



Curriculum Vitae

Dr. Pandora P. Psyllaki

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CURRENT POSITION: **Professor**, Department of Mechanical Engineering, University of West Attica, Greece

EDUCATION

07.1995-03.1999: **Ph.D. in Chemical Engineering**
National Technical University of Athens (NTUA), Greece
Dissertation: "Structure and tribological properties of ceramic thin films and coatings deposited by advanced techniques upon various metallic substrates"

09.1986-02.1992: **Diploma Ing. in Mining and Metallurgy Engineering**
National Technical University of Athens (NTUA), Greece
(5-year curriculum with mandatory thesis, conforming Bachelor and Master degree)
Entrance Rank: 3rd; Graduation Rank: 5th (in a class of 70)
Diploma Thesis: "Study of the formation of Cr surface alloys on brass via electrolytic deposition and remelting with high power laser" (in collaboration with Laboratoire des Matériaux, Ecole Centrale des Arts et Manufactures, Paris, France)

AREAS OF RESEARCH

Over 25-year-long continuous research experience in the scientific field of metallic materials and their in-service performance in various environments. Emphasis on topics related to failure analysis, response under mechanical loading, tribology and surface modification techniques aiming at components' lifetime extension. More precisely:

Failure Analysis of materials and engineering components during operation

- Experimental analysis of failed components, identification of dominant failure mechanisms and root cause analysis, components' quality enhancement.
- Correlation of microstructure characteristics and mechanical properties to materials' performance under various environmental conditions.
- Planning of experimental testing campaigns to develop ANN prediction models.

[Relevant publications: 1, 5, 12, 19, 22, 25, 26, 27, 28, 29, 30, 31, 33, 34, 45, 67].

Mechanical characterisation of engineering materials

- Conventional testing techniques (tensile/Charpy/creep/fatigue testing, hardness/microhardness measurements).
- Non-conventional laser-based techniques for estimating adhesion strength of protective

ceramic materials onto metallic substrates.

[Relevant publications: 13, 39, 40, 50, 52, 60, 62, 65].

Identification of micro-phenomena taking place in tribo-systems

- Surface topography influence on the evaluation of friction coefficient during sliding.
- Wear micro-mechanisms in stratified structures.
- Determination of the response of composite coatings to surface loading.

[Relevant publications: 8, 9, 16, 17, 18, 20, 21, 23, 24, 35, 36, 37, 41, 42, 44, 49, 53, 54, 57, 61, 68].

Surface modification techniques for enhancement of performance of metallic materials

- Thermal Spraying techniques for depositing high-thickness ceramic coatings.
- Physical and Chemical Vapour Deposition (PVD and CVD) of low-thickness films.
- Liquid nitrocarburising of tool steels to enhance tribological performance.
- Boronising of steels for ameliorating their resistance to molten metals attack.
- Surface hardfacing via conventional arc welding techniques.
- Remelting via high power CO₂ laser, micromachining via pulsed excimer laser and surface cleaning via pulsed Nd:YAG laser of metallic surfaces.
- Non-conventional, in-situ elaboration of hardfacing layers on metallic surfaces via concentrated solar irradiation.

[Relevant publications: 6, 7, 11, 14, 15, 32, 38, 43, 46, 47,48, 51, 55, 56, 58, 59, 63, 64, 69,70,72, 73].

SPECIAL SKILLS

- Extensive experience in the design, technical implementation and management of R&D Projects: management of the research work, follow-on of the technical and financial progress, authoring of management, technical and financial reports.
- Capability of attracting research funds via authoring of research proposals for funding through competitive calls.
- Capability of creating, supporting and managing research teams (research engineers, graduate and undergraduate students).
- Experience in the acquisition and set-up of experimental infrastructure.
- Hands-on experience with laboratory characterisation techniques.
- Proficiency with laboratory and industrial techniques for surface treatment of metallic and ceramic materials.
- Proficiency with Quality Assurance Systems and laboratories' accreditation procedures.

PROFESSIONAL/ ACADEMIC/ RESEARCH EXPERIENCE

10.2007 - Today: Department of Mechanical Engineering
School of Engineering, University of West Attica (*current Organisation name*), Greece

08.2019 – Today: Professor (full)

08.2014 – 07.2019: Associate Professor

02.2010 – 08.2014: Assistant Professor

10.2007 - 01.2010: Part-time Lecturer

Teaching duties:

Instruction of the following courses offered by the Department: Advanced Materials Technology, Surface Engineering, Manufacturing Processes, Tribology, Quality Assurance Systems, Advanced Welding Technologies, Heat Treatments.

