

CURRICULUM VITAE



INFORMAZIONI PERSONALI

Nome
Indirizzo
Numero di telefono (ufficio)
Fax
E-mail
Nazionalità
Data di nascita

LUCA LUSVARGHI

DIPARTIMENTO DI INGEGNERIA "ENZO FERRARI" (UNIVERSITA' DI MODENA E REGGIO EMILIA), VIA PIETRO VIVARELLI, 10, 41125, MODENA, ITALIA

+390592056206

+390592056243

luca.lusvarghi@unimore.it

Italiana

10/05/1972

CARRIERA ACCADEMICA

Periodo
Ruolo Accademico
Compiti principali e attività di ricerca

Da inizio 2000 – tempo presente (04-07-2024)

Professore Associato di Scienza e Tecnologia dei Materiali – SSD IMAT-01/A (ex ING-IND/22). Abilitato a livello nazionale alla Prima Fascia (Professore Ordinario) nel SSD IMAT-01/A (ex ING-IND/22) dal 01-12-2017 fino al 01-12-2028.

- **Attività didattica:** dall'AA 2010-2011, è titolare del corso "Ingegneria delle Superfici e dei Ricoprimenti" (6 crediti) e dall'AA 2014-2015, è titolare del corso "Caratterizzazione strumentale dei Materiali" (6 crediti), entrambi tenuti agli studenti della Laurea Magistrale in Ingegneria dei Materiali;
- **Attività di tutoraggio:** dal 2003, è stato correlatore e relatore di più di 120 tesi di laurea triennali e magistrali in Ingegneria dei Materiali e Meccanica; è stato relatore di 15 tesi di dottorato e ha partecipato a varie commissioni di dottorato come componente della commissione e revisore/opponent (in Finlandia, Francia, Svezia, India e Italia).
- **Tematiche di ricerca:** Dal 2000, la sua ricerca è focalizzata su tematiche di ingegneria di superficie. In particolare, la sua attività scientifica si è concentrata su tecniche di deposizione quali la termospruzzatura, in vuoto (PVD, CVD) e sui processi di diffusione per applicazioni ad alta temperatura. I suoi interessi riguardano l'ottimizzazione dei parametri di processo delle tecniche di ingegneria delle superfici e la caratterizzazione microstrutturale, meccanica, tribologica e la valutazione della resistenza alla corrosione di rivestimenti spessi, sottili e di superfici modificate. Ha inoltre studiato rivestimenti con proprietà funzionali in ambito di electromagnetic shielding e coating bioattivi per applicazioni biomedicali. Ha portato avanti studi incentrati su:
 - rivestimenti resistenti all'usura e/o alla corrosione per la protezione di

- componenti meccanici e la sostituzione del cromo duro (ossidi duri termospruzzati (allumina, cromia, allumina-titania), cermets con leganti tradizionali e a base ferro e leghe metalliche (nickel, cobalto e recentemente ferro) depositate HVOF e HVOF, rivestimenti sottili a base carbonio (DLC) via sistemi ibridi PECVD/PVD e coating spessi ottenuti tramite cold spraying);
- sostituzione di Co e W (incluse dalla Commissione Europea nella lista della Critical Raw Materials a partire dal 2011) in rivestimenti per la protezione di componenti meccanici;
 - barriere termiche depositate via termospruzzatura resistenti alla corrosione CMAS
 - rivestimenti funzionali di elettrodi necessari all'elettrolisi dell'acqua per via elettrochimica e fotoelettrochimica finalizzati alla produzione di idrogeno
 - la simulazione FEM di impatti (termospruzzatura) e delle proprietà termomeccaniche e tribologiche di film e coatings.
 - ottimizzazione dei processi di deposizione, trattamento superficiale e finitura superficiale su componenti metallici realizzati via Additive Manufacturing (AM) (es.: pretrattamenti di materiali realizzati via AM da rivestire via termospruzzatura; influenza della microstruttura di componenti AM sull'efficacia della nitrurazione).
 - Deposizione di film sottili metallici e a base di nitruri via tecniche PVD, in particolare nell'ambito delle leghe ad alta entropia
 - tribologia di rivestimenti e materiali compositi a matrice polimerica in funzione delle condizioni di carico, velocità e temperatura e del rinforzo della matrice polimerica
 - studio dell'interazione dell'idrogeno con i materiali: stoccaggio allo stato solido, film barriera, infragilimento da idrogeno
- **Attività di ricerca e gestionale di progetti in progetti finanziati:** dal 2005, ha partecipato come collaborato scientifico e project leader di più di 15 progetti regionali, nazionali ed internazionali.
 - A livello europeo:
 - *MATERA-EU6-ERA-NET-4302-31/2006/26 ("New generation microwave ferrite thick films for absorbers" (2007-2008)) – PI (Unimore partner)*
 - *FP7-NMP-2012-SMALL-6 HYDROBOND ("New cost/effective superHYDROphobic coatings with enhanced BOND strength and wear resistance for application in large wind turbine blades" (2013-2016) – PI (Unimore partner)*
 - LIFE12 ENV/IT/000678 - "Recycling of thermal spray waste in sintered products - LIFE ReTSW-SINT" (2013-2016) – Participant (Unimore partner).
 - HORIZON-CL4-2022-RESILIENCE-01 – CoBRAIN Integrated Computational/Experimental Material Engineering Of Thermal Spray Coatings (2023-2026) – Participant (Unimore Coordinator)
 - *CETPartnership Joint Call 2022 TRI3 – HOOPLA Identification of the effect of hydrogen as a function of structural condition in pipeline distribution infrastructure and storage tanks (2023-2026) – PI (Unimore partner)*
 - A livello Nazionale e regionale:
 - PRIN 2020 – CONCERTO Multiscale modelling/characterisation and fabrication of nanocomposite ceramics with improved toughness (2022-2025) – Participant (Unimore partner)
 - PRIN 2022 – HEADSTONE High-Entropy Alloys for improveD Solid-State hydrOgeN storageE (2023-2025) – PI (Unimore Coordinator)
 - PRIN 2022 – GENESIS Graded Ebcs for Next generation gaS turbine engineS (2023-2025) – Participant (Unimore coordinator)
 - POR-FESR 2014-2020 – RIMMEL Rivestimenti Multi-funzionali e multi-scala, per componenti MEccanici in acciaio e Leghe di alluminio fabbricati con additive manufacturing (2019-2021) – PI (Unimore partner)

- POR-FESR 2021-2027 – ALERT Leghe di ALLuminio per componenti soggetti a fatica E fretting: Rivestimenti e Trattamenti superficiali integrati (2024-2026) – PI (Unimore partner)

- **Attività di ricerca in collaborazione con imprese:** la collaborazione in questo ambito è con numerose aziende, sia a livello di progetti di ricerca che di analisi di materiali (es.: failure analysis). In particolare, si segnalano collaborazioni con:
 - ditte italiane: Lincotek Surface Solutions, Sacmi Imola, Tetra Pak, Fava, Gnutti Carlo, Ferrari, Sidel, Ecor International, MBN Nanomaterialia, Gruppo Concorde, ATP Group, VIS Hydraulics, Petrolvalves, Lafer, STS, Bonetti, Leonardo, Surface Protec Technologies, etc...
 - ditte straniere: Tenneco, Putzier, Hoganas, Valmet, Hannecard, Oerlikon Metco, etc...
- **Attività istituzionali:**
 - Coordinatore del Corso di Dottorato in Ingegneria Civile, Ambientale e dei Materiali dal 2023
 - Coordinatore Erasmus di Dipartimento di Ingegneria “Enzo Ferrari” dal 2020
 - Vice Direttore del Centro Interdipartimentale Intermech Mo.Re. dal 2024
 - Membro del Consiglio Direttivo del Centro Interdipartimentale Grandi Strumenti (CIGS), Università di Modena e Reggio dal 2015
 - Membro della Commissione Ricerca del Dipartimento di Ingegneria “Enzo Ferrari” dal 2018
- **Attività come reviewer di riviste:** dal 2005, svolge attività di reviewer di numerose riviste scientifiche internazionali, quali: Journal of the European Ceramic Society, Surface and Coatings Technology, Tribology Letters, Applied Surface Science, Journal of Thermal Spraying Technology, Surface Engineering.
- **Attività come Editor di riviste:** 2016-2020 - Editor della rivista internazionale Surface and Coatings Technology, quartile 1

Afferenza

Periodo
Ruolo Accademico

Da dicembre 2008 fino al 30/11/2015
Ricercatore Universitario, SSD ING-IND/22
Abilitato al ruolo di Professore Associato dal 2014
Università degli Studi di Modena e Reggio Emilia

Periodo
Ruolo Accademico

2005 – November 2008

Tecnico Laureato

Afferenza

Università degli Studi di Modena e Reggio Emilia

Periodo

2004

Ruolo Accademico

Assegnista di Ricerca

Afferenza

Università degli Studi di Modena e Reggio Emilia

FORMAZIONE

Periodo

2001 – 2003

Università

Università degli Studi di Modena e Reggio Emilia

Title

Dottorato in Ingegneria dei Materiali

Periodo

Anni accademici 1991/1992 – 1997/1998

Università

Università degli Studi di Modena e Reggio Emilia

Laurea

Laurea in Fisica (vecchio ordinamento)

