

Curriculum Vitae

Oronzio Manca

Indirizzo: Dipartimento di Ingegneria, Università degli Studi della Campania “Luigi Vanvitelli”, via Roma 29, 81031 Aversa (CE)

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Posizione: professore ordinario all'Università degli Studi della Campania “Luigi Vanvitelli”.

Oronzio Manca è nato a Napoli nel 1954, ha conseguito, con lode, la laurea in Ingegneria Meccanica presso la Facoltà di Ingegneria dell'Università di Napoli il 27 luglio 1979. Attualmente afferisce al Dipartimento di Ingegneria dell'Università degli Studi della Campania “Luigi Vanvitelli” già Seconda Università degli Studi di Napoli.

Borse di studio e altre attività

È stato borsista CNEN dal 3/3/80 al 14/3/82, sull' "Analisi delle esperienze in acqua sulla termoidraulica dei fasci di barre"

è stato consulente dal 15/3/82 al 15/6/83 per il C.R.A.I.E.S., Centro di Ricerca Applicata per l'Impiego dell'Energia Solare; presso l'Istituto di Fisica Tecnica della Facoltà di Ingegneria dell'Università degli Studi di Napoli.

Ha usufruito di una borsa di studio CNR-NATO SENIOR bimestrale, usufruita presso il Department of Mechanical and Aerospace Engineering della RUTGERS - The State University of New Jersey, dal 13/07/95 al 12/09/95.

Professore invitato all'Université Paris-Est, Marne-la-Vallée, dal 25 Febbraio, 2013 al 25 Marzo, 2013 con l'attività n.PR2093.

Esperienze professionali:

Professore ordinario dall'1.11.2002 a oggi, in regime di tempo pieno nel raggruppamento ING-IND/10 presso il Dipartimento di Ingegneria dell'Università degli Studi della Campania “Luigi Vanvitelli” già Seconda Università degli Studi di Napoli;

è stato professore straordinario in regime di tempo pieno nel raggruppamento ING-IND/10 dal 1.11.1999 al 31.10.2002 presso la Facoltà di Ingegneria della Seconda Università degli Studi di Napoli;

è stato professore di II fascia in regime di tempo pieno nel raggruppamento I050 dal 1.11.1992 al 31.10.1995 presso la Facoltà di Ingegneria dell'Università degli Studi di Napoli Federico II e dal 1.11.1995 al 31.10.1999 presso la Facoltà di Ingegneria della Seconda Università degli Studi di Napoli;

è stato ricercatore di Fisica tecnica presso la Facoltà di Ingegneria dell'Università degli Studi di Napoli dal febbraio 1984 all'ottobre 1992.

Insegnamenti:

ha tenuto corsi di Fisica tecnica e Misure termotecniche presso l'Università degli Studi di Napoli Federico II dal e l'Università degli Studi della Campania “Luigi Vanvitelli” già Seconda Università degli Studi di Napoli;

correlatore di numerose tesi di laurea teoriche, numeriche e sperimentali, circa 400, svolte presso gli insegnamenti della Fisica tecnica, con particolare riferimento al risparmio energetico e alla trasmissione del calore.

Incarichi di gestione accademica:

è stato presidente del corso di laurea in Ingegneria Meccanica dal Novembre 2000 al Dicembre 2004;

è stato presidente del Consiglio di Corso di Studi Aggregati dell'area Industriale dal Gennaio 2005 all'Ottobre 2011;

coordinatore del corso di Dottorato in Ingegneria Industriale e Informatica dal Settembre 2015

direttore della Scuola di Dottorato Politecnica e delle Scienze di Base dal Giugno 2016.

Ricerca:

È stato responsabile scientifico di contratti di ricerca Bilaterali finanziati dal CNR dal 1994 al 1998;

è stato responsabile scientifico di contratti di ricerca finanziati con fondi di Ateneo dalla Seconda Università degli studi di Napoli dal 1995 al 2007;
è stato responsabile scientifico di un contratto di ricerca finanziario dalla Regione Campania 1997-2000;
è stato ed è responsabile di convenzioni di ricerca con aziende pubbliche e private;
è stato responsabile scientifico locale per il progetto “ Laboratorio nazionale pubblico-privato per lo sviluppo di tecnologie per l’energia solare termica ad alta temperatura presso il Centro Ricerche ENEA di Portici”;
è stato responsabile scientifico del Progetto di Formazione associato al progetto di ricerca “ELIOSLAB”;
è stato responsabile scientifico locale di ricerche cofinanziate dal MURST (PRIN) per i bienni 1997-1999, 1999-2001, 2001-2003 e 2003-2005, 2005-2007
è responsabile scientifico nazionale di una ricerca cofinanziata dal MURST (PRIN 2009) per il biennio 2011-2013.

è membro del "Management Committee" e responsabile del "Working Group 1" in NanoUptake Project COST Action 15119 "Overcoming Barriers to Nanofluids Market Uptake"
è membro dell'American Society of Mechanical Engineering (ASME) e fa parte del comitato K-8 dell’Heat Transfer Division dell’ASME, dell'Unione Italiana di Termofluidodinamica (UIT), dell'Associazione Italiana dell’Automobile (ATA), vice presidente dell'Associazione Italiana Gestione dell’Energia (AIGE).
Membro dello Scientific Council of International Center for Heat and Mass Transfer;

è stato Associate Editor (AE) del Journal of Heat Transfer da Luglio 2010 fino a Giugno 2016 ed è AE del Journal of Porous Media da Settembre 2010 a oggi;
è membro dell'Editorial Advisory Boards delle riviste: Advances in Mechanical Engineering, Advances in Theoretical and Applied Mechanics, Heat Transfer Research, International Journal of Advanced Thermofluid Research, Journal of Engineering, Open Journal of Heat, Mass and Momentum Transfer, The Open Thermodynamics Journal, The Open Fuels and Energy Science Journal, Thermal Science and Engineering Progress, Inventors.