Instruction duties involve classroom lectures, authoring of lectures' notes, preparation and supervision of laboratory experiments, grading of reports and final exams. Details on the

pedagogical targets of these courses, the courses' syllabus and relevant teaching documents can be found in <http://triblab.puas.gr/> (in English and Greek). The courses above are mandatory for either all Department students (~230 registered each semester), or only for students following the Manufacturing Division (~180 registered each semester). For several semesters, depending on the demand of foreign students hosted within the framework of the University's ERASMUS Exchange Programme, some of these courses are taught to them in English.

Supervision of students duties:

- Member of three (3) Ph.D. dissertation committees.
- Supervision of over fifty (50) degree theses in the fields of Materials Science, Materials Characterisation, Surface Modification Techniques, Failure Analysis and Tribology.
- Supervision of over ninety (90) 6-months mandatory practical training of students at Mechanical Engineering enterprises.

Administrative duties:

11.2015 – 10.2017: Director of the Design & Manufacturing Division of the Department.

10.2016 – 09.2018 and 10.2013-09.2016: Department Representative and Vice-representative respectively, to the Special Account for Research Grants of the University.

10.2012 – 03.2016: Member of the Internal Evaluation Committee for the Quality Assurance of the Department.

07.2010 – Today: Member of (6) electoral colleges for the selection of permanent teaching faculty.

Successfully completed competitive projects

2019: "Concentrated solar energy for elaborating surface stainless steel claddings", (Solar Surfing) within the framework of EU-DG RTDs project SFERA III, Horizon 2020.

2015: "Advanced Materials for environment – friendly applications", Long-life learning programme, funded by the Greek Ministry of Education/ Co-ordinator, budget: 35.000 €.

2014, 2015, 2016: "Anti-wear carbide-based coatings using concentrated solar energy" (CarbiSol 1, CarbiSol 2, CarbiSol 3), within the framework of EU-DG RTD project SFERA II, FP7.

- 10.2005 – Today:** **Post-graduate (M.Sc.) "Chemistry and Technology of Materials"**
University of Ioannina, Greece
 Adjunct Visiting Professor
 Teaching of two graduate one-semester courses: Surface Engineering, Engineering Failure Analysis; Supervision of three (3) M.Sc. theses.
- 04.2009 – 10.2009:** **School of Naval and Mechanical Engineering**
National Technical University of Athens, N.T.U.A., Greece
 Research Associate, Naval Technology Laboratory: Laser surface texturing of tool steels.
- 09.2008 – 11.2009:** **National Centre for Scientific Research "Demokritos", Greece**
 Research Associate, Ceramic materials synthesis and characterization
- 10.2006 – 07.2008:** **Department of Mechanical Engineering**
University of Western Macedonia, Greece
 Part-time Lecturer. Semester courses: Surface Modification Techniques, Tribology, Engineering Failure Analysis.
- 04.2005 – 09.2008:** **Department of Mechanical Engineering**
Aristotle University of Thessaloniki, Greece
 Research Associate, Physical Metallurgy Laboratory: Failure Analysis

of metallic parts; optimisation of boronising process of tool steels; surface modification of metallic foams.

04.2001 – 03.2005: Metallurgical Industrial Research & Technological Development Center-MIRTEC S.A., Volos, Greece

04.2001 – 03.2005: Head, Research and Technological Development Sector

Responsibilities:

Managing and expanding the R&D activities of the company, through the implementation of nationally- and internationally-funded applied research projects. Analytically:

- Submission of research proposals for funding through EU and/or national sources. Dissemination of information upon proposal calls, search for appropriate partners locally and abroad, establishment of appropriate consortia, authoring of proposals.
- Technical implementation and management of funded R&D projects: carrying out the research work, follow-on of the technical and financial progress, authoring of progress and financial reports, representation of the company in partner technical meetings.
- Experimental research on metallic materials' microstructure, properties and performance.
- Hiring of skilled personnel for the Sectors' needs.

Achievements:

Proposal submission and implementation of five (5) nationally and internationally-funded research projects, in the areas of Materials Technology and Innovation Transfer, with a total budget for MIRTEC > 500.000 €. Creation of four (4) new job positions (Diploma, M.Sc., Ph.D.) within the R&D Sector. Five (5) scientific publications in International Journals.