Votazione Finale

110/110 e Lode

PUBBLICAZIONI

Al momento della stesura di questo Curriculum Vitae, è autore e co-autore di **174** pubblicazioni su riviste internazionali in lingua inglese e con referaggio anonimo. Secondo il database di Scopus, l'h-index è 47 e ha ricevuto 6268 citazioni.
Tra le pubblicazioni più rilevanti e recenti:

- 1) L. R. Gehlen, G. Bolelli, P. Puddu, E. Forlin, A. Colella, G. Pintaude, L. Lusvarghi, Tribological and electrochemical performances of HVOF sprayed NbC-NiCr coatings, Surface and Coatings Technology, Volume 474, 15 December 2023, 130098
- 2) V. Zin, F. Montagner, E. Miorin, C. Mortalò, R. Tinazzi, G. Bolelli, L. Lusvarghi, A. Togni, S. Frabboni, G. Gazzadi, A. Mescola, G. Paolicelli, L. Armelao, S. M. Deambrosis, Effect of Mo content on the microstructure and mechanical properties of CoCrFeNiMox HEA coatings deposited by High Power Impulse Magnetron Sputtering, Surface & Coatings Technology 476 (2024) 130244
- 3) S. Bursich, S. Morelli, G. Bolelli, G. Cavazzini, E. Rossi, F. G. Mecca, S. Petruzzi, E. Bemporad, L. Lusvarghi, The Effect of Ceramic YSZ Powder Morphology on Coating Performance for Industrial TBCs, Surface & Coatings Technology 476 (2024) 130270
- 4) F. Ottani, L. Lusvarghi, G. Bolelli, F. Amenta, S. Pedrazzi, N. Morselli, M. Puglia, G. Allesina, Using infrared imaging to measure the friction coefficient during pin-on-disk sliding wear tests, Measurement, Volume 225, 15 February 2024, 114048
- 5) H. Myalska-Głowacka, G. Bolelli, L. Lusvarghi, G. Cios, M. Godzierz, V. Talaniuk, Influence of nano-sized WC addition on the microstructure, residual stress, and tribological properties of WC-Co HVOF-sprayed coatings, Surface and Coatings Technology, Volume 482, 30 April 2024, 130696

CONFERENCES

Al momento della stesura di questo Curriculum Vitae, ha presentato come presenting author o come co-autore di più di **200** lavori (poster e presentazioni orali, invited include) a conferenze nazionali ed internazionali. Ha pubblicato più di **25** lavori in Atti di Congresso nazionali ed internazionali.

COLLABORAZIONI NAZIONALI ED INTERNAZIONALI

Ha instaurato molte collaborazioni a livello nazionale ed internazionale. Tra i Centri di Ricerca con cui sono state attivate o sono in atto collaborazioni, si segnalano:

- Dipartimento di Ingegneria Chimica, Materiali e Ambiente, Università "La Sapienza", Roma – Prof. Teodoro Valente
- Dipartimento di Ingegneria, Università di Roma 3 – Prof. Edoardo Bemporad
- Dipartimento di chimica, materiali e ingegneria chimica "Giulio Natta" – Prof. Luigi De Nardo
- Center for Thermal Spray Research, University of Stony Brook, USA – Prof. Sanjay Sampath
- VTT Technical Research Centre of Finland, Finland – Dr. Tomi Suhonen
- Tampere University of Technology, Department of Materials Science, Finland – Dr. Heli Koivuluoto
- Institute for Manufacturing Technologies of Ceramic Components and Composites, Università di Stoccarda, Germany – Prof. Andreas Killinger
- Department of Materials Technology, Helmut Schmidt University, Germany – Prof. Thomas Klassen
- Surface Engineering Institute (IOT), Università di Aachen, Germany – Prof. Kirsten Bobzin
- Institute for Materials and Processes in Energy Systems, Forschungszentrum Jülich, Germany – Prof. Robert Vassen
- IKTS Fraunhofer Institute, Dresda, Germania – Dr. Michael-Lutz Berger
- Research and Testing Institute Plzen, Cech Republic – Dr. Sarka Houdkova
- Laboratori SPCTS, ENSIL, Università di Limoges, Limoges, France – Dr. Alain Denoirjean
- University West, Trollhattan, Sweden – Prof. Shrikant Joshi
- University of Barcellona, Spain – Prof. Irene Cano, Prof. Sergi Dosta
- Instituto de Tecnología Cerámica (ITC), Universitat Jaume I, Spagna – Prof. E. Sanchez

Publicazioni

LISTA COMPLETA DELLE PUBBLICAZIONI SU RIVISTE INTERNAZIONALI

IN LINGUA INGLESE SOTTOPOSTE A PROCESSO DI PEER-REVIEW

- 1) F. Bondioli, A.M. Ferrari, L. Lusvarghi, T. Manfredini, C. Siligardi, C. Meneghini, S. Mobilio, "The structure of ZrO₂ phases and devitrification processes in a Ca-Zr-Si-O based glass-ceramic: a combined A-XRD and XAS study", *Journal of Applied Crystallography* 37/7-6, (2004) 890-900.
- 2) G. Bolelli, V. Cannillo, L. Lusvarghi, T. Manfredini, C. Siligardi, C. Bartuli, A. Loreto, T. Valente, "Plasma-Sprayed Glass-Ceramic Coatings on Ceramic Tiles: microstructure, chemical resistance and mechanical properties", *Journal of European Ceramic Society* 25/11, (2005) 1835-1853.
- 3) F. Bondioli, A.M. Ferrari, L. Lusvarghi, T. Manfredini, S. Nannarone, L. Pasquali, G. Selvaggi, "Synthesis and characterization of praseodymium-doped ceria powders by Microwave-Hydrothermal (MH) Route", *Journal of Materials Chemistry* 15/10, (2005) 1061-1066.
- 4) G. Bolelli, L. Lusvarghi, T. Manfredini, C. Siligardi, "Influence of the manufacturing process on the crystallization behavior of a CZS glass system", *Journal of Non-Crystalline Solids* 351/30-32, (2005) 2537-2546.
- 5) G. Ghermandi, R. Cecchi, P. Laj, L. Lusvarghi, S. Zappoli, D. Ceccato, "Internal/External mixing of aerosol particles elemental composition retrieved from MicroPIXE and PIXE", *Nuclear Instruments and Methods B* 240/1-2, (2005) 313-320.
- 6) G. Bolelli, V. Cannillo, L. Lusvarghi, S. Riccò, "Mechanical and tribological properties of electrolytic hard chrome and HVOF-sprayed coatings", *Surface and Coatings Technology* 200/9, (2006) 2995-3009.
- 7) F. Bondioli, V. Cannillo, L. Lusvarghi, M. Montorsi, M. Avella, M. E. Enrico, M. Malinconico, "Modeling of ceramic particles filled polymer-matrix nanocomposites", *Composites Science and Technology* 66/7-8, (2006) 1030-1037.
- 8) A. Corradi, L. Lusvarghi, M.R. Rivasi, C. Siligardi, P. Veronesi, G. Marucci, M. Annibali, G. Ragazzo, "Waste treatment under microwave irradiation", in *Advances in Microwave and Radio Frequency Processing*, M. Willert-Porada (Ed.), Springer-Verlag, (2006) 341-348, ISBN: 3-540-43252-3.
- 9) G. Bolelli, C. Lugli, L. Lusvarghi, T. Manfredini, V. Cannillo, "Plasma-sprayed graded ceramic coatings on refractory materials for improved chemical resistance", *Journal of European Ceramic Society* 26/13, (2006) 2561-2579.
- 10) G. Bolelli, V. Cannillo, L. Lusvarghi, T. Manfredini, "Glass-alumina composite coatings by plasma spraying. Part I: microstructural and mechanical characterization", *Surface and Coatings Technology* 201/1-2, (2006) 458-473.
- 11) G. Bolelli, V. Cannillo, L. Lusvarghi, T. Manfredini, M. Montorsi, "Glass-alumina composite coatings by plasma spraying. Part II: microstructure-based modeling of mechanical properties", *Surface and Coatings Technology* 201/1-2, (2006) 474-486.
- 12) G. Bolelli, V. Cannillo, L. Lusvarghi, T. Manfredini, "Wear behaviour of thermally sprayed ceramic oxide coatings", *Wear* 261/11-12, (2006) 1298-1315.
- 13) G. Bolelli, R. Giovanardi, L. Lusvarghi, T. Manfredini, "Corrosion resistance of HVOF-sprayed coatings for hard chrome replacement", *Corrosion Science* 48/11, (2006) 3375-3397.
- 14) G. Bolelli, L. Lusvarghi, "Heat Treatment Effects on the Tribological Performance of HVOF-Sprayed Co-Mo-Cr-Si Coatings", *Journal of Thermal Spray Technology* 15/4, (2006) 802-810.
- 15) G. Bolelli, L. Lusvarghi, "Tribological properties of HVOF as-sprayed and heat treated Co-Mo-Cr-Si coatings", *Tribology Letters* 25/1, (2007) 43-54.
- 16) G. Bolelli, L. Lusvarghi, T. Manfredini, C. Siligardi, "Devitrification behaviour of plasma sprayed glass coatings", *Journal of European Ceramic Society* 27/2-3, (2007) 623-628.
- 17) C. Bartuli, L. Lusvarghi, T. Manfredini, T. Valente, "Thermal spraying to coat traditional ceramic substrates: case studies", *Journal of European Ceramic Society* 27/2-3, (2007) 1615-1622.
- 18) V. Cannillo, L. Lusvarghi, T. Manfredini, M. Montorsi, C. Siligardi, A. Sola, "Glass-ceramic Functionally Graded Materials produced with different methods", *Journal of European Ceramic Society* 27/2-3, (2007) 1293-1298.
- 19) V. Cannillo, L. Lusvarghi, C. Siligardi, A. Sola, "Characterization of glass-alumina functionally graded coatings obtained by plasma spraying", *Journal of European Ceramic Society* 27/4, (2007) 1935-1943.
- 20) V. Cannillo, L. Lusvarghi, C. Siligardi, A. Sola, "Prediction of the elastic properties profile in glass-alumina functionally graded materials", *Journal of European Ceramic Society* 27/6, (2007) 2393-2400.
- 21) G. Bolelli, L. Lusvarghi, T. Manfredini, F. Pighetti Mantini, R. Polini, E. Turunen, T. Varis, S. P. Hannula, "Comparison between Plasma- and HVOF-sprayed ceramic coatings. Part 1: microstructure and mechanical properties", *International Journal of Surface Science and Engineering* vol.1 n.1, (2007) 38-61.
- 22) G. Bolelli, L. Lusvarghi, T. Manfredini, F. Pighetti Mantini, E. Turunen, T. Varis, S. P. Hannula, "Comparison between Plasma- and HVOF-sprayed ceramic coatings. Part 2: tribological behaviour", *International Journal of Surface Science and Engineering* vol.1 n.1, (2007) 62-79.
- 23) M. Barletta, G. Bolelli, S. Guarino, L. Lusvarghi, "Development of matte finishes in electrostatic (EFB) and conventional hot

