

Dr. Konstantinos Lentzaris

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1. PERSONAL INFORMATION

Family Name, First Name: Lentzaris Konstantinos

Gender: Male

Date of birth: 07/07/1981

Place of birth: Ioannina, Greece

Nationality: Greek

Address: Neoxoropoulo Ioannina, P.S. 297, P.C.45500, Greece

Marital status: Married

Military obligations: Fullfilled (10/2011 - 6/2012) - Technical Corps (gunsmith)

2. FORMAL EDUCATION

2.1. PhD

December 2006 – November 2012

Department of Mechanical Engineering, Aristotle University of Thessaloniki, Greece.

Dissertation: Surface coatings. Thermo-chemical surface treatments on ferrous and non-ferrous materials.

Supervisor: Professor D. N. Tsipas.

2.2. M.Sc.

October 2008 - July 2010

Interdepartmental postgraduate course: «Processes and Advanced Materials Technology», Aristotle University of

Thessaloniki, Greece.

Dissertation: Thermo-chemical surface treatments on ferrous materials.

Supervisor: Professor N. Michailidis

2.3. B.Sc.

September 2000 – July 2006

Department of Materials Science and Engineering of the University of Ioannina

Dissertation: Production of fiber and polymeric membranes from semi-crystalline polymer by the phase inversion

method.

Supervisor: Professor K. Beltsios

3. CURRENT POSITION

3.1. Lecturer (with fix-term contracts)

October 2016 – September 2018

Department of Materials Science and Engineering, University of Ioannina, Greece.

Role in Current Position: Through the program «Acquisition of academic teaching experience from new scientists PhD holders at the University of Ioannina» (P.N. 16501/2016, 1325/2017 and 12889/2017) was accepted to teach the following graduate level courses: (a) Classical Mechanics and (b) Welding Technology.

4. WORKING EXRERIENCE

4.1. Researcher

February 2013 – September 2016,

Laboratory of Applied Metallurgy, Department of Materials Science and Engineering, University of Ioannina.

Role in Position: (a) Responsible of conducting and evaluating high temperature corrosion and solid particle erosion lab tests according to ASTM standards, (b) Participation in research programs and proposal composition, (c) Tutoring (02/2014 – 06/2017) students at the graduate level course: Materials Lab IV (Appied Metallurgy

Laboratory) and (d) Technical co-supervision of ten (10) master thesis.

4.2. Instructor (with fix-term contracts)

October 2014 – February 2016,

IIEK Delta, Private Institute of Vocational Training.

Role in Position: Teaching the following lessons: (a) Mechanical Engineering (Lab), (b) Constructions Technology (Theory & Lab), (c) Mechanical design (Lab), (d) Machine Elements (Theory), (e) Electrotechnical Applications (Theory & Lab), (f) Organization and Operation of car-shop (Theory), (g) Transport – Distribution - Storage of combustible materials (Theory), (h) Production of liquid and gas combustible materials (Theory), (i) Mechanics of vehicles (Theory & Lab) and (j) Analog Electronics (Theory & Lab).

4.3. Researcher (with fix-term contract)

January 2015 – November 2015,

School of Mining and Metallurgical Engineering, National Technical University of Athens.

Role in Position: Through the research program Thalis «Development of ceramic matrix nano-composites with metalli reinforcements» (P.N. MIS 380143) was accepted to perform the following tasks: (a) Bibliographical review, (b) Microstructural characterization and (c) Evaluate mechanical response.

4.4 Administrative Assistant (with fix-term contract)

September 2010 – December 2011,

Interdepartmental postgraduate course "Processes & Advanced Materials Technology", Aristotle University of Thessaloniki.

Role in Position: (a) Administrative work, (b) Creation of database for the graduates of the interdepartmental postgraduate course and (c) Website administrator: http://dtpy.web.auth.gr/

4.5. Research Fellow (with fix-term contract)

June 2010 – September 2010,

PROcesses, Materials and Solar Energy Laboratory (PROMES), Centre National de la Recherché Scientifique (CNRS), France.