02.2002 – 03.2005: Head, Mechanical and Hydraulic Testing Laboratory

Responsibilities:

Services to national SMEs and industries, including quality testing of metallic materials according to the requirements of international technical standards, failure analysis of engineering components, technical consulting and support. Design and planning of mechanical testing experiments required from industrial clients, periodic verification of testing equipment, devices' uncertainties calculation, issuing of the respective testing reports, periodic assessment of sub-contractors and education/assessment of the laboratory's staff. The Laboratory was then employing five technicians, with experience in Mechanical and Hydraulic testing of metallic materials (tensile testing, Brinell, Rockwell & Vickers hardness measurements, toughness (Charpy) testing, bending) and was accredited by the Greek National Council of Accreditation (ESYD) according to the requirements of the ISO EN 17045 standard.

Achievements:

Self-sustainability of the Laboratory via customer services in the order of 400.000 €/year (~20% of the company's turnover), expansion of the laboratory's infrastructure, successful laboratory evaluation in three successive annual audits by ESYD.

**10.2000 – 03.2001: Department of Physics
Aristotle University of Thessaloniki, Greece**
Post-doctoral researcher, Laboratory of Thin Films & Coatings:
Physical Vapour Deposition and thin films characterisation.

04.1999 – 09.2000: Université de Bourgogne, Dijon, France
Post-doctoral researcher, Laboratoire des Recherches sur la
Reactivité des Solides, CNRS: Laser cleaning and laser ultrasonic
testing for the estimation of adhesion of ceramic coatings onto
metallic substrates.

- 09.1995 – 03.1999,
09.1993 – 07.1994:** **Department of Physics, Chemistry and Materials Technology, TEI of Piraeus, Greece**
Part-time Lecturer: Materials technology and quality control.
- 09.1994 – 07.1995:** **Centre des Matériaux Pierre-Marie Fournier, École Nationale Supérieure des Mines de Paris (ENSMP), Paris, France**
Research Associate: Microstructure characterization and tribological performance of thin films and coatings.

AWARDS

- **1986 Fellowship from the Hellenic Fellowship Foundation (I.K.Y.)** for excelling in the University entrance panhellenic examinations.
- **1990 ERASMUS Fellowship** for carrying out part of the Diploma Thesis in France.
- **1997 Fellowship from the French Government** for carrying out research at the Centre des Matériaux Pierre-Marie Fournier, Ecole des Mines, Paris, France.
- **1998 TMR Fellowship** (ERB FMRX-CT98-0188) for carrying out research at Laboratoire des Recherches sur la Réactivité des Solides, Université de Bourgogne, Dijon, France.
- **1999 Best Poster Award for the work:** “Laser Cleaning of oxidized Fe-alloys” by P. Pasquet, P. Psyllaki, R. Oltra, P. Meja and M. Autric, at the 14th International Conference on Surface Modification Technologies, Paris, France, 11-13/9/2000.
- **2000 Individual Marie Curie Fellowship/ Improving Human Potential from EU (MCFI-2000-001120)** for a two-year project titled «Microstructure and wear mechanisms of plasma sprayed oxide coatings», at Centre des Matériaux Pierre-Marie Fournier, Ecole des Mines, Paris, France; not accepted for personal reasons.
- **2017: Highlight Oral Presentation of the work:** “Elaboration of Wear Resistant Carbide-based Surface Layers via Concentrated Solar Power” by P. Psyllaki, A. Mourtas, G. Vourlias, E. Pavlidou, J. Rodríguez, I. Cañadas, EUROMAT 2017, Thessaloniki, Greece, 17-22/9/2017.

SCIENTIFIC ARTICLES' REVIEWER

More than one hundred (>100) peer reviews of scientific articles submitted for publication to International Journals. Indicatively:

- Elsevier: *Journal of Materials Processing Technology, Materials Science and Engineering C, Engineering Failure Analysis, Journal of Alloys and Compounds, Wear, Materials Research Bulletin, Applied Surface Science, etc.*
- Springer: *Journal of Materials Engineering and Performance, ASM Handbook, Journal of Thermal Analysis and Calorimetry, etc.*
- MDPI: *Metals, Materials, Lubricants.*

RTD PROPOSALS' EVALUATOR

- **2010:** Initial evaluation of proposals submitted to EU DG Research FP7.
- **2015:** Final evaluation and certification of the completion of innovation-oriented SME projects, funded by the Greek General Secretariat of Research and Technology (GSRT).
- **2017:** Initial evaluation of proposals to be funded, East Macedonia-Thrace Region (Greece).
- **2018:** Initial evaluation of proposals to be funded by the State Scholarships Foundation (Greece), -post-graduate level.