- dipping (CHDFB) fluidized bed coating process”, *Progress in Organic Coatings* 59/1, (2007) 54-68.
- 24) M. Barletta, L. Lusvarghi, F. Pighetti Mantini, S. Guarino, “Epoxy-based thermosetting powder coatings: surface levelling, scratch adhesion and wear resistance”, *Surface and Coatings Technology* 201/16-17, (2007) 7479-7504.
- 25) M. Barletta, G. Bolelli, V. Cannillo, L. Lusvarghi, M. Montorsi, F. Pighetti Mantini, Microstructural and tribological comparison of HVOF-sprayed and post-treated M-Mo-Cr-Si (M=Co,Ni) alloy coatings, *Wear*, 263/7-12, (2007) 1394-1413.
- 26) G. Bolelli, L. Lusvarghi, T. Manfredini, E. Parsini, C. Siligardi, BAS, CMAS and CZAS glass coatings deposited by plasma spraying, *Journal of European Ceramic Society* 27/16, (2007) 4575-4588.
- 27) G. Bolelli, L. Lusvarghi, F. Pighetti Mantini, F. Casadei, M. Barletta, Microstructural and Tribological Characterization of As-Sprayed and Heat-Treated HVOF Deposited Ni Alloys, *Surface Engineering* 23/5, (2007) 355-372.
- 28) M. Barletta, G. Bolelli, A. Gisario, L. Lusvarghi, Mechanical strength and wear resistance of protective coatings applied by Fluidized Bed (FB), *Progress in Organic Coatings* 61/2-4, (2008) 262-282.
- 29) M. Barletta, L. Lusvarghi, F. Pighetti Mantini, G. Rubino, Surface appearance and mechanical strength of multi-layer polymeric films, *Progress in Organic Coatings* 61/2-4, (2008) 249-261.
- 30) G. Bolelli, V. Cannillo, L. Lusvarghi, F. Pighetti Mantini, E. Gualtieri, C. Menozzi, A FIB study of sharp indentation testing on plasma-sprayed TiO₂, *Materials Letters* 62/10-11, (2008) 1557-1560.
- 31) M. Montorsi, L. Lusvarghi, C. Siligardi, C. Vernia, Sintering and crystallization of CaO-Al₂O₃-ZrO₂-SiO₂ glasses containing different amount of glasses, *Journal of the American Ceramic Society* 91 [3], (2008) 990-995.
- 32) V. Cannillo, L. Lusvarghi, C. Siligardi, A. Sola, Effects of different production techniques on glass-alumina functionally graded materials, *Ceramics International*, 34, (2008) 1719-1727
- 33) G. Bolelli, L. Lusvarghi, V. Cannillo, A. Killinger, R. Gadow, J. Rauch, Investigation of HVSFS deposited glass coatings, *Materials Letters*, 62/17-18, (2008) 2772-2775.
- 34) V. Cannillo, L. Lusvarghi, F. Pierli, A. Sola, Production and characterization of plasma sprayed TiO₂-hydroxyapatite functionally graded coatings, *Journal of European Ceramic Society*, 28/11, (2008) 2161-2169.
- 35) G. Bolelli, V. Cannillo, R. Giovanardi, L. Lusvarghi, Electrochemical evaluation of the corrosion resistance of some thermally sprayed coatings, *International Journal of Surface Science and Engineering*, Vol. 2, Nos. 3/4, (2008) 222-239.
- 36) G. Bolelli, L. Lusvarghi, F. Pighetti Mantini, F. Pitacco, H. Volz, Enhanced tribological properties of PECVD DLC coated thermally sprayed coatings, *Surface and Coatings Technology*, 202/18, (2008) 4382-4386.
- 37) G. Bolelli, L. Lusvarghi, R. Giovanardi, A comparison between corrosion resistances of some HVOF-sprayed metal alloy coatings, *Surface and Coatings Technology*, 202/19, (2008) 4793-4809.
- 38) G. Bolelli, L. Lusvarghi, M. Barletta, E. Turunen, T. Varis, C. L. Azanza-Ricardo, M. Leoni, P. Scardi, Residual stresses in HVOF sprayed ceramic coatings, *Surface and Coatings Technology*, 202/19, (2008), 4810-4819
- 39) G. Bolelli, L. Lusvarghi, M. Barletta, Heat treatment effects on the corrosion resistance of some HVOF-sprayed metal alloy coatings, *Surface and Coatings Technology*, 202/19, (2008) 4839-4847.
- 40) S. Yugeswaran, V. Selvarajan, P. Dhanasekaran, L. Lusvarghi, Transferred arc plasma processing of mullite-zirconia composite from natural bauxite and zircon sand, *Vacuum*, 83, (2008) 353-359.
- 41) M. Barletta, A. Gisario, L. Lusvarghi, G. Bolelli, G. Rubino, On the combined use of scratch tests and CLA profilometry for the characterization of polyester powder coatings: influence of scratch load and speed, *Applied Surface Science*, 254, (2008) 7198-7214.
- 42) V. Cannillo, L. Lusvarghi, F. Pierli, A. Sola, In-vitro behaviour of titania-hydroxyapatite functionally graded coatings, *Advances in Applied Ceramics*, 107/5, (2008) 259-267.
- 43) G. Bolelli, L. Lusvarghi, M. Montecchi, F. Pighetti Mantini, F. Pitacco, H. Volz, M. Barletta, HVOF Sprayed WC-Co as Hard Interlayer for DLC Films, *Surface and Coatings Technology*, 203, (2008) pp. 699-703.
- 44) A. Fregoni, N. Parenti, F. Pitacco, L. Lusvarghi, A new way for the aesthetical enhancement of ceramic materials: decorative PVD (Physical Vapour Deposition) films, *International Ceramics Journal*, October 2008, 57 – 62.
- 45) M. Barletta, G. Rubino, S. Guarino, G. Bolelli, L. Lusvarghi, A. Gisario, Fast regime – Fluidized Bed Machining (FR-FBM) of Atmospheric Plasma Spraying (APS) TiO₂ coatings, *Surface and Coatings Technology*, 203, (2008) 855-861.
- 46) M. Barletta, G. Rubino, G. Bolelli, L. Lusvarghi, Fast Regime - Fluidized Bed Machining (FR-FBM) of thermally sprayed coatings, *Journal of Thermal Spray Technology*, 17(5-6), (2008) 796-804.
- 47) M. Barletta, A. Gisario, G. Rubino, L. Lusvarghi, Influence of scratch load and speed in scratch tests of bilayer powder coatings, *Progress in Organic Coatings*, 64, (2009) 247-258.
- 48) G. Bolelli, J. Rauch, V. Cannillo, A. Killinger, L. Lusvarghi, R. Gadow, Microstructural and tribological investigation of High Velocity Suspension Flame Sprayed (HVSFS) Al₂O₃ coatings, *Journal of Thermal Spray Technology*, 18(1), (2009) 35-49.
- 49) G. Bolelli, J. Rauch, V. Cannillo, A. Killinger, L. Lusvarghi, R. Gadow, Properties of High Velocity Suspension Flame Sprayed (HVSFS) TiO₂ coatings, *Surface and Coatings Technology*, 203, (2009) 1722-1732.
- 50) C.P.Yoganand, V.Selvarajan, L. Lusvarghi, CaO-MgO-SiO₂ glass ceramics: Transferred Arc Plasma (TAP) synthesis and microstructural characterization, *Current Applied Physics*, 9, (2009) 839-846.
- 51) J. Rauch, G. Bolelli, A. Killinger, R. Gadow, V. Cannillo, L. Lusvarghi, Advances in High Velocity Suspension Flame Spraying (HVSFS), *Surface and Coatings Technology*, 203, (2009) 2131-2138.