Lead Guest Editor dell'Advances in Mechanical Engineering per gli Special Issue su "Heat Transfer in Nanofluids" 2010, 2012 e 2013;

Guest Editor di Nanoscale Research Letters per lo Special Issue su "Nanofluids" 2011 e dell'International Review of Mechanical Engineering per gli Special Issue su "Heat Transfer", 2010, 2011,2012 and 2013;
Heat Transfer Engineering per lo Special Issue "Selected Papers from the ASME-ATI-UIT 2015 Conference on Thermal Energy Systems: Production, Storage, Utilization, and the Environment"; Computational Thermal Science, Journal of Enhanced Heat Transfer, High Temperature Material Processes: An International Quarterly of High-Technology Plasma Processes and Multiphase Science and Technology per lo special issue ”Selected papers from the 7th International Symposium on Advances in Computational Heat Transfer, CHT-17”.

Co-chair per

ASME-ATI-UIT 2010 Conference on Thermal and Environmental Issues in Energy Systems, Sorrento, Italy, May 16-19, 2010;

3rd Int. Conf. on Porous Media and its Applications in Science, Engineering and Industry, Montecatini Terme, Italy, June 20-24, 2010;

5th Int. Conf. on Porous Media and its Applications in Science, Engineering and Industry, Kona, Hawaii, USA, June 22-27, 2014.

ASME-ATI-UIT 2015 Conference on Thermal Energy Systems: Production, Storage, Utilization and the Environment, Napoli, Italy, May 17-20, 2015.

1st AIGE-IIETA International Conference on Energy Conversion, Management, Recovery, Saving, Storage and Renewable Systems, Napoli, Italy, June 9-10, 2016.

6th Int. Conf. on Porous Media and its Applications in Science, Engineering and Industry, Waikoloa, Hawaii, USA, July 3-8, 2016.

7th International Symposium on Advances in Computational Heat Transfer, CHT-17, Napoli, Italy, 28 May - 02 June 2017.

Membro Local Organizing Committee del 5th International Conference on Diffusion in Solids and Liquids DSL 2009, Rome, Italy, 24-26 June, 2009.

Chair of Track 15 Measurement Techniques and Thermophysical Properties in Micro/Nanoscale at the 4th ASME Micro/Nanoscale Heat & Mass Transfer International Conference (MNHMT-13), The University of

Hong Kong, Hong Kong, December 11-14, 2013 and at the 5th ASME Micro/Nanoscale Heat & Mass Transfer International Conference (MNHMT-16), Singapore, January 3 - 6, 2016.

Membro dell'International Executive Committee of

1st Int. Conf. on Computational Methods for Thermal Problems, Naples, Italy, 2009,

2nd Int. Conf. on Computational Methods for Thermal Problems, Dailan, China, September 5-7, 2011.

Membro dello Scientific Committee of CMEM XIII, Prague (CZ), 2-4 July, 2007; CMEM XIV, Algarve, Portugal, 10-12 June, 2009; 7th Int. Cong. Materials Science and Engineering, Iasi, Romania, May 28-31, 2009; 6th International Conference on Diffusion in Solids and Liquids DSL 2010, Paris, France, 05-07 July, 2010; 7th International Conference on Diffusion in Solids and Liquids DSL 2011, Algarve, Portugal, 27-29 June, 2011; 8th Int. Cong. Materials Science and Engineering, Iasi, Romania, May 26-29, 2011; 4th Int. Conf. on Porous Media and its Applications in Science, Engineering and Industry, Potsdam, Germany, June 17-22, 2012; 8th International Conference on Diffusion in Solids and Liquids DSL 2012, Istanbul, Turkey, June 25-29, 2012; 5th International Conference on Applications of Porous Media August 25-28, Cluj-Napoca, Romania; 9th International Conference on Diffusion in Solids and Liquids DSL 2013, Madrid, Spain, June 24-28, 2013; 10th International Conference on Diffusion in Solids and Liquids DSL 2014; 11th International Conference on Diffusion in Solids and Liquids DSL 2015; 12th International Conference on Diffusion in Solids and Liquids DSL 2016; 13th International Conference on Diffusion in Solids and Liquids DSL 2017; 14th International Conference on Diffusion in Solids and Liquids DSL 2018.

Esaminatore Esterno nel Thesis Examining Committee for PhD examination in Mechanical Engineering a The University of Hong Kong, Hong Kong nel 2014, 2017 e 2018, The University of Limerick nel 2012 e 2014, The University of Queensland, University of Pretoria, South Africa, opposer nell'esame finale al KTH Royal Institute of Technology di Stoccolma in Svezia nel 2017.

Membro della Commissione per la valutazione dei Candidati ad AssMember Assistant Professor all'University of Southern Denmark

Reviewer per una posizione Associate Professor all'University of Pretoria, South Africa.

Collaborazioni scientifiche

con Università Italiane: Università di Bologna, Università di Catania, Università di Napoli Federico II; Università di Genova, Università di Padova, Università di Roma Tor Vergata, Politecnico di Torino, Università di Trieste, Università di Udine;

con Università estere: Professor Wilson K. S. Chiu, University of Connecticut, CT USA; Professor Vanessa Egan, University of Limerick, Ireland; Professor Yogesh Jaluria, Rutgers University, NJ USA; Professor Guy Lauriat, Université Paris-Est Marné la Vallée, France; Professor Alina Minea, Technical University GH.Asachi Iasi, Romania; Professor Moghtada Mobedi, Shizuoka University, Japan; Professor Akira Nakayama, Shizuoka University, Japan; Professor Mohsen Sharifpur, University of Pretoria; Professor Mikhail Sheremet, Tomsk University, Russian Federation; Professor Kambiz Vafai, University of California Riverside, CA USA; Professor Liqiu Wang, The University of Hong Kong, Hong Kong; Professor Gongnan Xie, Northwestern Polytechnical University, China.