PARTICIPATION IN PROFESSIONAL/ SCIENTIFIC COMMITTEES

- “Scientific committee on issues concerning the production and processing of inorganic materials”, *National Technical Chamber of Greece*.
- Working group preparing the technical requirements of a novel zinc alloy, *Hellenic Organisation for Standardization (ELOT SA)*.
- “Permanent scientific committee on issues concerning engineering materials”, *National Technical Chamber of Greece*.
- International Advisory Board, thematic session “Mobility and Transportation–Space Exploration–Security”, 2nd International Congress on Ceramics, Verona, Italy, 29.06-04.07.2007.
- Scientific Board, 6th Hellenic Conference on Metallic Materials, Ioannina, Greece, 07-09.12.2016.
- Elected Member of the Executive Committee of the Hellenic Metallurgical Society (Treasurer) (01.01.2017-31.12.19; re-elected 01.01.2020-31.12.22).
- Member of the Scientific Committee of the International Conference SolarPACES, Santiago, Chile, 26-29.09. 2017.
- Member of the Organising Committee of the 7th Hellenic Conference on Metallic Materials, Athens, Greece, 11-13.12.2019.

OVERVIEW OF SCIENTIFIC/ RESEARCH ACTIVITIES

A cumulative table of the overall research/scientific activities is provided below. A detailed list of publications follows at the end of the CV.

Publications:	
Articles in Refereed International Journals, up to 22.03.20: <i>Source: Scopus:</i>	51
Full Manuscript Articles in International Refereed Conference Proceedings:	25
Articles in Refereed National Journals:	3
Full Manuscript Articles in National Refereed Conference Proceedings:	9
Presentations in International Conferences/ Workshops:	30
International recognition of published work:	
Heterocitations (excluding by self and co-authors), up to 22.03.20: <i>Source: Scopus</i>	510
H factor, up to 22.03.20 <i>Source: Scopus</i>	13
Prizes/Awards in International Conferences:	2
Conferences Scientific/Organising Committee Memberships:	4
Peer reviews for international scientific journals and conferences:	>150
EU invitations for research proposals evaluation:	1
Greek state invitations for research proposals evaluation:	3

PUBLISHED SCIENTIFIC WORK

BOOKS/ BOOK CHAPTERS

1. G.A. Pantazopoulos and **P.P. Psyllaki**, “Progressive failures of components in chemical process industry: Case history investigation and root-cause analysis”, pp. 1-23, in: Handbook of Materials Failure Analysis with Case Studies from the Chemicals, Concrete and Power Industries, A.S.H. Makhlof and M. Aliofkhazraei (Eds.), Elsevier 2015. ISBN: 978-008100125-7;978-008100116-5.
2. *Translation in Greek and scientific editing* of the textbook: R. Askeland, W. Wright «Science and Engineering of Materials», SI Edition, 7th Edition (2016), 896 pages. ISBN: 978-960-418-615-0, <https://www.tziola.gr/book/epistimi-ke-technologia-ton-ylikon/>

Textbooks in Greek, to be published in 2020:

3. **P. Psyllaki**, “Mechanisms and Failure Analysis of Materials and Constructions”, ISBN: 978-960-418-844-4, <https://www.tziola.gr/book/michanismi-ke-analysi-astochias-ylikon-ke-kataskevon/>
4. **P. Psyllaki**, P. Nikolakopoulos, “Surface Engineering and Applications: Tribology, Machine Elements and Surface Modification Techniques”, ISBN: 978-960-418-834-5, <https://www.tziola.gr/book/michaniki-epifanion-ke-efarmoges-trivologiastichia-michanon-ke-epifaniakes-katergasies/>

PUBLICATIONS IN REFEREED INTERNATIONAL JOURNALS (44), (*: corresponding author)