- 52) D. Lisjak, D. Makovec, S. Gyrgyek, A. Hujanen, P. Lintunen, T. Varis, G. Bolelli, L. Lusvarghi, M. Drogenik, The preparation of barium hexaferrites coatings with HVOF, *Journal of the American Ceramic Society*, 92 [4], (2009) 818–824.
- 53) J.R. Colmenares-Angulo, V. Cannillo, L. Lusvarghi, A. Sola, S. Sampath, Role of Process Type and Process Conditions on Phase Content and Physical Properties of Thermal Sprayed TiO₂ Coatings, *Journal of Materials Science*, 44, (2009) 2276–2287.
- 54) V. Cannillo, J. Colmenares, L. Lusvarghi, F. Pierli, S. Sampath, In vitro characterization of plasma sprayed apatite wollastonite glass-ceramic biocoatings on titanium alloys, *Journal of European Ceramic Society*, 29, (2009) 1665-1677.
- 55) S. Yugeswaran, V. Selvarajan, L. Lusvarghi, A.I.Y. Tok, D. S.R. Krishna, Characterization of Mullite-Zirconia Composite Processed by Non-Transferred and Transferred Arc Plasma, *Plasma Science and Technology*, 11/2, (2009) 200-205.
- 56) M. Barletta, A. Gisario, L. Lusvarghi, “On the use of Fluidized Bed Coating (FBC) to deposit thin Al₂O₃ films onto metal substrates”, *International Journal of Materials and Product Technology*, 35-3/4, (2009) 407-424.
- 57) C.P. Yoganand, V. Selvarajan, L. Lusvarghi, O.M. Goudouric, K.M. Paraskevopoulos, M. Rouabhia, “Bioactivity of CaO–MgO–SiO₂ glass ceramics synthesized using Transferred Arc Plasma (TAP) process”, *Materials Science and Engineering C*, 29, (2009) 1759–1764.
- 58) C. Giolli, A. Scrivani, G. Rizzi, F. Borgioli, G. Bolelli, L. Lusvarghi, Failure Mechanism for Thermal Fatigue of Thermal Barrier Coating systems, *Journal of Thermal Spray Technology*, 18(2), (2009) 223-230.
- 59) G. Bolelli, E. Gualtieri, L. Lusvarghi, F. Pighetti Mantini, F. Pitacco, S. Valeri, H. Volz, Thermally-sprayed coatings as interlayers for DLC-based thin films, *Journal of Thermal Spray Technology*, 18(2), (2009) 231-242.
- 60) D. Lisjak, K. Bobzin, K. Richardt, M. Bégard, G. Bolelli, L. Lusvarghi, A. Hujanen, P. Lintunen, M. Pasquale, E. Olivetti, M. Drogenik, T. Schläfer, Preparation of barium hexaferrite coatings using Atmospheric Plasma Spraying, *Journal of the European Ceramic Society*, 29, (2009) 2333–2341.
- 61) M. Bégard, K. Bobzin, G. Bolelli, A. Hujanen, P. Lintunen, D. Lisjak, L. Lusvarghi, M. Pasquale, K. Richardt, T. Schläfer, T. Varis, Thermal spraying of Co,Ti-substituted Ba-hexaferrite coatings for electromagnetic wave absorption applications, *Surface and Coatings Technology*, 203, (2009) 3312–3319.
- 62) S. Baragetti, L. Lusvarghi, G. Bolelli, F. Tordini, “Fatigue behaviour of a 2011-T6 aluminium alloy coated with PVD WC/C, CVD DLC and PECVD SiO_x coatings”, *Surface and Coatings Technology*, 203, (2009) 3078–3087.
- 63) G. Bolelli, J. Rauch, V. Cannillo, A. Killinger, L. Lusvarghi, R. Gadow, “Microstructural and in vitro characterisation of High-Velocity Suspension Flame Sprayed (HVSFS) bioactive glass coatings”, *Journal of the European Ceramic Society*, 29, (2009) 2249-2257
- 64) G. Bolelli, L. Lusvarghi, M. Barletta, HVOF-sprayed WC-CoCr coatings on Al alloy: effect of the coating thickness on the tribological properties, *Wear*, 267 (5-8), (2009) 944-953.
- 65) V. Cannillo, L. Lusvarghi, A. Sola, Design of experiment for the optimisation of titania-hydroxyapatite functionally graded coatings, *International Journal of Applied Ceramic Technology*, 6 [4], (2009) 537–550.
- 66) G. Bolelli, E. Gualtieri, L. Lusvarghi, S. Valeri, “Effetto dello spessore sulla resistenza ad usura e corrosione di rivestimenti WC-CoCr depositati su lega di Al tramite termospruzzatura HVOF”, *La Metallurgia Italiana*, ottobre 2009, 17-28.
- 67) V. Cannillo, L. Lusvarghi, A. Sola, “Effect of a Heat Treatment on the Bioactivity of Titania-Hydroxyapatite Functionally Graded Coatings”, in “*Special Topics on Materials Science and Technology - The Italian Panorama*”, Edited by D. Acierno, A. d'Amore, D. Caputo and R. Cioffi, Brill Publishing, (2009) 101-107, ISBN 9004172246
- 68) M. Barletta, V. Cannillo, L. Lusvarghi, A. Sola, “Post-deposition laser treatment of plasma sprayed titania-hydroxyapatite functionally graded coatings”, *Journal of the European Ceramic Society*, 29, (2009) 3147-3158.
- 69) M. Barletta, G. Bolelli, B. Bonferroni, L. Lusvarghi, Wear and Corrosion Behaviour of HVOF-Sprayed WC-CoCr Coatings on Al Alloys, *Journal of Thermal Spray Technology*, 19(1-2) (2010), 358-367.
- 70) G. Bolelli, V. Cannillo, L. Lusvarghi, G. Gadow, A. Killinger, J. Rauch, M. Romagnoli, Effect of the Suspension Composition on the Microstructural Properties of High Velocity Suspension Flame Sprayed (HVSFS) Al₂O₃ Coatings, *Surface and Coatings Technology*, 204 (2010), 1163-1179.
- 71) G. Bolelli, B. Bonferroni, V. Cannillo, R. Gadow, A. Killinger, L. Lusvarghi, J. Rauch, N. Stiegler, Wear Behaviour of High Velocity Suspension Flame Sprayed (HVSFS) Al₂O₃ Coatings Produced Using Micron- and Nano-Sized Powder Suspensions, *Surface and Coatings Technology*, 204 (2010), 2657-2668.
- 72) Giovanni Bolelli, Valeria Cannillo, Rainer Gadow, Andreas Killinger, Luca Lusvarghi, Johannes Rauch, Processing and characterisation of High-Velocity Suspension Flame Sprayed (HVSFS) bioactive glass coatings, *Ceramics Silikaty*, 54(1), (2010) 1-7.
- 73) Giovanni Bolelli, Simo-Pekka Hannula, Luca Lusvarghi, Erja Turunen, Tommi Varis, Mechanical and tribological properties of HVOF-sprayed ceramic coatings, *Thermal Spray Bulletin*, Thermal Spray Bulletin 3 (2010) [1] 54-68
- 74) E. Bemporad, G. Bolelli, V. Cannillo, D. De Felicis, R. Gadow, A. Killinger, L. Lusvarghi, J. Rauch, M. Sebastiani, Structural characterization of High Velocity Suspension Flame Sprayed (HVSFS) TiO₂ coatings, *Surface and Coatings Technology*, 204 (2010), 3902-3910.
- 75) G. Bolelli, Kazi Sabiruddin, L. Lusvarghi, E. Gualtieri, S. Valeri, P. P. Bandyopadhyay, FIB assisted study of plasma sprayed splat–substrate interfaces: NiAl–stainless steel and alumina–NiAl combinations, *Surface and Coatings Technology*,

205 (2010), 363-371

76) M. Bégard, M. Bruehl, K. Bobzin, T. Schlaefel, G. Bolelli, L. Lusvarghi, D. Lisjak, A. Hujanen, P. Lintunen, U. Kanerva, T. Varis, M. Pasquale, Development of Ba-hexaferrite Coatings for Electromagnetic Wave Absorption Applications, *Surface and Coatings Technology*, 205 (2010), 1015–1020.