Role in Position:(a) Use of solar furnaces for the production of metal matrix composites from industrial wastes and (b) X-ray diffraction and differential thermal analysis characterization techniques.

4.6. **Academic Assistant** (with fix-term contracts)

April 2008 – December 2010,

Department of Mechanical Engineering, Aristotle University of Thessaloniki, Greece

Role in Position: (a) Tutoring at the following graduate level courses: 1) Materials science and engineering II, 2) Advanced materials technology, 3) Mechanical engineering laboratory and (b) Tutoring at the following post-graduate level course: Materials characterization

5. SCIENTIFIC INTERESTS / PUBLICATIONS

5.1. Research interests in the area of:

- High Entrtopy Alloys
- Complex Metallic Alloys
- Coatings Surface modification of high alloyed steels and non-ferrous materials
- Metal matrix composites and Functionally Graded Materials
- Alloy heat treatment
- Wear, Solid Particle Erosion, Corrosion and Oxidation response

5.2. Publications in Refereed Scientific Journals

- 1. E. Chantziara, **K. Lentzaris**, A.G. Lekatou, A.E. Karantzalis* (2018) Solid particle erosion response of aluminum reinforced with tungsten carbide nanoparticles and aluminide particles, MATEC Web of Conferences, (under submission process)
- 2. A.G. Lekatou*, M.Mpalanou, **K. Lentzaris**, A.E. Karantzalis (2018) Microstructure and surface degradation properties of Al reinforced by Al_xW intermetallic compounds via different fabrication routes, MATEC Web of Conferences, (under submission process)
- 3. K. Lentzaris, A.G. Lekatou*, A.E. Karantzalis (2018) High temperature oxidation behavior of heat treated cast austenitic stainless steel, Metals- MDPI, (under submission process).
- 4. **K. Lentzaris***, A. Poulia, E. Georgatis, A.G. Lekatou, A.E. Karantzalis (2018), Analysis of microstructure and sliding wear behavior of Co_{1.5}CrFeNi_{1.5}Ti_{0.5} high entropy alloy, Journal of Materials Engineering and Performance, pp. 1-10 (https://doi.org/10.1007/s11665-018-3374-y)
- 5. A.G. Lekatou*, N. Gkikas, V. Gousia, A.E. Karantzalis, **K. Lentzaris** (2018), Solidification sequence and saline corrosion performance of cast aluminium matrix composites reinforced with submicron tungsten carbide particles: The roles of in-situ intermetallic phases, Journal of Materials Engineering and Performance, (accepted for publication).
- 6. **K. Lentzaris**, A.G. Lekatou*, A. Ntoumazios, A.E. Karantzalis, A.K. Sfikas (2017) Solid Particle Erosion Study of Al Alloys In-Situ Reinforced by a Cobalt Aluminide, Material Science and Engineering with Advanced Research Special Issue, p.p.19-25.
- 7. E. Karapanou, A.G. Lekatou, A. K. Sfikas, E. Georgatis, **K. Lentzaris**, A.E. Karantzalis* (2017) Vacuum Arc Melting processed Fe-Al matrix based intermetallic composites, reinforced with VC phases: Assessment of microstructure, sliding wear and aqueous corrosion response, Material Science and Engineering with Advanced Research Special Issue, p.p.1-6.
- 8. G. Bakoulis, A. G. Lekatou, A. Poulia, A. K. Sfikas, **K. Lentzaris**, A.E. Karantzalis* (2017) Al- (Al₉Co₂, Al₁₃Co₄) Powder Metallurgy Processed Composite Materials: Analysis of Microstructure, Sliding Wear and Aqueous Corrosion, Material Science and Engineering with Advanced Research Special Issue: p.p.53-60.