5. **P.P. Psyllaki***: «An introduction to wear degradation mechanisms of surface-protected metallic components», *Metals*, **9**(10) (2019), Article number: 1057.
6. A. Mourlas, E. Pavlidou, G. Vourlias, J. Rodríguez, **P. Psyllaki***: «Concentrated solar energy for in-situ elaboration of wear-resistant composite layers. Part II: Tungsten carbide surface enrichment of common steels», *Surface & Coatings Technology*, **375** (2019) 739-751.
7. A. Mourlas, E. Pavlidou, G. Vourlias, J. Rodríguez, **P. Psyllaki***: «Concentrated solar energy for in-situ elaboration of wear-resistant composite layers. Part I: TiC and chromium carbide surface enrichment of common steels», *Surface & Coatings Technology*, **377** (2019) Article number: 124882.
8. **P. Psyllaki***, A. Mourlas, G. Vourlias, E. Pavlidou, M. Vardavoulias: «Influence of microstructure flaws on the tribological performance of Cr-based thermal-sprayed ceramic coatings», *Ceramics International*, **45** (2019) 19360-19369.
9. L. Cavaleri, P. Asteris, **P.P. Psyllaki**, M.G. Douvika, A.D. Skentou, N.M. Vaxevanidis: «Prediction of surface treatment effects on the tribological performance of tool steels using artificial neural networks», *Applied Sciences*, **9**(14) (2019) 2788.
10. N. Vaxevanidis, A. Vencl, E. Assenova, M. Kandeve, P. Psyllaki, “Scientific Literature on Thermal Spray Coatings from Southeastern Europe: A Ten Years Bibliometric Analysis”, *FME Transactions*, **47** (2019) 649-657.
11. N. Chaidemenopoulos, **P. Psyllaki***, E. Pavlidou, G. Vourlias, “Aspects on carbides transformations of Fe-based hardfacing deposits”, *Surface and Coatings Technology*, **357** (2019) 651-661.
12. **P. Psyllaki***, K. Stamatiou, I. Iliadis, A. Mourlas, P. Asteris, N. Vaxevanidis, “Surface treatment of tool steels against galling failure”, *MATEC Web of Conferences*, **188** (2018) Article number 04024.
13. A. Koutsomichalis, N.M. Vaxevanidis, **P. Psyllaki**, “Tensile, Fatigue and Tribological Performance of Cr₃C₂-NiCr Plasma Sprayed Coating on Mild Steel”, *Journal of the Balkan Tribological Association*, **3A-I** (2016) 3260-3273.