77) D. Lisjak, G. Bolelli, L. Lusvarghi, M. Bégard, M. Bruehl, K. Bobzin, P. Lintunen, U. Kanerva, M. Pasquale, M. Drofenik, Magnetic phase formation in CoTi-substituted Ba hexaferrite coatings prepared with atmospheric plasma spraying, *Journal of the American Ceramic Society*, 93 [9] (2010), 2579–2584

78) Yugeswaran, S., Suresh, K., Selvarajan, V., Lusvarghi, L., Karoly, Z., Szépvölgyi, J., Synthesis of mullite by means of transferred and nontransferred Arc plasma melting, *Materials and Manufacturing Processes* 25 (9), 909-914 (2010)

79) G. Bolelli, L. Lusvarghi, H. Koivuluoto, P. Vuoristo, F. Casadei, Corrosion resistance of cold-sprayed Ta coatings in very aggressive conditions, *Surface and Coatings Technology*, 205 (2010), 1103–1107.

80) Giovanni Bolelli, Valeria Cannillo, Rainer Gadow, Andreas Killinger, Luca Lusvarghi, Antonella Sola, Nico Stiegler, Microstructure and in-vitro behaviour of a novel High Velocity Suspension Flame Sprayed (HVSFS) bioactive glass coating, *Surface and Coatings Technology*, 205 (2010), 1145–1149.

81) B. Bonferroni, G. Bolelli, L. Lusvarghi, J. Nohava, Interesting aspects of indentation and scratch methods for characterization of thermally-sprayed coatings, *Surface and Coatings Technology*, 205 (2010), 1127–1131

82) A. Valarezo, G. Bolelli, W. B. Choi, S. Sampath, V. Cannillo, L. Lusvarghi, R. Rosa, Damage tolerant functionally graded WC-Co/Stainless Steel HVOF coatings, *Surface and Coatings Technology*, 205(7), 2197-2208 (2010)

83) G. Bolelli, B. Bonferroni, H. Koivuluoto, L. Lusvarghi, P. Vuoristo, Depth-sensing indentation for assessing the mechanical properties of cold-sprayed Ta, *Surface and Coatings Technology*, 205 (7), 2209-2217 (2010)

84) Darja Lisjak, Pertti Lintunen, Arto Hujanen, Tommi Varis, Giovanni Bolelli, Luca Lusvarghi, Marko Jagodič, Miha Drofenik, Hexaferrite/polyethylene composite coatings prepared with flame spraying, *Materials Letters*, 65 (3), 534-536 (2011)

85) Sabiruddin, K., Bandyopadhyay, P.P., Bolelli, G., Lusvarghi, L., Variation of Splat Shape with Processing Conditions in Plasma Sprayed Alumina Coatings, *Journal of Materials Processing Technology*, 211 (3), 450-462 (2011).

86) D. Lisjak, M. Bégard, M. Bruehl, K. Bobzin, A. Hujanen, P. Lintunen, G. Bolelli, L. Lusvarghi, S. Ovtar, M. Drofenik, Hexaferrite/polyester composite coatings for electromagnetic-wave absorbers, *Journal of Thermal Spray Technology*, 20(3), 638-644 (2011)

87) K. Bobzin, G. Bolelli, M. Bruehl, A. Hujanen, P. Lintunen, D. Lisjak, S. Gyergyek, L. Lusvarghi, Characterisation of Plasma-Sprayed SrFe₁₂O₁₉ Coatings for Electromagnetic Wave Absorption, *Journal of the European Ceramic Society*, Volume 31 (8), (2011) 1439-1449

88) C. Siligardi, P. Miselli, L. Lusvarghi, M. Reginelli, Influence of CaO-ZrO₂-Al₂O₃-SiO₂ glass-ceramics frits on the technological properties of porcelain stoneware bodies, *Ceramics International*, Volume 37, Issue 6, (2011) Pages 1851-1858

89) G. Bolelli, B. Bonferroni, G. Coletta, L. Lusvarghi, F. Pitacco, Wear and corrosion behaviour of HVOF WC-CoCr / CVD DLC hybrid coating systems deposited onto aluminum substrate, *Surface and Coatings Technology*, Volume 205, Issues 17-18, (2011) 4211-4220

90) L. Altomare, D. Bellucci, G. Bolelli, B. Bonferroni, V. Cannillo, L. De Nardo, R. Gadow, A. Killinger, L. Lusvarghi, A. Sola, N. Stiegler, Microstructure and in-vitro behaviour of 45S5 bioglass coatings deposited by High Velocity Suspension Flame Spraying (HVSFS), *Journal of Materials Science – Materials in Medicine*, Volume 22, Issue 5, (2011) 1303-1319

91) S. Yugeswaran, A. Kobayashi, P.V. Ananthapadmanabhan, L. Lusvarghi, Influence of processing variables on the formation of La₂Zr₂O₇ in transferred arc plasma torch processing, *Current Applied Physics*, Volume 11, Issue 6, (2011) Pages 1394-1400

92) G. Bolelli, B. Bonferroni, V. Cannillo, R. Gadow, A. Killinger, L. Lusvarghi, J. Rauch, N. Stiegler, Deposizione di rivestimenti in Al₂O₃ mediante High Velocity Suspension Flame Spraying (HVSFS): caratteristiche dei riporti ed effetto dei parametri operativi, *La Metallurgia Italiana*, giugno 2011, 5-14

93) S. Yugeswaran, P.V. Ananthapadmanabhan, A. Kobayashi, L. Lusvarghi, Transferred arc plasma processed mullite from coal ash and bauxite, *Ceramics International*, Volume 37, Issue 8, (2011) Pages 3437-3444

94) S. Yugeswaran, V. Selvarajan, L. Lusvarghi, Z. Karoly, J. Szépvölgyi, Synthesis of mullite from laboratory waste silica through transferred Arc plasma processing method, *Materials and Manufacturing Processes*, Volume 26, Issue 6, June 2011, Pages 813-820

95) G. Bolelli, V. Cannillo, L. Lusvarghi, R. Rosa, A. Valarezo, W. B. Choi, R. Dey, C. Weyant, S. Sampath, Functionally Graded WC-Co/NiAl HVOF Coatings for Damage Tolerance, Wear and Corrosion Protection, *Surface and Coatings Technology*, Volume 206, Issues 8-9, (2012) Pages 2585-2601

96) G. Bolelli, B. Bonferroni, J. Laurila, L. Lusvarghi, A. Milanti, K. Niemi, P. Vuoristo, Micromechanical properties and sliding wear behaviour of HVOF-sprayed Fe-based alloy coatings, *Wear*, Volumes 276–277, (2012) Pages 29-47

97) N. Stiegler, D. Bellucci, G. Bolelli, V. Cannillo, R. Gadow, A. Killinger, L. Lusvarghi, A. Sola, High-Velocity Suspension Flame Sprayed (HVSFS) Hydroxyapatite Coatings for Biomedical Applications, *Journal of Thermal Spray Technology*, Volume 21, Number 2, (2012) Pages 275-287