- 9. E. Bata, **K. Lentzaris**, A.G. Lekatou, N.M. Barkoula, A. Poulia, A.K. Sfikas, A.E. Karantzalis* (2017) Effect of Solid Particle Erosion on the Aqueous Corrosion Behaviour of a Ti 6Al 4V Sheet, Material Science and Engineering with Advanced Research Special Issue, p.p.26-33.
- 10. A.G. Lekatou*, I. Kenanoglou, K. Kalantzis, A.E. Karantzalis, D. Sioulas, **K. Lentzaris**, A.K. Sfikas (2017) Surface Degradation of Composites Prepared by Al₂O₃ and Ni Nanopowders, Material Science and Engineering with Advanced Research Special Issue, p.p.7-18.
- 11. **K. Lentzaris**, P. Psyllaki, I. Sideris, N. Michailidis*, D. Tsipas (2012) Evaluation of the tribological behavior of boronised tools steels, Journal of the Balkan Tribological Association, Vol. 18, Iss. 2, p.p. 250-258.

5.3. Publications in International Conference Proceedings

- 1. <u>E. Chantziara</u>, **K. Lentzaris**, A.G. Lekatou, A.E. Karantzalis (2018) Solid particle erosion response of aluminum reinforced with tungsten carbide nanoparticles and aluminide particles, 5th International Conference of Engineering against Failure (ICEAF V), 20-22 June 2018, Chios island, Greece, (oral presentantion).
- 2. A.G. Lekatou, M. Mpalanou, K. Lentzaris, A.E. Karantzalis (2018) Microstructure and surface degradation properties of Al reinforced by Al_xW intermetallic compounds via different fabrication routes, 5th International Conference of Engineering against Failure (ICEAF V), 20-22 June 2018, Chios island, Greece, (oral presentantion)
- 3. K. Chantziara, K. Lentzaris, A.G. Lekatou, N.M. Barkoula, A. Poulia, A.E. Karantzalis, Analysis of Microstructure, Sliding Wear, Solid Paricle Erosion and Aqueous Corrosion of Al based submicron WC particulate reinforced composites, European Congress and Exhibition on Advanced Materials and Processes, (EUROMAT 2017), 17-22 September 2017, Thessaloniki, Greece, (oral presentantion)
- 4. **K. Lentzaris**, A. Poulia, E. Georgatis, A.G. Lekatou, A.E. Karantzalis (2018), Analysis of microstructure and sliding wear behavior of Co_{1.5}CrFeNi_{1.5}Ti_{0.5} high entropy alloy, European Congress and Exhibition on Advanced Materials and Processes, (EUROMAT 2017), 17-22 September 2017, Thessaloniki, Greece, (oral presentantion)
- 5. **K.** Lentzaris, K. Tsirka, P. Triantafyllou, E. Karapanou, A. Evaggelou, A.G. Lekatou, E. Georgatis, A.E. Karantzalis, Discussion of the efficiency of different ceramic reinforcements on the wear resistance improvement of different metallic and intermetallic matrices, European Congress and Exhibition on Advanced Materials and Processes, (EUROMAT 2017), 17-22 September 2017, Thessaloniki, Greece, (poster presentantion)
- 6. <u>A. Lekatou</u>, A.E. Karantzalis, I. Kenanoglou, K. Kalantzis, **K. Lentzaris**, D. Sioulas, A. Poulia, A.K. Sfikas, Corrosion and wear behaviour of Al₂O₃-Ni nanocomposites, in Proceedings of 17th International Conference on Experimental Mechanics (ICEM 17), 3-7 July 2016, Rhodes, Greece (poster presentantion).
- 7. **K. Lentzaris**, P. Psyllaki, I. Sideris, N. Michailidis, D. Tsipas, Evaluation of the tribological behavior of boronised tool steels, in Proceedings of 9th International Conference The 'A' Coatings in Manufacturing Engineering, 3-5 October 2011, Thessaloniki, Greece, Tziolas Pub., ISBN: 978-960-98780-5-0, pp.381-388 (oral presentantion).

