</u> , Teuta Dilo, Gert Schmidt: "Studimi i një gjilpëre në Shkodër". Conference of Natural Sciences and Technology, Faculty of Natural Sciences, University of Tirana. Oral presentation of the paper at the Conference: Edlira Duka. Article published in the Bulletin of Natural Science BSHN no. 24 / 2017, ISSN 2305-882X.
25 - 28 September 2018	<u>Olta Çakaj</u> , Edlira Duka, Teuta Dilo, Nikolla Civici, Gert Schmidt, Elsa Qoku, Elio Hobdari, Jamarbër Buzo: "Antique bronze mirror (III-II century BC) excavated in Amantia (Vlora, Albania) and studied with $\mu$ -XRF, SEM-EDS, XRD, OM". 6 <sup>th</sup> Balkan Symposium of Archaeometry, Ljubljana, Slovenia. Oral presentation of the paper at the Conference: Olta Çakaj.
25 - 28 September 2018	Edlira Duka, <u>Olta Çakaj</u> , Teuta Dilo, Nikolla Civici, Gert



	Schmidt, Adem Bunguri: "Study of ancient iron sword excavated in Dibër, with XRF, SEM-EDS and OM". 6 <sup>th</sup> Balkan Symposium of Archaeometry, Ljubljana, Slovenia. Poster presentation of the paper at the Conference: Olta Çakaj.
4 - 5 April 2019	Edlira Duka, <u>Olta Çakaj</u> , Teuta Dilo, Zamir Tafilica, Nikolla Civici: "Study on medieval iron nails discovered on the outskirts of Shkodra". 2 <sup>nd</sup> International Scientific Conference on Professional Sciences, Durrës, Albania. Oral presentation of the paper at the Conference: Edlira Duka.
19 - 21 June 2019	<u>Olta Çakaj</u> , Edlira Duka, Gert Schmidt, Nikolla Civici, Elsa Qoku, Teuta Dilo: "Preliminary study of Anastasius emperor's coins (VI AD) excavated in the Macellum build in his honor, in Durrës, Albania". The 5 <sup>th</sup> International Conference Archaeometallurgy in Europe, Miskolc, Hungary. Oral presentation of the paper at the Conference: Olta Çakaj.
19 - 21 June 2019	Edlira Duka, <u>Olta Çakaj</u> , Teuta Dilo, Nikolla Civici, Adem Bunguri, Gert Schmidt: "Investigation of the composition and the process used during the production of three antique spearhead with multivariate methods". The 5 <sup>th</sup> International Conference Archaeometallurgy in Europe, Miskolc, Hungary. Poster presentation of the paper at the Conference: Olta Çakaj.
20 - 22 November 2019	Edlira Duka, <u>Olta Çakaj</u> , Teuta Dilo, Elsa Qoku, Niko Civici, Adem Bunguri: "In search of Illyrian metallurgy: case study of iron slag founded in Lura". Accepted in the 1 <sup>st</sup> International Conference on Applied Physics (ICAP 2019), Faculty of Natural Sciences, University of Tirana, Albania.
20 - 22 November 2019	<u>Olta Çakaj</u> , Edlira Duka, Teuta Dilo, Nikolla Civici, Frederik Stamati: "Effect of porosity in the microhardness of an Albanian-Dalmatian axe (XIII-XII B.C.) and a celt one (XI-X B.C.) excavated in northern Albania". Accepted in the 1 <sup>st</sup> International Conference on Applied Physics (ICAP 2019), Faculty of Natural Sciences, University of Tirana, Albania.
18 - 22 May 2020	<u>Olta Çakaj</u> , Edlira Duka, Gert Schmidt, Frederik Stamati: "Preliminary study of two antique Illyrian helmets (V-IV B.C.) excavated in northern and central Albania". Accepted in the "International Symposium on Archaeometry" (ISA 2020), Lisbon, Portugal. <i>Postponed because of the COVID-19 pandemic.</i>

## LECTURES

I am currently a lecture of the following subjects:

**BOOK AND  
LABORATORY SCRIPT**

February 2014

“Materials Physics” - Master of Science in Physics

“Materials Science” - Master of Science Industrial and Environmental Chemistry

“General Physics” - Bachelor Physics and Mathematics

March 2014

Teuta Dilo, Olta Çakaj: “Laboratory of Material Science” - laboratory script.

Teuta Dilo, Olta Çakaj: “Structure and materials’ properties characterization” - theory and laboratory script in Materials Science. INFBOTUES, ISBN 978-9928-173-15-7.

**DIPLOMA THESIS  
SUPERVISION**

March - September 2015

Asetila Prenga with Master of Science in Physics diploma thesis: “The use of polymers as dental materials”.

March - July 2017

Elena Aga with Master of Science in Physics diploma thesis: “Polarized light microscopy”.

September 2017 - April 2018

Bledar Murati with Master of Science in Physics diploma thesis: “Batteries”.

March - July 2018

Xhuliana Matraku with Master of Science in Physics diploma thesis: Archaeometallurgy characterization of some antique coins excavated in Durrës”.

March - July 2018

Xhorxhina Matraku with Master of Science in Physics diploma thesis: “Study of an antique mirror with  $\mu$ -XRF, SEM-EDS, OM and Vickers microhardness test”.

March - July 2019

Grisilda Çorja with Master of Science in Physics diploma thesis: “Physical principle and construction of generators”.

March - July 2019

Denisa Ajdini with Master of Science in Physics diploma thesis: “Artificial light”.

March - July 2019

Rukije Dufi with Master of Science in Physics diploma thesis: “Variation of microhardness from the microstructure of a binary alloy Pb-Sn”.

March – September 2020	Edra Çausi with Master of Science in Physics diploma thesis: “Solar energy as one of the most important renewable energy sources”.
March – September 2020	Evllona Dinko with Master of Science in Physics diploma thesis: “Stiffness investigation of Si monocrystal”.
March – June 2021	Klaudia Gjini with Master of Science in Physics diploma thesis: “Conductivity and thermal insulation of timber materials”.
March – June 2021	Inis Tahiri with Master of Science in Physics diploma thesis: “Magnetic field of ferromagnets”.
May – September 2021	Armando Zeka with Master of Science in Physics diploma thesis: “Thermal capacity of some building materials”.

## **FOREIGN LANGUAGES**

English	<ul style="list-style-type: none"> <li>- Written → excellent</li> <li>- Spoken → excellent</li> </ul> <p>The English language diploma from Faculty of Foreigner Languages, Tirana, Albania, 31 October 2009. TOEIC diploma, level C (score 870 points).</p>
Italian	<ul style="list-style-type: none"> <li>- Written → very good</li> <li>- Spoken → excellent</li> </ul>

## **COMPUTER KNOWLEDGE**

Very good knowledge:	<ul style="list-style-type: none"> <li>- Microsoft Office</li> <li>- MatLab / Origin / Mathematica</li> <li>- Photoshop / Fireworks / Illustrator</li> </ul>
Basic knowledge in the use of operating systems:	<ul style="list-style-type: none"> <li>- Macintosh / Linux</li> </ul>

## **SKILLS**

Very good communication and interactive skills. Propensity to work in groups and individually. Very good skills for managing time during work, projects and presentations.