- 98) D. Bellucci, G. Bolelli, V. Cannillo, R. Gadow, A. Killinger, L. Lusvarghi, A. Sola, N. Stiegler, High Velocity Suspension Flame Sprayed (HVSFS) potassium-based bioactive glass coatings with and without TiO₂ bond coat, *Surface and Coatings Technology*, Volume 206, Issues 19–20, (2012) Pages 4079-4094
- 99) G. Bolelli, T. Börner, F. Bozza, V. Cannillo, G. Cirillo, L. Lusvarghi, Cermet coatings with Fe-based matrix as alternative to WC-CoCr: mechanical and tribological behavior, *Surface and Coatings Technology*, Volume 206, Issues 19–20, (2012) Pages 3857-3868
- 100) M. Sebastiani, G. Bolelli, L. Lusvarghi, P.P. Bandyopadhyay, E. Bemporad, High resolution residual stress measurement on amorphous and crystalline plasma-sprayed single-splats, *Surface and Coatings Technology*, Volume 206, Issue 23, 15 July 2012, Pages 4872–4880
- 101) G. Bolelli, N. Stiegler, D. Bellucci, V. Cannillo, R. Gadow, A. Killinger, L. Lusvarghi, A. Sola, Deposition Mechanisms in Hypervelocity Suspension Spraying: Case Study for Two Bioactive Materials, *Surface & Coatings Technology*, 210 (2012) 28–45
- 102) G. Bertolissi, C. Chazelas, G. Bolelli, L. Lusvarghi, M. Vardelle, A. Vardelle, Engineering the microstructure of solution precursor plasma-sprayed coatings, *Journal of Thermal Spray Technology*, Volume 21, Issue 6, (2012) 1148-1162 - **JTST Volume 21 Best Paper Honorable Mention**
- 103) A. Cattini, L. Łatka, D. Bellucci, G. Bolelli, A. Sola, L. Lusvarghi, L. Pawłowski, V. Cannillo, Suspension plasma sprayed bioactive glass coatings: effects of processing on microstructure, mechanical properties and in-vitro behaviour, *Surface and Coatings Technology*, Surface & Coatings Technology, 220 (2013) 52–59
- 104) V. Melli, G. Rondelli, L. Altomare, G. Bolelli, B. Bonferroni, L. Lusvarghi, A. Cigada, Luigi De Nardo, Metal Injection Molding as Enabling Technology for the Production of Metal Prosthesis Components. Electrochemical and in vitro Characterization, *Journal of Biomedical Materials Research: Part B - Applied Biomaterials*, Volume 101, Issue 7, October 2013, Pages: 1294–1301
- 105) F. Bozza, G. Bolelli, L. Lusvarghi, C. Siligardi, C. Giolli, A. Giorgetti, A. Scrivani, Analisi del processo di “pack chromising” su superleghe di Ni per turbine a gas, *La Metallurgia Italiana*, marzo 2013, 13-21
- 106) C. Siligardi, L. Lusvarghi, C. Giolli, A. Scrivani, D. Venturelli, Recycling in ceramic glazes of zirconia overspray from thermal barrier coatings manufacturing, *Journal of the European Ceramic Society*, Volume 34, Issue 1, January 2014, Pages 147-154
- 107) C. Siligardi, L. Tagliaferri, L. Lusvarghi, G. Bolelli, D. Venturelli, Preparation of innovative metallic composite glazes for porcelainized stoneware tiles, *Ceramics International*, Volume 40, Issue 1, Part B, January 2014, Pages 1821–1828
- 108) G. Bolelli, D. Bellucci, V. Cannillo, L. Lusvarghi, A. Sola, R. Gadow, A. Killinger, P. Muller, N. Stiegler, Suspension thermal spraying of hydroxyapatite: microstructure and in vitro behavior, *Materials Science and Engineering C*, 34 (2014) 287–303
- 109) G. Bolelli, L.-M. Berger, M. Bonetti, L. Lusvarghi, Comparative study of HVOF-sprayed WC-(W,Cr)2C-Ni and WC-CoCr hardmetal coatings, *Wear*, 309 (2014) 96–111
- 110) D. Bellucci, A. Sola, L. Lusvarghi, V. Cannillo, Hydroxyapatite-tricalcium phosphate-bioactive glass ternary composites, *Ceramics International*, Volume 40, Issue 2, March 2014, Pages 3805-3808
- 111) G. Bolelli, F. Bozza, L. Lusvarghi, P. Sassatelli, A. Scrivani, C. Giolli, A. Giorgetti, M. Thoma, A. Candeli, Diffusion mechanisms and microstructure development in pack aluminizing of Ni-based alloys, *Surface and Coatings Technology*, 239 (2014) 147–159
- 112) H. Koivuluoto, A. Milanti, G. Bolelli, L. Lusvarghi, P. Vuoristo, High-Pressure Cold-Sprayed Ni and Ni-Cu Coatings - Improved Structures and Corrosion Properties, *Journal of Thermal Spray Technology*, 23 (1-2), 2014, 98-103
- 113) A. Milanti, H. Koivuluoto, P. Vuoristo, G. Bolelli, F. Bozza, L. Lusvarghi, Microstructural characteristics and tribological behavior of HVOF-sprayed novel Fe-based alloy coatings, *Coatings*, 4(1) (2014) 98-120.
- 114) G. Bolelli, J. Hulka, H. Koivuluoto, L. Lusvarghi, A. Milanti, K. Niemi, P. Vuoristo, Properties of WC-FeCrAl coatings manufactured by different high velocity thermal spray processes, *Surface and Coatings Technology*, Volume 247, 25 May 2014, Pages 74-89
- 115) G. Bolelli, T. Börner, A. Milanti, L. Lusvarghi, J. Laurila, H. Koivuluoto, K. Niemi, P. Vuoristo, Tribological Behavior of HVOF- and HVOF-Sprayed Composite Coatings based on Fe-Alloy + WC-12%Co, *Surface and Coatings Technology*, Volume 248, 15 June 2014, Pages 104-112
- 116) A. Joulia, G. Bolelli, E. Gualtieri, L. Lusvarghi, S. Valeri, M. Vardelle, S. Rossignol, A. Vardelle, Comparing the Deposition Mechanisms in Suspension Plasma Spray (SPS) and Solution Precursor Plasma Spray (SPPS) deposition of Yttria-Stabilised Zirconia (YSZ), *Journal of the European Ceramic Society*, Volume 34, Issue 15, December 2014, Pages 3925-3940
- 117) M. Pihlatie, J. Lagerbom, G. Bolelli, J. Laakso, L. Hyvärinen, M. Kylmälahti, O. Himanen, J. Kiviaho, L. Lusvarghi, P. Vuoristo, Post-mortem evaluation of oxidized atmospheric plasma sprayed MnCo_{1.9}Fe_{0.1}O₄ and MnCo_{1.7}Fe_{0.3}O₄ oxide spinel chromium barrier protective coatings on Crofer 22 APU interconnectors, *International Journal of Hydrogen Energy*, Volume 39, Issue 30, 13 October 2014, Pages 17284-17294
- 118) S. Yugeswaran, P.V. Ananthapadmanabhan, L. Lusvarghi, Zircon dissociation in air plasma through low power

- transferred arc plasma torch, *Ceramics International*, Volume 41, Issue 1, Part A, January 2015, Pages 265-273
- 119) V. Melli, M. Juszczak, E. Sandrini, G. Bolelli, B. Bonferroni, L. Lusvarghi, A. Cigada, T. Manfredini, L. De Nardo, Metal Injection Molding as enabling technology for the production of metal prosthesis components – mechanical and fatigue performance evaluation, *Journal of Materials Science – Materials in Medicine*, Volume 26, Issue 1, January 2015, 5332, DOI - 10.1007/s10856-014-5332-z
- 120) G. Bolelli, A. Candeli, H. Koivuluoto, L. Lusvarghi, T. Manfredini, P. Vuoristo, Microstructure-based thermo-mechanical modelling of thermal spray coatings, *Materials and Design*, Volume 73, 15 May 2015, Pages 20-34
- 121) G. Bolelli, L.-M. Berger, T. Börner, H. Koivuluoto, L. Lusvarghi, C. Lyphout, N. Markocsan, V. Matikainen, P. Nylén, P. Sassatelli, R. Trache, P. Vuoristo, Tribology of HVOF- and HVOF-sprayed WC-10Co4Cr hardmetal coatings: a comparative assessment, *Surface and Coating Technology*, 265 (2015) 125–144
- 122) H. Koivuluoto, G. Bolelli, A. Milanti, L. Lusvarghi, P. Vuoristo, Microstructural Analysis of High-Pressure Cold-Sprayed Ni, NiCu and NiCu+Al₂O₃ Coatings, *Surface and Coatings Technology*, Volume 268, 25 April 2015, Pages 224-229
- 123) G. Bolelli, V. Cannillo, R. Gadov, L. Lusvarghi, A. Killinger, T. Manfredini, P. Müller, Properties of Al₂O₃ coatings by High Velocity Suspension Flame Spraying (HVSFS): effects of injection systems and torch design, *Surface and Coatings Technology*, Volume 270, 25 May 2015, Pages 175-189
- 124) A. Milanti, V. Matikainen, H. Koivuluoto, G. Bolelli, L. Lusvarghi, P. Vuoristo, Effect of spraying parameters on the microstructural and corrosion properties of HVOF-sprayed Fe-Cr-Ni-B-C coatings, *Surface and Coatings Technology*, Volume 277, 15 September 2015, Pages 81-90
- 125) G. Bolelli, D. Bellucci, V. Cannillo, R. Gadov, A. Killinger, L. Lusvarghi, P. Müller, A. Sola, Comparison between Suspension Plasma Sprayed (SPS) and High Velocity Suspension Flame Sprayed (HVSFS) bioactive coatings, *Surface and Coatings Technology*, 280 (2015) 232–249
- 126) G. Bolelli, A. Candeli, L. Lusvarghi, A. Ravoux, K. Cazes, A. Denoirjean, S. Valette, C. Chazelas, E. Meillot, L. Bianchi, Tribology of NiCrAlY + Al₂O₃ composite coatings by plasma spraying with hybrid feeding of dry powder + suspension, *Wear* 344-345 (2015) 69–85
- 127) C. Lyphout, K. Sato, S. Houdkova, E. Smazalova, L. Lusvarghi, G. Bolelli, P. Sassatelli, Tribological Properties of Hard Metal Coatings Sprayed by High Velocity Air Fuel Process, *Journal of Thermal Spray Technology*, Volume 25, Issue 1-2, 1 January 2016, Pages 331-345
- 128) G. Bolelli, A. Milanti, L. Lusvarghi, L. Trombi, H. Koivuluoto, P. Vuoristo, Wear and impact behaviour of High Velocity Air-Fuel sprayed Fe-Cr-Ni-B-C alloy coatings, *Tribology International*, volume 95, March 2016, Pages 372-390
- 129) C. Pirani, F. Iacono, L. Generali, P. Sassatelli, C. Nucci, L. Lusvarghi, M.G. Gandolfi, C. Prati, HyFlex EDM: superficial features, metallurgical analysis and fatigue resistance of innovative electro discharge machined NiTi rotary instruments, *International Endodontic Journal*, Volume 49, Issue 5, pages 483–493, May 2016
- 130) Pablo Carpio, Emilio Rayón, María Dolores Salvador, Luca Lusvarghi, Enrique Sánchez, Mechanical properties of double-layered and graded composite coatings of YSZ obtained by atmospheric plasma spraying, *Journal of Thermal Spray Technology*, (2016) 25:778-787
- 131) A. Milanti, V. Matikainen, G. Bolelli, H. Koivuluoto, L. Lusvarghi, P. Vuoristo, Microstructural details and sliding wear behaviour of Fe-based coatings manufactured with HVOF and HVOF thermal spray processes, *Journal of Thermal Spray Technology*, June 2016, Volume 25, Issue 5, pp 1040-1055
- 132) G. Bolelli, L.-M. Berger, T. Börner, H. Koivuluoto, L. Lusvarghi, C. Lyphout, N. Markocsan, P. Nylén, P. Sassatelli, R. Trache, P. Vuoristo, Sliding and abrasive wear behaviour of HVOF- and HVOF-sprayed Cr₃C₂-NiCr hardmetal coatings, *Wear*, Volumes 358–359, 15 July 2016, Pages 32–50
- 133) P. Sassatelli, G. Bolelli, L. Lusvarghi, T. Manfredini, R. Rigon, Manufacturing and Properties of High Velocity Oxygen-Fuel (HVOF)-Sprayed FeVCrC Coatings, *Journal of Thermal Spray Technology*, Volume 25, Issue 7, 1 October 2016, Pages 1302-1321
- 134) S. Dosta, G. Bolelli, A. Candeli, L. Lusvarghi, I. G. Cano, J. M. Guilemany, Plastic deformation phenomena during cold spray impact of WC-Co particles onto metal substrates, *Acta Materialia*, Volume 124, 1 February 2017, Pages 173-181
- 135) J. Henao, A. Concustell, S. Dosta, G. Bolelli, I.G. Cano, L. Lusvarghi, J.M. Guilemany, Deposition mechanisms of metallic glass particles by Cold Gas Spraying, *Acta Materialia*, Volume 125, 15 February 2017, Pages 327-339
- 136) F. Iacono, C. Pirani, L. Generali, Bolelli G, P. Sassatelli, L. Lusvarghi, M.G. Gandolfi, L. Giorgini, C. Prati, Structural analysis of HyFlex EDM instruments, *International Endodontic Journal*, Volume 50, Issue 3, 1 March 2017, Pages 303-313.
- 137) Giovanni Bolelli, Alessia Candeli, Luca Lusvarghi, Tiziano Manfredini, Alain Denoirjean, Stéphane Valette, Alice Ravoux, Erick Meillot, “Hybrid” plasma spraying of NiCrAlY + Al₂O₃ + h-BN composite coatings for sliding wear applications, *Wear*, 378-379 (2017) 68–81.
- 138) Matikainen, Ville; Bolelli, Giovanni; Koivuluoto, Heli; Honkanen, Mari; Vippola, Minnamari; Lusvarghi, Luca; Vuoristo, Petri, A Study of Cr₃C₂-based HVOF and HVOF Sprayed Coatings: Microstructure and Carbide Retention, *Journal of Thermal Spray Technology*, August 2017, Volume 26, Issue 6, pp 1239–1256
- 139) V. Matikainen, G. Bolelli, H. Koivuluoto, P. Sassatelli, L. Lusvarghi, P. Vuoristo, Sliding wear behavior of thermally sprayed Cr₃C₂-based coatings, *Wear*, Volumes 388–389, 15 October 2017, Pages 57-71