14. A.G. Mourlas, P.P. **Psyllaki***, "Application of Concentrated Solar Power for elaborating wear resistant hardfacing surface layers", *Bulgarian Chemical Communications*, **48**(Special Issue-E2) (2016) 266-271.
15. A. Mourlas, P. **Psyllaki***, D. Pantelis, "Anti-wear TiC-based surface layers using concentrated solar energy", *Key Engineering Materials*, **674** (2016) 296-301.
16. A. Mourlas, P. **Psyllaki***, D. Chaliampalias, G. Vourlias, L. Kolaklieva, R. Kakanakov, "Tribological behaviour of gradient TiAlSiN superhard coatings", *Key Engineering Materials*, **674** (2016) 207-212.
17. Pantazopoulos, **P. Psyllaki***, "An overview on the tribological behaviour of nitrocarburised steels for various industrial applications", *Tribology in Industry*, **37**(3) (2015) 299-308.
18. N.M. Vaxevanidis, A. Vencl, **P. Psyllaki**, "Research on tribology in southeastern Europe: A bibliometric study", *FME Transactions*, **43**(3) (2015) 259-268.
19. G. Pantazopoulos, A. Tsolakis, **P. Psyllaki**, A. Vazdrivanidis, "Wear and degradation modes in selected vehicle tribosystems», *Tribology in Industry*, **37**(1) (2015) 72-80.
20. D. Kekes, **P. Psyllaki***, M. Vardavoulias, G. Vekinis, "Wear micro-mechanisms of composite WC-Co/Cr - NiCrFeBSiC coatings. Part II: Cavitation erosion", *Tribology in Industry*, **36**(4) (2014) 375-383.
21. D. Kekes, **P. Psyllaki***, M. Vardavoulias, "Wear micro-mechanisms of composite WC-Co/Cr - NiCrFeBSiC coatings. Part I: Dry sliding", *Tribology in Industry*, **36**(4) (2014) 361-374.
22. **P.P. Psyllaki**, G. Pantazopoulos, A. Pistoli, "Degradation of stainless steel grids in chemically aggressive environment", *Engineering Failure Analysis*, **35** (2013) 418-426.
23. C.-M. Karamboiki, A. Mourlas, **P. Psyllaki***, J. Sideris, "Influence of microstructure on the sliding wear behavior of nitrocarburized tool steels", *Wear*, **303**(1-2) (2013) 560-568.
24. K. Lentzaris, **P. Psyllaki**, J. Sideris, N. Michailidis, D. Tsipas, "Evaluation of the tribological behaviour of boronised tool steels", *Journal of the Balkan Tribological Association*, **18**(2) (2012) 250-258.
25. **P. Psyllaki**, G. Pantazopoulos, P. Karaiskos, "Failure mechanisms of an automobile clutch assembly cast iron pressure plate", *Journal of Failure Analysis and Prevention*, **12**(1) (2012) 16-23.
26. G. Vourlias, D. Chaliampalias, T.T. Zorba, E. Pavlidou, **P. Psyllaki**, K.M. Paraskevopoulos, G. Stergioudis, K. Chrissafis, "A combined study of the oxidation mechanism and resistance of AISI D6 steel exposed at high temperature environments", *Applied Surface Science*, **257**(15) (2011) 6687-6698.
27. G. Vourlias, N. Pistofidis, **P. Psyllaki**, E. Pavlidou, K. Chrissafis, "Initial stages of oxidation of a precipitation-hardening (PH) steel", *Journal of Thermal Analysis and Calorimetry*, **101**(3) (2010) 893-898.
28. **P. Psyllaki***, G. Pantazopoulos, H. Lefakis, "Metallurgical evaluation of creep-failed superheater tubes", *Engineering Failure Analysis*, **16**(5) (2009) 1420-1431.
29. G. Vourlias, N. Pistofidis, **P. Psyllaki**, E. Pavlidou, G. Stergioudis, K. Chrissafis, "Plasma-Sprayed YSZ coatings: Microstructural features and resistance to molten metals", *Journal of Alloys and Compounds*, **483**(1-2) (2009) 382-385.
30. G. Vourlias, N. Pistofidis, **P. Psyllaki**, E. Pavlidou, G. Stergioudis, K. Chrissafis, "Nanophenomena during exposure of plasma-sprayed ceria stabilised zirconia coatings to oxygen rich environments", *Journal of Alloys and Compounds*, **483**(1-2) (2009) 378-381.
31. M. Manda, **P.P. Psyllaki**, D.N. Tsipas, P.T. Koidis, "Observations on an in-vivo failure of a titanium dental implant/ abutment screw system: A case report", *Journal of Biomedical Materials Research Part B: Applied Biomaterials*, **89B** (1) (2009) 264-273.
32. **P. Psyllaki***, V. Griniari, D. Pantelis, "Parametric study on laser nitriding of 1.5919 steel", *Journal of Materials Processing Technology*, **195**(1-3) (2008) 299-304.