È autore o coautore di 540 lavori scientifici (137 su riviste internazionali), coautore del libro "Applied Diffusion Processes from Engineering to Finance", Wiley-ISTE, 2013; co-editor del libro "Heat Transfer Enhancement with Nanofluids", Publisher CRC, Taylor and Francis Group, 2015; coautore di 5 libri didattici.

È autore o coautore di 264 documenti registrati in SCOPUS, con 2756 citazioni (2258 senza autocitazioni) da 1805 documenti, h-index di 27 (24 senza autocitazioni, 2258) e i10-index pari a 64 al 7 Aprile 2018. In Scholar Google le citazioni sono 4312 (2771 dal 2013), h-index 32 (26 dal 2013) e i10-index 88 (61 dal 2013) al 7 Aprile 2018.

L'attività di ricerca è svolta ed è stata svolta soprattutto in Energetica e Trasmissione del calore e può suddividersi nei seguenti filoni:

- sistemi solari attivi: impianti a pompa di calore elioassistita;
- sistemi solari passivi: collettori non capacitivi, collettori solari ibridi fotovoltaici-termici;
- fluidi refrigeranti sostitutivi;
- conduzione: soluzioni analitiche e numeriche nell'impiego di sorgenti laser e fascio elettronico nei processi tecnologici;
- irraggiamento e conduzione in film sottili multistrato;
- convezione naturale e mista per il controllo termico dei sistemi elettronici e nei processi tecnologici;
- convezione forzata, mista e naturale in mezzi porosi;

- convezione forzata e mista in nanofluidi.
- preparazione e caratterizzazione dei nanofluidi;
- sistemi per l'accumulo termico sensibile e latente con PCM e nano-PCM;
- incremento dello scambio termico.

RIVISTE INTERNAZIONALI

1. R. Festa, O. Manca, V. Naso, A comparison between models of thermal fields in laser and electron beam surface processing, *International Journal of Heat and Mass Transfer*, vol.31 n.1, pp.99-106, 1988, DOI: 10.1016/0017-9310(88)90226-8.
2. O. Manca, R. Mastrullo, P. Mazzei, On calibration of hot-wire probes at low velocities in air with variable fluid temperature, *Dantec Information*, n.6, pp.6-8, February 1988.
3. O. Manca, S. Nardini, V. Naso, Surface periodic on-off heat flux over a semi-infinite body, *International Communications in Heat and Mass Transfer*, vol.17, n.2, pp. 125- 135, 1990, DOI: 10.1016/0735-1933(90)90047-N.
4. R. Festa, O. Manca, V. Naso, Simplified thermal models in laser and electron beam surface hardening, *International Journal of Heat and Mass Transfer*, vol.33, n.11, pp.2511-2518, 1990, DOI: 10.1016/0017-9310(90)90008-I.
5. R. Festa, O. Manca, V. Naso, F. Nenci, Thermal design and experimental analysis of laser and electron beam hardening, *ASME Journal of Engineering for Industry*, vol 115, pp.309-314, 1993, DOI: 10.1115/1.2901665.
6. O. Manca, V. Naso, Solution to Steady-State Three-Dimensional Conduction for a Rectangular Surface Heat Source on Semi-Infinite Body, *International Communications in Heat and Mass Transfer*, vol.21, pp.799-808, 1994, DOI: 10.1016/0735-1933(94)90033-7.
7. O. Manca, B. Morrone, V. Naso, Quasi-Steady State Three-Dimensional Temperature Distribution Induced by Moving Circular Gaussian Heat Source in a Finite Depth Solid, *International Journal of Heat and Mass Transfer*, vol.38, pp.1305-1315, 1995, DOI: 10.1016/0017-9310(94)00231-J.
8. B. Morrone, A. Campo, O. Manca, Optimum Plate Separation in a Vertical Parallel-Plate Channel for Natural Convection Flows: Incorporation of Large Spaces at the Channel Extremes, *International Journal of Heat and Mass Transfer*, vol. 40, pp. 993-1000, 1997, DOI: 10.1016/0017-9310(96)00197-4.
9. N. Angelucci, N. Bianco, O. Manca, Thermal Transient Analysis of Thin Film Multilayers Heated by Pulsed Laser, *International Journal of Heat and Mass Transfer*, vol 40, pp. 4487-4491, 1997, DOI: 10.1016/S0017-9310(97)00059-8.
10. N. Bianco, O. Manca, B. Morrone, Conjugate Optical-Thermal Models of Back and Front Laser Treatments of Thin Multilayer Films, *International Journal of Heat and Technology*, vol.15, n. 2, pp.49-56, 1997.
11. N. Bianco, O. Manca, B. Morrone, Instationary Conjugate Optical-Thermal Field in Thin Films Due to Pulsed Laser Heating: a Comparison between Back and Front Treatment, *Heat and Mass Transfer*, vol.34, pp.255-261, 1998, DOI: 10.1007/s002310050257.
12. S. Avagliano, N. Bianco, O. Manca, V. Naso, Conjugate Thermal and optical Analysis of laser Back Scribing for Amorphous Silicon Photovoltaic Cells Processing, *International Journal of Heat and Mass Transfer*, vol. 42, pp. 645-656, 1999, DOI: 10.1016/S0017-9310(98)00200-2.
13. O. Manca, B. Morrone, S. Nardini, Thermal Analysis of Solids at High Peclet Numbers Subjected to Moving Heat Source, *ASME Journal of Heat Transfer*, vol. 121, pp.182-186, 1999, DOI: 10.1115/1.2825939.
14. O. Manca, S. Nardini, Composite Correlation for Air Natural Convection in Tilted Channels, *Heat Transfer Engineering*, vol. 20, no. 3, pp. 64-72, 1999, DOI:10.1080/014576399271439.
15. A. Campo, O. Manca, B. Morrone, Numerical Analysis of Partially Heated Vertical Parallel Plates in Natural Convective Cooling, *Numerical Heat Transfer - Part A: Applications*, vol. 36, pp. 129-151, 1999, DOI:10.1080/104077899274813.
16. O. Manca, S. Nardini, V. Naso, Experimental Analysis of Air Natural Convection on Inclined Discretely Heated Plates with Parallel Shroud below, *International Journal of Heat and Technology*, vol.18, n.1, pp.27-36, 2000.
17. O. Manca, B. Morrone, S. Nardini, Experimental Analysis of Thermal Instability in Natural Convection Between Horizontal Parallel Plates Uniformly Heated, *ASME Journal of Heat Transfer*, vol. 122, n. 1, pp. 50-57, 2000, DOI: 10.1115/1.521427.