- 140) P. E. Santangelo, G. Allesina, G. Bolelli, L. Lusvarghi, V. Matikainen, P. Vuoristo, Infrared thermography as a Non-Destructive Testing solution for thermal spray metal coatings, *Journal of Thermal Spray Technology*, Volume 26, Issue 8, 1 December 2017, Pages 1982-1993
- 141) G. Bolelli, M. Bursi, L. Lusvarghi, T. Manfredini, V. Matikainen, R. Rigon, P. Sassatelli, P. Vuoristo, Deposition of FeVCrC Coatings by HVOF and HVOF processes, *Wear*, 394-395, 2018, pp. 113-133
- 142) P. Sassatelli, G. Bolelli, M. Lassinantti Gualtieri, E. Heinonen, M. Honkanen, L. Lusvarghi, T. Manfredini, R. Rigon, M. Vippola, Properties of HVOF-sprayed Stellite-6 coatings, *Surface and Coatings Technology*, Volume 338, 25 March 2018, Pages 45-62
- 143) J. Henao, G. Bolelli, A. Concustell, L. Lusvarghi, S. Dosta, I. G. Cano, J. M. Guilemany, Deposition behavior of cold-sprayed metallic glass particles onto different substrates, *Surface and Coatings Technology*, Volume 349, 15 September 2018, Pages 13-23
- 144) G. Bolelli, S. Popa, P. Puddu, P. Krieg, M. Lassinantti Gualtieri, L. Lusvarghi, A. Killinger, R. Gadow, Suspension HVOF spraying of TiO₂ using a liquid-fuelled torch, *Surface and Coatings Technology*, Volume 349, 15 September 2018, Pages 677-694
- 145) D. Bellucci, R. T. Candidato Jr., L. Lusvarghi, G. Bolelli, L. Pawlowski, G. Candiani, L. Altomare, L. De Nardo, V. Cannillo, Bioactive Zn-doped hydroxyapatite coatings and their antibacterial efficacy against *Escherichia coli* and *Staphylococcus aureus* bacteria, submitted to *Surface and Coatings Technology*, Volume 352, 25 October 2018, Pages 84-91
- 146) S. Morelli, R. Pérez-García, A. Querejeta, J. Muñoz, L. Lusvarghi, M. Lassinantti-Gualtieri, G. Bolelli, H.-J. Grande, Photocatalytic enamel/TiO₂ coatings developed by Electrophoretic Deposition (EPD), *Ceramics International*, 44 (2018) 16199-16208
- 147) G. Bolelli, A. Colella, L. Lusvarghi, P. Puddu, R. Rigon, P. Sassatelli, V. Testa, Properties of HVOF-sprayed TiC-FeCrAl coatings, *Wear*, 418-419 (2019) 36-51.
- 148) G. Bolelli, M. G. Righi, M. Zeeshan Mughal, R. Moscatelli, O. Ligabue, N. Antolotti, M. Sebastiani, L. Lusvarghi, E. Bemporad, Effects of thermal cycling on nano-scale elastic modulus and fracture toughness of thermal barrier coatings, *Materials & Design*, Volume 166, 15 March 2019, Article 107615
- 149) C. Lyphout, G. Bolelli, E. Smazalova, K. Sato, J. Yamada, S. Houdkova, L. Lusvarghi, T. Manfredini, Influence of hardmetal feedstock powder on the tribological properties of High Velocity Air Fuel (HVOF) sprayed coatings, *Wear*, Volumes 430-431, 15 July 2019, Pages 340-354
- 150) H. Myalska, L. Lusvarghi, G. Bolelli, P. Sassatelli, G. Moskal, Tribological behavior of WC-Co HVOF-sprayed coatings modified by nano-sized TiC addition, *Surface & Coatings Technology* 371 (2019) 401-416
- 151) G. Bolelli, S. Dosta, L. Lusvarghi, T. Manfredini, J.M. Guilemany, I.G. Cano, Building up WC-Co coatings by cold spray: a finite element simulation, *Surface and Coatings Technology*, Volume 374, 25 September 2019, Pages 674-689
- 152) L. Generali, A. Borghi, L. Lusvarghi, G. Bolelli, P. Veronesi, A. Vecchi, U. Consolo, C. Becce, C. Bertoldi, P. Sassatelli, Evaluation of the usage induced degradation of Genius and Reciproc reciprocating nickel-titanium instruments", *Odontology*, Volume 107, Issue 4, 1 October 2019, Pages 473-481
- 153) G. Bolelli, D. Meschini, T. Varis, V. Testa, S. Morelli, L. Lusvarghi, P. Vuoristo, Corrosion Properties of Thermally Sprayed Bond Coatings under Plasma Sprayed Chromia Coatings in Sulphuric Acid solutions, *Journal of Thermal Spray Technology*, (2020) 29:270-284
- 154) L. Generali, P. Puddu, A. Borghi, S. Brancolini, L. Lusvarghi, G. Bolelli, U. Consolo, E. Pedullà, Mechanical Properties and Metallurgical Features Vivo Used Reciproc Blue and Reciproc, *International Endodontic Journal*, 53, 250-264, 2020
- 155) G. Bolelli, C. Vorkötter, L. Lusvarghi, S. Morelli, V. Testa, R. Vassen, Performance of wear resistant MCrAlY coatings with oxide dispersion strengthening, *Wear*, Volumes 444-445, 15 March 2020, 203116
- 156) A. Xia, A. Togni, S. Hirn, G. Bolelli, L. Lusvarghi, R. Franz, Angular-dependent deposition of MoNbTaVW HEA thin films by three different physical vapor deposition methods, *Surface and Coatings Technology*, Volume 385, 15 March 2020, 125356
- 157) G. Bolelli, A. Colella, L. Lusvarghi, S. Morelli, P. Puddu, E. Righetti, P. Sassatelli, V. Testa, TiC-NiCr thermal spray coatings as an alternative to WC-CoCr and Cr₃C₂-NiCr, *Wear* 450-451 (2020) 203273
- 158) S. Morelli, V. Testa, G. Bolelli, O. Ligabue, E. Molinari, N. Antolotti, L. Lusvarghi, CMAS corrosion of YSZ thermal barrier coatings obtained by different thermal spray processes, *Journal of the European Ceramic Society*, in press
- 159) V. Testa, S. Morelli, G. Bolelli, B. Benedetti, P. Puddu, P. Sassatelli, L. Lusvarghi, Alternative metallic matrices for WC-based HVOF coatings, *Surface and Coatings Technology*, Volume 402, 25 November 2020, 126308
- 160) L. Generali, A. Malovo, G. Bolelli, A. Borghi, G. R. M. La Rosa, P. Puddu, L. Lusvarghi, A. Rota, U. Consolo, E. Pedullà, Mechanical properties and metallurgical features of new green NiTi reciprocating instruments, *Materials* 2020, 13(17), 3736
- 161) A. Elsenberg, M. Busato, F. Gärtner, A. List, A. Bruera, G. Bolelli, L. Lusvarghi, T. Klassen, Influence of MAX-Phase Deformability on Coating Formation by Cold Spraying, *Journal of Thermal Spray Technology*, Volume 30, Issue 3, February 2021, Pages 617-642
- 162) S. Yuvaraj, N. Muthukumarasamy, M. Flores, G. Rajesh, K.M. Paraskevopoulos, G. K. Pouroutzidou, G.S. Theodorou, K. Ioannidou, L. Lusvarghi, Dhavalan Velauthapillai, C. P. Yoganand, Incorporation of nanosized carbon over hydroxyapatite (HAp) surface using DC glow discharge plasma for biomedical application, *Vacuum* 190 (2021) 110300