5.4. Publications in National Conference Proceedings

- 1. **K. Lentzaris**, A.G. Lekatou, A.E. Karantzalis, E. Antonakis, High temperature oxidation behavior of heat treated cast austenitic stainless steel, Proceedings of 6th National Conference on Metallic Materials 7-9 December 2016, Ioannina, Greece, Tziolas Pub., ISBN: 978-960-418-664-8, pp. 89-94, in English (oral presentantion).
- 2. **K. Lentzaris**, X.Papaspyrou, A.K. Sfikas, A.E. Karantzalis, A. Lekatou, Development and surface property evaluation of Mo-based intermetallic Al matrix composites, Proceedings of 6th National Conference on

- Metallic Materials 7-9 December 2016, Ioannina, Greece, Tziolas Pub., ISBN: 978-960-418-664-8, pp.433-438, in English (poster presentantion).
- 3. A.G. Lekatou, I. Kenanoglou, <u>K. Kalantzis</u>, A.E. Karantzalis, D. Sioulas, **K. Lentzaris**, A.K. Sfikas, Surface degradation of composites prepared by Al₂O₃ and Ni nanopowders, Proceedings of 6th National Conference on Metallic Materials 7-9 December 2016, Ioannina, Greece, Tziolas Pub., ISBN: 978-960-418-664-8, pp.427-432, in English (poster presentantion).
- 4. **K. Lentzaris**, A. Ntoumazios, A. Barmpas, A.K. Sfikas, A. Poulia, A.E. Karantzalis, A.G.Lekatou, Solid particle erosion behaviour of Al-Co alloys, Proceedings of 6th National Conference on Metallic Materials 7-9 December 2016, Ioannina, Greece, Tziolas Pub., ISBN: 978-960-418-664-8, pp.475-480, in English (poster presentantion).
- E. Bata, K. Lentzaris, A. Lekatou, N.M. Barkoula, A. Poulia, A. Sfikas, A. E. Karantzalis, Solid particle erosion of Ti6Al4V sheet: Effect on surface characteristics and aqueous corrosion behaviour, Proceedings of 6th National Conference on Metallic Materials 7-9 December 2016, Ioannina, Greece, Tziolas Pub., ISBN: 978-960-418-664-8, pp.445-450, in English (poster presentantion).
- 6. <u>K. Chantziara</u>, **K. Lentzaris**, A.G Lekatou, N.M. Barkoula, A. Poulia, A.E. Karantzalis, Al based submicron WC particulate reinforced composites: Production, microstructure characterisation and sliding wear, solid particle erosion behaviour assessment, Proceedings of 6th National Conference on Metallic Materials 7-9 December 2016, Ioannina, Greece, Tziolas Pub., ISBN: 978-960-418-664-8, pp.463-468, in English (poster presentantion).
- V. Gousia, A. Tsioukis, A. Lekatou, <u>K. Lentzaris</u>, A.E. Karantzalis, Composites Al MoSi₂: Analysis of microstructure, sliding wear, solid particle erosion and aqeous corrosion behaviour, Proceedings of 6th National Conference on Metallic Materials 7-9 December 2016, Ioannina, Greece, Tziolas Pub., ISBN: 978-960-418-664-8, pp.457-462, in Greek (poster presentantion in greek).
- 8. **K. Lentzaris**, A. Antonopoulos, M. Pyxaras, I. Sideris, D. Tsipas, Behaviour of boronised tool steels against solid particle erosion, Proceedings of 4th National Conference on Metallic Materials 4-5 November 2010, Thessaloniki, Greece, ISBN: 978-960-6865-31-2, pp. 431-436, in Greek (oral presentantion in greek).
- 9. **K. Lentzaris**, E. Gkigkelou, P. Psyllaki, I. Sideris, D. Tsipas, Parametric analysis of boronised tool steels tribological behaviour, Proceedings of 4th National Conference on Metallic Materials 4-5 November 2010, Thessaloniki, Greece, ISBN: 978-960-6865-31-2, pp. 413-420, in Greek (oral presentantion in greek).