18. N. Bianco, O. Manca, Two-Dimensional Transient Analysis of Absorbing Thin Film in Laser Treatments, *ASME Journal of Heat Transfer*, vol. 122, n. 1, pp. 113-117, 2000, DOI: 10.1115/1.521429.
19. O. Manca, B. Morrone, S. Nardini, Visualization of Flow Structures in Natural Convection Between Horizontal Heated Parallel Plates, *Journal of Flow Visualization and Image Processing*, vol. 7, pp. 159-171, 2000.
20. A. Andreozzi, O. Manca, Thermal and fluid dynamic behaviour of symmetrically heated vertical channels with auxiliary plate, *International Journal of Heat and Fluid Flow*, vol. 22, pp.424-432, 2001, DOI: 10.1016/S0142-727X(01)00080-7.
21. O. Manca, S. Nardini, Thermal design of uniformly heated inclined channels in natural convection with and without radiative effects, *Heat Transfer Engineering*, vol. 22, n. 2, pp. 13-28, 2001, DOI:10.1080/01457630118178.
22. A. Auletta, O. Manca, B. Morrone, V. Naso, Heat transfer enhancement by the chimney effect in a vertical isoflux channel, *International Journal of Heat and Mass Transfer*, vol.44 pp. 4345-4357, 2001, DOI: 10.1016/S0017-9310(01)00064-3.
23. N. Bianco, O. Manca, V. Naso, Transient conductive-radiative analysis of multilayer thin films heated by different laser pulses, *International Journal of Thermal Sciences*, vol. 40, pp.959-968, 2001, DOI: 10.1016/S1290-0729(01)01282-0.
24. G. Barbaro, N. Bianco, O. Manca, One Dimensional Approximate Analytical Solutions of Heat Conduction in Solids with Temperature Dependent Properties, *Hybrid Methos in Engineering*, , vol. 3, pp. 345-379, 2001.
25. A. Andreozzi, O. Manca, B. Morrone, Numerical Solution to the Natural Convection on Vertical Isoflux Plates by Full Elliptic Equations, *Numerical Heat Transfer, Part A*, vol. 41, pp. 263-283, 2002, DOI: 10.1080/10407780252780162.
26. O. Manca, S. Nardini, V. Naso, Effect on Natural Convection of the Distance Between an Inclined Discretely Heated Plate and a Parallel Shroud Below, *ASME Journal of Heat Transfer*, vol. 124, pp. 441-451, 2002, DOI: 10.1115/1.1470488.
27. A. Andreozzi, O. Manca, V. Naso, Natural convection in vertical channels with auxiliary plate, *International Journal for Numerical Methods in Heat and Fluid Flow*, vol. 12, pp. 716-734, 2002, DOI: 10.1108/09615530210438364.
28. A. Auletta, O. Manca, Heat and Fluid Flow Resulting from the Chimney Effect in a Symmetrically Heated Vertical Channel with Adiabatic Extensions, *International Journal of Thermal Sciences*, vol. 41, pp. 1101-1111, 2002, DOI: 10.1016/S1290-0729(02)01396-0.
29. O. Manca, S. Nardini, K. Khanafer, K. Vafai, Effect of Heated Wall Position on Mixed Convection in a Channel with an Open cavity, *Numerical Heat Transfer, Part A*, vol. 43, pp. 259-282, 2003, DOI: 10.1080/10407780307310.
30. A. Auletta, O. Manca, M. Musto, S. Nardini, Thermal Design of Symmetrically and Asymmetrically Heated Channel-Chimney Systems in Natural Convection, *Applied Thermal Engineering*, vol. 23, pp. 605-621, 2003, DOI: 10.1016/S1359-4311(02)00241-7.
31. A. Campo, O. Manca, B. Morrone, Analytical estimation of axial fluid conduction in forced convection tube flows with zero-to-uniform step heat fluxes at the walls, *Heat Transfer Engineering*, vol. 24, n. 4, pp. 49-58, 2003, DOI: 10.1080/01457630304027.
32. O. Manca, M. Musto, V. Naso, Experimental analysis of asymmetrical isoflux channel-chimney systems, *International Journal of Thermal Sciences*, vol. 42, pp. 837-846, 2003, DOI: 10.1016/S1290-0729(03)00056-5.
33. N. Bianco, O. Manca, Theoretical comparison of two-dimensional transient analysis between back and front laser treatment of thin multilayer films, *International Journal of Thermal Sciences*, vol. 43, pp. 611-621, 2004, DOI: 10.1016/j.ijthermalsci.2003.11.001.
34. A. Campo, O. Manca, B. Morrone, Natural convection in vertical, parallel-plate channels with appended unheated entrances, *International Journal for Numerical Methods in Heat and Fluid Flow*, vol. 15, pp. 183-204, 2005, DOI: 10.1108/09615530510578447.
35. A. Andreozzi, B. Buonomo, O. Manca, Numerical study of natural convection in vertical channels with adiabatic extensions downstream, *Numerical Heat Transfer Part A: Applications*, vol. 47, pp. 741-762, 2005.
36. O. Manca, M. Musto, V. Naso, Experimental investigation of natural convection in an asymmetrically heated vertical channel with an asymmetric chimney, *Journal of Heat Transfer*, vol. 127, pp. 888-896, 2005.