33. D. Papadopoulos, D. Tsipas, **P. Psyllaki***, "Failure of an Al-alloy tail wheel trunion of a combat vehicle", *Engineering Failure Analysis*, **14**(5) (2007) 783-790.
34. **P. Psyllaki**, K. Papadimitriou, G. Pantazopoulos, "Failure modes of liquid nitrocarburised and heat treated tool steel under monotonic loading conditions", *Journal of Failure Analysis and Prevention*, **6** (2006) 13-18.
35. G. Pantazopoulos, **P. Psyllaki**, D. Kanakis, S. Antoniou, K. Papadimitriou, J. Sideris, "Tribological properties a liquid nitrocarburized special purpose cold-work tool steel", *Surface & Coatings Technology*, **200** (2006) 5889-5895.
36. G. Pantazopoulos, T. Papazoglou, **P. Psyllaki**, G. Sfantos, S. Antoniou, K. Papadimitriou, J. Sideris, "Sliding wear behaviour of a liquid nitrocarburized precipitation-hardening (PH) stainless steel", *Surface & Coatings Technology*, **187** (2004) 77-85.
37. **P. Psyllaki**, G. Kefalonikas, G. Pantazopoulos, J. Sideris, S. Antoniou, "Microstructure and tribological behaviour of liquid nitrocarburized tool steels", *Surface & Coatings Technology*, **162** (2002) 67-78.
38. D. Pantelis, **P. Psyllaki**, Ch. Sarafoglou, "Surface alloying on cast iron using concentrated solar energy", *Fonderie-Fondeur d'Aujourd'hui*, **211** (2002) 23-33.
39. G. Rosa, **P. Psyllaki**, R. Oltra, T. Montesin, C. Coddet, S. Costil, "Laser ultrasonic testing for estimation of adhesion of Al₂O₃ plasma sprayed coatings", *Surface Engineering*, **17**(4) (2001) 332-338.
40. G. Rosa, **P. Psyllaki**, R. Oltra, S. Costil, C. Codet, "Simultaneous laser generation and laser ultrasonic detection of the mechanical breakdown of a coating-substrate interface", *Ultrasonics*, **39** (2001) 355-365.
41. **P. Psyllaki***, M. Jeandin, D. Pantelis, "Microstructure and wear mechanisms of thermal-sprayed alumina coatings", *Materials Letters*, **47** (2001) 77-82.
42. **P. P. Psyllaki***, M. Jeandin, D. I. Pantelis, M. Allouard, "Pin-on-disc testing of P.E.C.V.D. Diamond-Like Carbon coatings on tool steel substrates", *Surface and Coatings Technology*, **130** (2000) 297-303.
43. **P. Psyllaki** and R. Oltra, "Preliminary study on the laser cleaning of stainless steels after high temperature oxidation", *Materials Science and Engineering A*, **282** (1-2) (2000) 145-152.
44. D. Pantelis, **P. Psyllaki**, N. Alexopoulos, "Tribological behaviour of plasma-sprayed Al₂O₃ coatings under severe wear conditions", *Wear*, **237** (2000) 197-204.
45. D.N. Tsipas, G.K. Triantafyllidis, J.K. Kiplayat, **P.P. Psyllaki**, "Degradation behaviour of boronized carbon and high alloyed steels in molten aluminium and zinc", *Materials Letters*, **37**(3) (1998) 128-131.
46. S. Labdi, Ph. Houdy, **P. Psyllaki**, M. Jeandin, "Elaboration and characterization of Ti and TiN thin films and Ti/TiN multilayers for hard coating applications", *Thin Solid Films*, **275** (1996) 213-215.
47. D. Pantelis and **P. Psyllaki**: "Excimer Laser Micromachining of CMSX2 and TA6V alloys", *Materials and Manufacturing Processes*, **11**(3) (1996) 271-282.
48. **P. Psyllaki**, S. Polymenis, Y. Chryssoulakis, D. Pantelis, "Laser melting treatment of thick chromium electrodeposits on brass substrate", *Plating and Surface Finishing*, **80**(1) (1993) 57-62.

FULL MANUSCRIPT PUBLICATIONS IN REFEREED INTERNATIONAL CONFERENCE PROCEEDINGS (25)

49. A. Mourlas, **P. Psyllaki**, M. Vardavoulias: «Influence of the CerMet fraction on the wear of HVOF composite coatings», *Proceedings of the 8th International Conference on Tribology (BalkanTrib'14)*, Sinaia, Romania (30.10-01.11.2014), 506-512.

50. A. Koutsomichalis, N. Vaxevanidis, **P. Psyllaki**: «Mechanical and tribological behaviour of Cr₃C₂-NiCr plasma sprayed coatings”, *Proceedings of the 8th International Conference on Tribology* (BalkanTrib'14), Sinaia, Romania (30.10-01.11.2014), 513-519.
51. **P.P. Psyllaki**, D.I. Pantelis, G.-C. Vosniakos: “Nd:YAG laser surface micro-modification of tool steels”, *Proceedings of the 5th International Conference on Manufacturing Engineering* (ICMEN), Thessaloniki, Greece (01-03.10.2014) 343-350.
52. A. Koutsomichalis, N.M. Vaxevanidis, A. Vencel, **P. Psyllaki**: Mechanical and wear behaviour of titania plasma-sprayed coatings, *Proceedings of the 11th International Conference “THE-A” Coatings in Manufacturing Engineering*, Thessaloniki, Greece (01-03.10.2014) 185-191.
53. A. Koutsomichalis, N.M. Vaxevanidis, A. Mourlas, **P. Psyllaki**: “Tribological behavior of abradable Al-Si- polyester plasma sprayed coatings”, *Proceedings of the 3rd European Conference on Tribology* (ECOTRIB 2011), Vienna, Austria (07-09.06.2011), 189-194.
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- A. Mourlas, **P. Psyllaki**, D. Pantelis, “Anti-wear TiC-based surface layers using concentrated solar energy”, oral presentation at 24th International Baltic Conference BALTMATTRIB 2015, 05-06.11.2015, Tallinn, Estonia.
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