[<u>Underline</u>: presenting author, * corresponding author]

5.5. Fellowships / Prizes / Awards

- 1. Award for best oral presentation at the 6th Pan Hellenic Conference on Metallic Materials for the publication: High temperature oxidation behavior of heat treated cast austenitic stainless steel
- 2. Award for best poster presentation at the 6th Pan Hellenic Conference on Metallic Materials for the publication: Surface degradation of composites prepared by Al₂O₃ and Ni nanopowders.

6. PERSONAL SKILLS

6.1. Languages

- 1. Greek: Native Language
- English: European level C2. Certificate of Proficiency in English University of Cambridge (June 2005) and Certificate of Proficiency in English - University of Michigan (March 2005)
- 3. French: European level A2. Language certificate in French L' Institut Français (May 1996)

6.2. Technical skills

- 1. Surface modification at ferrous and non-ferrous metallic materials.
- Materials characterization with techniques such as: optical microscopy, SEM & EDX, hardness, XRD, Confocal microscopy, TGA/DTA.
- 3. Evaluation of modified surfaces' mechanical, tribological and corrosion properties

6.3. Organisational skills

- 1. Member of the organizing committee of the 6th Pan-Hellenic Conference of Metallic Materials, 7-9 December 2016, Ioannina
- 2. Assistance at the organization of the 4th Pan-Hellenic Conference of Metallic Materials, 4-5 November 2010, Science Centre and Technology Museum "NOESIS", Thessaloniki
- Assistance at the organization of the seminar «Corrosion evaluation with standards tests» 17-12-2008, Physical Metallurgy Laboratory, Department of Mechanical Engineering, Aristotle University of Thessaloniki, 54124 Thessaloniki Greece

6.4. Computer skills

- 1. Text editors. Software programs: Word, Excel, PowerPoint.
- 2. Internet and mail. Software programs: Explorer, Firefox, Chrome, Netscape, Thunderbird, Outlook.
- 3. Creating and managing databases. Software programs: Microsoft Access, SQLite
- 4. Photo editing. Software programs: Photoshop, CorelDraw, Image J
- 5. 2D and 3D CAD design. Software programs: AutoCAD Mechanical
- 6. Publishing and managing bibliographies, citations and references. Software programs: Endnote, Refworks
- 7. Design and develop standards-based websites and applications. Software programs: Dreamweaver

7. ATTENDANCE AT ASSOCIATIONS / CONFERENCES

7.1. Attendance on scientific associations

- 1. Member of Technical Chamber of Greece (February 2018)
- Member of certified registry of evaluators of General Secretariat for Research and Technology (GSRT) R.N. 17880 (February 2018)
- 3. Member of Balkan Tribological Association (October 2011)
- 4. Member of the Hellenic Metallurgical Society (November 2010)
- 5. Member of the Hellenic Union of Material Scientists and Engineers (September 2006)

7.2. Attendance at scientific conferences

- Combination of metallic ceramic materials for technological application, April 2009, Hellenic Metallurgical Society – Hellenic Ceramic Society, Ioannina, Greece
- Corrosion evaluation with standards tests, December 2008, Physical Metallurgy Laboratory, Department of Mechanical Engineering, Aristotle University of Thessaloniki, Thessaloniki, Greece
- 3. Non destructive testing methods Tool for technical projects quality control, December 2008, Department of Materials Science and Engineering Technical Chamber of Greece, Epirus Division, Ioannina, Greece
- 4. 3rd Pan-Hellenic Conference of Porous Materials, November 2007, Chemical Process and Energy Resources Institute CPERI Department of Chemistry AUTh, Thessaloniki, Greece.