37. N. Bianco, L. Langellotto, O. Manca, S. Nardini, V. Naso, Converging on New Cooling Technology, *Fluent News*, p. 28, Summer 2005.
38. N. Bianco, L. Langellotto, O. Manca, S. Nardini, Thermal Design and Optimization of Uniformly Heated Vertical Convergent Channels in Natural Convection, *Applied Thermal Engineering*, vol. 26, pp. 170-177, 2006.
39. A. Campo, O. Manca, B. Morrone, Numerical investigation of the natural convection flows for low-Prandtl fluids in vertical parallel-plates channels, *Journal of Applied Mechanics*, vol. 73, pp. 96-107, 2006.
40. O. Manca, S. Nardini, K. Vafai, Experimental investigation of mixed convection in a channel with an open cavity, *Experimental Heat Transfer*, vol. 19, pp. 53-68, 2006.
41. N. Bianco, L. Langellotto, O. Manca, V. Naso, Numerical analysis of radiative effects on natural convection in vertical convergent and symmetrically heated channels, *Numerical Heat Transfer - Part. A: Applications*, vol. 49, pp. 369-391, 2006.
42. A. Andreozzi, A. Auletta, O. Manca, Entropy generation in natural convection in a symmetrically and uniformly heated vertical channel, *International Journal of Heat and Mass Transfer*, vol. 49, pp. 3221-3228, 2006, DOI: 10.1016/j.ijheatmasstransfer.2006.01.032.
43. O. Manca, S. Nardini, Experimental investigation on natural convection in horizontal channels with the upper wall at uniform heat flux, *International Journal of Heat and Mass Transfer*, vol. 50, pp. 1075-1086, 2007, DOI: 10.1016/j.ijheatmasstransfer.2006.07.038.
44. N. Bianco, O. Manca, S. Nardini, Experimental investigation on natural convection in a convergent channel with uniformly heated plates, *International Journal of Heat and Mass Transfer*, vol. 50, pp. 2772-2786, 2007, doi:10.1016/j.ijheatmasstransfer.2006.11.017.
45. A. Andreozzi, Y. Jaluria, O. Manca, Numerical analysis on transient natural convection in a horizontal open ended cavity, *Numerical Heat Transfer-Part A*, vol. 51, p. 815-842, 2007, DOI:10.1080/10407780601112720.
46. G. Foglia, S. Lazzari, O. Manca, Experimental Investigation on Mixed Convection in a Horizontal Channel, *Journal of Heat and Mass Transfer*, vol. 1, n. 1, pp. 27-48, February 2007.
47. L. Langellotto, O. Manca, S. Nardini, Numerical investigation of transient natural convection in air in a convergent vertical channel symmetrically heated at uniform heat flux, *Numerical Heat Transfer-Part A*, vol. 51, pp. 1065-1086, 2007.
48. N. Bianco, O. Manca, V. Naso, Analytical solution for moving sources at high Peclet numbers, *Journal of Heat and Mass Transfer*, vol. 1, n. 2, pp. 141-164, June 2007.
49. A. Andreozzi, A. Campo, O. Manca, Compounded natural convection enhancement in a vertical parallel-plate channel, *International Journal of Thermal Sciences*, vol. 47, pp. 742-748, doi:10.1016/j.ijthermalsci.2007.06.013, 2008.
50. O. Manca, S. Nardini, K. Vafai, Experimental analysis of opposing flow in mixed convection in a channel with an open cavity below, *Experimental Heat Transfer*, vol. 21, pp. 99-114, 2008.
51. A. Andreozzi, N. Bianco, O. Manca, V. Naso, Effect of moving plate on heat transfer in a vertical channel heated at uniform heat flux, *International Journal of Heat and Mass Transfer*, vol. 51, pp. 3906-3912, 2008, doi:10.1016/j.ijheatmasstransfer.2007.11.057.
52. A. Andreozzi, B. Buonomo, O. Manca, Thermal management of natural convection in symmetrical heated channel – chimney systems, *International Journal of Thermal Science*, vol. 48, pp. 475-487, 2009 doi:10.1016/j.ijthermalsci.2008.03.017.
53. N. Bianco, O. Manca, D. Ricci, Numerical model for multilayer thin films irradiated by a moving laser source, *Defect and Diffusion Forum*, vol. 283-286, pp. 352-357, 2009, doi:10.4028/3-908454-50-6.352, ISSN: 1012-0386.
54. N. Bianco, O. Manca, S. Nardini, S. Tamburrino, Transient heat conduction in solids irradiated by a moving heat source, *Defect and Diffusion Forum*, vol. 283-286, pp. 358-363, 2009, doi:10.4028/3-908454-50-6.358, ISSN: 1012-0386.
55. A. Andreozzi, B. Buonomo, O. Manca, Transient natural convection in a symmetrically heated vertical channel at uniform wall heat flux, *Numerical Heat Transfer-Part A*, vol. 55, pp. 409-431, 2009, DOI: 10.1080/10407780902776512 ISSN: 1040-7782.
56. O. Manca, S. Nardini, Experimental investigation on radiation effects on natural convection between horizontal walls with heated upper plate, *Journal of Heat Transfer*, vol. 131, pp. 062503-1-10, ISSN: 0022-1481, 2009, DOI: 10.1115/1.3084212.
57. A. A. Minea, O. Manca, Techniques for intensifying heat transfer: from basics to nanofluids, *Metalurgia*