- 163) G. Bolelli, D. Steduto, J. Kiilakoski, T. Varis, L. Lusvarghi, P. Vuoristo, Tribological Properties of Plasma Sprayed Cr₂O₃, Cr₂O₃-TiO₂, Cr₂O₃-Al₂O₃ and Cr₂O₃-ZrO₂ Coatings, *Wear*, Volumes 480–481, 2021, 203931
- 164) V. Testa, S. Morelli, G. Bolelli, L. Lusvarghi, S. Björklund, S. Joshi, Micromechanical behaviour and wear resistance of hybrid plasma-sprayed TiC reinforced Tribaloy-400, *Surface and Coatings Technology*, Volume 425, 15 November 2021, 127682
- 165) F. Amenta, G. Bolelli, S. Pedrazzi, G. Allesina, F. Santeramo, A. Bertarini, P. Sassatelli, L. Lusvarghi, Sliding wear behaviour of fibre-reinforced PTFE composites against coated and uncoated steel, *Wear*, Volumes 486–487, 15 December 2021, 204097
- 166) F. Amenta, G. Bolelli, S. De Lorenzis, A. Bertarini, L. Lusvarghi, Tribological behaviour of reinforced PTFE composites and un-reinforced Polyketone based materials against coated steel, *Lubricants*, *Lubricants* 2022, 10(1), 5;
- 167) K. Torkashvand, S. Joshi, V. Testa, F. Ghisoni, S. Morelli, G. Bolelli, L. Lusvarghi, F. Marra, M. Gupta, Tribological behaviour of HVOF-sprayed WC-based coatings with alternative binders, *Surface and Coatings Technology*, Volume 436, 25 April 2022, 128296
- 168) V. Testa, S. Morelli, G. Bolelli, F. Bosi, P. Puddu, A. Colella, T. Manfredini, L. Lusvarghi, Corrosion and wear performances of alternative TiC-based thermal spray coatings, *Surface and Coatings Technology*, Volume 438, 25 May 2022, 128400
- 169) S. Morelli, S. Bursich, V. Testa, G. Bolelli, A. Micciché, L. Lusvarghi, CMAS corrosion and thermal cycling fatigue resistance of alternative thermal barrier coating materials and architectures: a comparative evaluation, *Surface and Coatings Technology*, Volume 439, 15 June 2022, 128433
- 170) G. Bolelli, M. F. Bonilauri, P. Sassatelli, F. Bruno, R. Franci, G. Pulci, F. Marra, L. Paglia, G. C. Gazzadi, S. Frabboni, L. Lusvarghi, Pre-treatment of Selective Laser Melting (SLM) surfaces for thermal spray coating, *Surface and Coatings Technology*, Volume 441, 15 July 2022, 128533
- 171) F. Amenta, G. Bolelli, F. D'Errico, F. Ottani, S. Pedrazzi, G. Allesina, A. Bertarini, P. Puddu, L. Lusvarghi, Tribological behaviour of PTFE composites: interplay between reinforcement type and counterface material, *Wear* 510–511 (2022) 204498
- 172) S. Morelli, G. Rombolà, G. Bolelli, M. Lopresti, P. Puddu, E. Boccaleri, L. Seralessandri, L. Palin, V. Testa, M. Milanese, L. Lusvarghi, Hard ultralight systems by thermal spray deposition of WC-CoCr onto AZ31 magnesium alloy, *Surface & Coatings Technology* 451 (2022) 129056
- 173) G. Bolelli, C. Lyphout, L.-M. Berger, V. Testa, H. Myalska-Głowacka, P. Puddu, P. Sassatelli, L. Lusvarghi, Wear resistance of HVOF- and HVOF-sprayed (Ti,Mo)(C,N)-Ni coatings from an agglomerated and sintered powder, *Wear*, Volumes 512–513, 15 January 2023, 204550
- 174) E. Salerno, D. Casotti, G. Paolicelli, E. Gualtieri, A. Ballestrazzi, G. C. Gazzadi, G. Bolelli, L. Lusvarghi, S. Valeri, Friction and wear of DLC films deposited on Additive Manufactured AISi10Mg: the role of surface finishing, *Surface and Coatings Technology*, Volume 463, 25 June 2023, 129531
- 175) A. Bruera, P. Puddu, S. Theimer, M. V.-Vidaller, A. List, G. Bolelli, F. Gärtner, T. Klassen, L. Lusvarghi, Adhesion of cold sprayed soft coatings: effect of substrate roughness and hardness, *Surface and Coatings Technology*, Volume 466, 15 August 2023, 129651
- 176) R. Cortés, M. Á. Garrido-Maneiro, H. Koivuluoto, G. Bolelli, S. Morelli, V. Testa, L. Lusvarghi, J. Kondas, P. Poza, Local wear resistance of Inconel 625 coatings processed by different thermal techniques: A comparative study, *Surface & Coatings Technology* 470 (2023) 129831
- 177) L. R. Gehlen, G. Bolelli, P. Puddu, E. Forlin, A. Colella, G. Pintaude, L. Lusvarghi, Tribological and electrochemical performances of HVOF sprayed NbC-NiCr coatings, *Surface and Coatings Technology*, Volume 474, 15 December 2023, 130098
- 178) V. Zin, F. Montagner, E. Miorin, C. Mortalò, R. Tinazzi, G. Bolelli, L. Lusvarghi, A. Togni, S. Frabboni, G. Gazzadi, A. Mescola, G. Paolicelli, L. Armelao, S. M. Deambrosis, Effect of Mo content on the microstructure and mechanical properties of CoCrFeNiMox HEA coatings deposited by High Power Impulse Magnetron Sputtering, *Surface & Coatings Technology* 476 (2024) 130244
- 179) S. Bursich, S. Morelli, G. Bolelli, G. Cavazzini, E. Rossi, F. G. Mecca, S. Petrucci, E. Bemporad, L. Lusvarghi, The Effect of Ceramic YSZ Powder Morphology on Coating Performance for Industrial TBCs, *Surface & Coatings Technology* 476 (2024) 130270
- 180) F. Ottani, L. Lusvarghi, G. Bolelli, F. Amenta, S. Pedrazzi, N. Morselli, M. Puglia, G. Allesina, Using infrared imaging to measure the friction coefficient during pin-on-disk sliding wear tests, *Measurement*, Volume 225, 15 February 2024, 114048
- 181) H. Myalska-Głowacka, G. Bolelli, L. Lusvarghi, G. Cios, M. Godzierz, V. Talaniuk, Influence of nano-sized WC addition on the microstructure, residual stress, and tribological properties of WC-Co HVOF-sprayed coatings, *Surface and Coatings Technology*, Volume 482, 30 April 2024, 130696

Modena, 04-07-2024

Firma – Prof. Luca Lusvarghi

A handwritten signature in black ink, appearing to read 'Luca Lusvarghi', written in a cursive style.