International, vol. XIV, pp. 54-61, 2009. ISSN 1582-2214

58. V. Bianco, O. Manca, S. Nardini, M. Roma, Numerical investigation of transient thermal and fluid dynamic fields in an executive aircraft cabin, *Applied Thermal Engineering*, vol. 29, pp. 3418–3425, 2009, DOI: 10.1016/j.applthermaleng.2009.05.020.
59. V. Bianco, O. Manca, S. Nardini, Electricity consumption forecasting in Italy using linear regression models, *Energy*, vol. 34, pp. 1413–1421, 2009, DOI: 10.1016/j.energy.2009.06.034.
60. V. Bianco, F. Chiacchio, O. Manca, S. Nardini, Numerical investigation of nanofluids forced convection in circular tubes, *Applied Thermal Engineering*, vol. 29, pp. 3632–3642, 2009, doi:10.1016/j.applthermaleng.2009.06.019.
61. N. Bianco, O. Manca, A. Minea, V. Naso, Numerical study of the quasi-steady state temperature field by a moving heat source for surface treating, *Metalurgia*, vol. 61, pp. 5-11, 2009. ISSN 0461-9579.
62. M. Shafahi, V. Bianco, K. Vafai, O. Manca, An investigation of the thermal performance of cylindrical heat pipes using nanofluids, *International Journal of Heat and Mass Transfer*, vol. 53, pp. 376-383, 2010, doi:10.1016/j.ijheatmasstransfer.2009.09.019.
63. M. Shafahi, V. Bianco, K. Vafai, O. Manca, Thermal performance of flat-shaped heat pipes using nanofluids, *International Journal of Heat and Mass Transfer*, vol. 53, pp. 1438-1445, 2010, doi:10.1016/j.ijheatmasstransfer.2009.12.007.
64. A. Andreozzi, B. Buonomo, O. Manca, S. Nardini, Natural Convection in Vertical Channels with Porous Media and Adiabatic Extensions, *Defect and Diffusion Forum*, Vols. 297-301, pp 1432-1438, 2010, doi:10.4028/www.scientific.net/DDF.297-301.1432.
65. N. Bianco, O. Manca, D. Ricci, Numerical investigation on transient conjugate optical-thermal fields in thin films irradiated by moving sources for back and front treatments, *Defect and Diffusion Forum*, Vols. 297-301, pp 1439-1444, 2010, doi:10.4028/www.scientific.net/DDF.297-301.1439.
66. N. Bianco, O. Manca, S. Nardini, S. Tamburrino, Effect of solid thickness on transient heat conduction in workpieces irradiated by a moving heat source, *Defect and Diffusion Forum*, Vols. 297-301, pp 1445-1450, 2010, doi:10.4028/www.scientific.net/DDF.297-301.1445.
67. A. Andreozzi, O. Manca, Numerical investigation of steady state natural convection in air between horizontal parallel plates heated from the upper plate, *Numerical Heat Transfer Part A*, vol. 57, pp. 453-472, 2010, DOI: 10.1080/10407781003684324.
68. O. Manca, A. Minea, S. Nardini, S. Tamburrino, Transient heat conduction in solids irradiated by a moving heat source with combined donut and gaussian distributions, *International Review of Mechanical Engineering, Special Issue on Heat Transfer*, Vol. 4. n. 2, pp. 123-127, 2010, ISSN: 1970 - 8734.
69. N. Bianco, O. Manca, A. Minea, V. Naso, D. Ricci, Numerical model for back treatment of multilayer thin films by a moving laser source, *International Review of Mechanical Engineering, Special Issue on Heat Transfer*, Vol. 4. n. 2, pp. 128-133, 2010, ISSN: 1970 - 8734.
70. B. Buonomo, O. Manca, Natural convection slip flow in a vertical microchannel heated at uniform heat flux, *International Journal of Thermal Science*, vol. 49, pp. 1333-1344, 2010, DOI: 10.1016/j.ijthermalsci.2010.03.005.
71. N. Bianco, L. Langelotto, O. Manca, S. Nardini, Radiative effects on natural convection in air in symmetrically heated convergent channels, *International Journal of Heat and Mass Transfer*, vol. 53, pp. 3513-3524, 2010, DOI:10.1016/j.ijheatmasstransfer.2010.04.012.
72. V. Bianco, O. Manca, S. Nardini, Numerical simulation of water/Al₂O₃ nanofluid turbulent convection, *Special Issue on Heat Transfer in Nanofluids, Advances in Mechanical Engineering*, Vol. 2010 (2010), Article ID 976254, 10 pages, ISSN 1687-8132, doi:10.1155/2010/976254.
73. O. Manca, Y. Jaluria, D. Poulikakos, Heat Transfer in Nanofluids, Editorial, *Advances in Mechanical Engineering*, Vol. 2010 (2010), Article ID 380826, ISSN 1687-8132, doi:10.1155/2010/380826.
74. V. Bianco, O. Manca, A. Minea, S. Nardini, Analysis and forecasting of non residential electricity consumption in Romania, *Applied Energy*, vol. 87, pp. 3584-3590, 2010, doi:10.1016/j.apenergy.2010.05.018.
75. A. Andreozzi, B. Buonomo, O. Manca, Thermal and fluid dynamic behaviors of natural convection in symmetrical heated channel – chimney systems, *International Journal for Numerical Methods in Heat and Fluid Flow*, vol. 20 (7), pp. 811-833, 2010, DOI: 10.1108/09615531011065584.
76. V. Bianco, O. Manca, S. Nardini, Numerical investigation on nanofluids turbulent convection heat transfer inside a circular tube, *International Journal of Thermal Science*, vol. 50, pp. 341-349, 2011, doi:10.1016/j.ijthermalsci.2010.03.008.
77. A. A. Minea, O. Manca, Technology research, development and deployment: needs and trends on

- process heating, METALURGIA INTERNATIONAL, vol. XVI (1), pp. 77-82, 2011. ISSN 1582-2214.
78. L. Langellotto, O. Manca, Correlations for natural convection in air in vertical convergent channels at uniform heat flux with radiative effect, *Heat Transfer Engineering*, vol. 32, pp. 439-454, 2011, doi:10.1080/01457632.2010.506166.
 79. O. Manca, S. Nardini, D. Ricci, Numerical study of air forced convection in a channel provided with inclined ribs, *Frontiers in Heat and Mass Transfer*, (FHMT), vol. 2, 013007, 2011, DOI: 10.5098/hmt.v2.1.3007, ISSN: 2151-8629.
 80. L. Wang, Y. Jaluria, S. Choi, O. Manca, Nanofluids, Editorial, Special issue on nanofluids, *Nanoscale Research Letters*, vol. 6, 99, 2011, doi:10.1186/1556-276X-6-99.
 81. A. Di Micco, F. Fortunato, O. Manca, A. A. Minea, D. Ricci, Numerical analysis of a two-dimensional thermal model for a car under-body, *International Review of Mechanical Engineering*, Special Issue on Heat Transfer, Vol. 5 N. 2, February, pp. 2-11, 2011.
 82. O. Manca, P. Mesolella, S. Nardini, D. Ricci, Numerical study of a confined slot impinging jet with nanofluids, *Nanoscale Research Letters Special Issue in Nanofluids*, vol. 6, paper 188, 2011, doi:10.1186/1556-276X-6-188.
 83. V. Bianco, O. Manca, S. Nardini, Enhancement of heat transfer and entropy generation analysis of nanofluids turbulent convection flow in square section tubes, *Nanoscale Research Letters Special Issue in Nanofluids*, vol. 6, paper 252, 2011, doi:10.1186/1556-276X-6-252.
 84. N. Bianco, O. Manca, S. Nardini, S. Tamburrino, Effect of impinging jet on heat conduction in workpieces irradiated by a moving heat source, *Defect and Diffusion Forum Vols. 312-315*, pp 924-928, 2011, doi: 10.4028/www.scientific.net/DDF.312-315.924.
 85. O. Manca, S. Nardini, D. Ricci, S. Tamburrino, Numerical simulation of transient temperature fields in solids irradiated by moving gaussian and donut sources, *Defect and Diffusion Forum Vols. 312-315*, pp 959-964, 2011, doi:10.4028/www.scientific.net/DDF.312-315.959
 86. O. Manca, S. Nardini, D. Ricci, Numerical investigation of air forced convection in channels with different shaped transverse ribs, *International Journal for Numerical Methods in Heat and Fluid Flow*, Vol. 21, pp.618 - 639, 2011, doi:10.1108/09615531111135855.
 87. O. Manca, S. Nardini, D. Ricci, Numerical Analysis of Water Forced Convection in Channels with Differently Shaped Transverse Ribs, *Journal of Applied Mathematics*, vol. 2011, Article ID 323485, 25 pages, 2011. doi:10.1155/2011/323485.
 88. O. Manca, S. Nardini, D. Ricci, S. Tamburrino, Numerical Study of Transient Natural Convection in Air in Vertical Divergent Channels, *Numerical Heat Transfer Part A*, Vol. 60, pp. 580-603, 2011, DOI: 10.1080/10407782.2011.616780.
 89. O. Manca, A. A. Minea, S. Nardini, S. Tamburrino, Numerical Investigation on Convective Heat Transfer in High Temperature Solar Receiver, *Environmental Engineering and Management Journal*, Vol.10, No. 10, 1467-1475, October 2011, ISSN 1582-9596.
 90. G. Di Lorenzo, O. Manca, S. Nardini, D. Ricci, Numerical study of laminar confined impinging slot-jets with nanofluids, *Advances in Mechanical Engineering*, Special Issue on Heat Transfer in Nanofluids, Volume 2012, Article ID 248795, 2012, doi:10.1155/2012/248795.
 91. O. Manca, S. Nardini, D. Ricci, S. Tamburrino, Numerical Investigation on Mixed Convection in Triangular Cross Section Ducts with Nanofluids, *Advances in Mechanical Engineering*, Special Issue on Heat Transfer in Nanofluids, Volume 2012, Article ID 139370, 2012, doi:10.1155/2012/139370.
 92. M. Ferraiuolo, O. Manca, Heat transfer in a multilayered thermal protection system under aerodynamic heating, *International Journal of Thermal Sciences*, vol. 53, pp. 56-70, 2012, DOI:10.1016/j.ijthermalsci.2011.10.019.
 93. O. Manca, S. Nardini, D. Ricci, A numerical study of nanofluid forced convection in ribbed channels, *Applied Thermal Engineering*, vol. 37, pp. 280-292, 2012, DOI: 10.1016/j.applthermaleng.2011.11.030.
 94. B. Buonomo, O. Manca, Transient natural convection in a vertical microchannel, heated at uniform heat flux, *International Journal of Thermal Sciences*, vol. 56, pp. 35-46, 2012, doi:10.1016/j.ijthermalsci.2012.01.013.
 95. Y. Jaluria, O. Manca, D. Poulikakos, K. Vafai, L. Wang, Heat Transfer in Nanofluids 2012, Editorial, *Advances in Mechanical Engineering*, Vol. 2012 (2012), Article ID 972973, ISSN 1687-8132, doi:10.1155/2012/972973.
 96. A. Andreozzi, B. Buonomo, O. Manca, Numerical investigation on transient natural convection in a vertical symmetrically heated channel-chimney system at uniform heat flux, *International Journal of Heat and Mass Transfer*, vol. 55 (21-22), pp. 6077-6089, 2012,

doi:10.1016/j.ijheatmasstransfer.2012.06.021.

97. A. Andreozzi, N. Bianco, O. Manca, V. Naso, Numerical analysis of radiation effects in a metallic foam by means of the radiative conductivity model, *Applied Thermal Engineering*, vol. 49, pp. 14-21, 2012, doi:10.1016/j.applthermaleng.2011.09.024.
98. V. Bianco, O. Manca, S. Nardini, Linear regression models to forecast electricity consumption in Italy, *Energy Sources B: Economics, Planning, and Policy*, vol. 8, pp. 86–93, 2013, DOI: 10.1080/15567240903289549.
99. A. A. Minea, O. Manca, Experimental studies on radiation heat transfer enhancement on a standard muffle furnace, *Thermal Science*, vol. 17 n. 2, No. 2, pp. 591-598, 2013, doi: 10.2298/TSCI110309167M.
100. A. A. Minea, O. Manca, Numerical analysis on heat transfer enhancement and wall shear stress of an alumina nanofluid for different forced convection flows, *International Review of Mechanical Engineering (I.R.E.M.E.)*, Vol. 7, n. 2, pp. 272-275, 2013, ISSN 1970-8734.
101. A. Andreozzi, N. Bianco, O. Manca, V. Naso, Thermal and fluid dynamic behaviours of moving plate on heat transfer in a vertical channel heated at uniform heat flux, *International Journal of Thermal Sciences*, vol. 71, pp. 20-31, 2013, doi:10.1016/j.ijthermalsci.2013.04.001.
102. A. A. Minea, R. S. Luciu, O. Manca, Influence of microtube heating geometry on behavior of an alumina nanofluid at low Reynolds numbers, *Applied Mechanics and Materials*, Vol. 371, pp 596-600, 2013, doi:10.4028/www.scientific.net/AMM.371.596.
103. V. Bianco, O. Manca, S. Nardini, Second law analysis of Al₂O₃-water nanofluid turbulent forced convection in a circular cross section tube with constant wall temperature, *Advances in Mechanical Engineering*, Volume 2013 (2013), Article ID 920278, 12 pages dx.doi.org/10.1155/2013/920278.
104. B. Buonomo, O. Manca, S. Nardini, P. Romano, Thermal and fluid dynamic analysis of solar chimney building systems, *International Journal of Heat and Technology*, vol. 31 n.2, pp. 119-126, 2013.
105. O. Manca, S. Nardini, P. Romano, E. Mihalov, Numerical investigation on thermal and fluid dynamic behaviors of solar chimney building systems, *Journal of Chemical Technology and Metallurgy*, vol. 49, n. 1, pp. 106-116, 2014.
106. V. Bianco, O. Manca, A. Minea, S. Nardini, An analysis of the electricity sector in Romania, *Energy Sources B: Economics, Planning, and Policy*, vol. 9, 149–155, 2014, DOI: 10.1080/15567241003792366.
107. B. Buonomo, O. Manca, G. Lauriat, Forced convection in micro-channels filled with porous media in local thermal non-equilibrium conditions, *International Journal of Thermal Sciences*, vol. 77, pp. 206–222, 2014, DOI: 10.1016/j.ijthermalsci.2013.11.003.
108. T. L. Vu, G. Lauriat, O. Manca, Forced convection of air through networks of square rods or cylinders embedded in microchannels, *Microfluidics and Nanofluidics*, vol. 16, pp. 287–304, 2014, DOI: 10.1007/s10404-013-1229-2. ISSN: 1613-4982.
109. V. Bianco, O. Manca, S. Nardini, Entropy generation analysis of turbulent convection flow of Al₂O₃-water nanofluid in a circular tube subjected to constant wall heat flux, *Energy Conversion and Management*, vol. 77, pp. 306-314, 2014, dx.doi.org/10.1016/j.enconman.2013.09.049.
110. O. Manca, Y. Jaluria, G. Lauriat, K. Vafai, L. Wang, Heat Transfer in Nanofluids 2013, Editorial, *Advances in Mechanical Engineering*, Volume 2014 (2014), Article ID 832415, 2 pages, doi: 10.1155/2014/832415
111. O. Manca, S. Nardini, D. Ricci, S. Tamburrino, Effects of High Reynolds Number Impinging Jet on the Heat Conduction in Work-Pieces Irradiated by a Moving Heat Source, *Defect and Diffusion Forum* Vol. 354 (2014) pp. 189-194, doi:10.4028/www.scientific.net/DDF.354.189.
112. A. Andreozzi, B. Buonomo, O. Manca, S. Tamburrino, Thermal energy storages analysis for high temperature in air solar systems, *Applied Thermal Engineering*, vol. 71 (2014), pp. 130-141, DOI: 10.1016/j.applthermaleng.2014.06.036.
113. V. Bianco, O. Manca, S. Nardini, Performance analysis of turbulent convection heat transfer of Al₂O₃ water-nanofluid in circular tubes at constant wall temperature, *Energy*, vol. 77, pp. 403-413, 2014, doi:10.1016/j.energy.2014.09.025.
114. L. Colla, L. Marinelli, L. Fedele, S. Bobbo, O. Manca, Characterization and simulation of the heat transfer behaviour of water-based ZnO nanofluids, *Journal of Nanoscience and Nanotechnology*, Volume 15, Number 5, pp. 3599-3609, 2014. doi:10.1166/jnn.2015.9864.
115. O. Manca, S. Nardini, D. Ricci, S. Tamburrino, A numerical analysis on nanofluid mixed convection in triangular cross-sectioned ducts heated by a uniform heat flux, *Advanced Mechanical Engineering*,

- 02/2015, vol. 7, Article ID 292973 pp. 1-14, 2015, DOI: 10.1155/2014/292973.
116. B. Buonomo, O. Manca, C. Montaniero, S. Nardini, Numerical Investigation of Convective-Radiative Heat Transfer in a Building-integrated Solar Chimney, *Advances in Building Energy Research*, vol. 9 issue 2, pp. 253-266, 2015, DOI:10.1080/17512549.2015.1014840.
 117. A. Andreozzi, O. Manca, Radiative effects on natural convection in a vertical channel with an auxiliary parallel plates, *International Journal of Thermal Sciences*, vol. 97, pp. 41-55, 2015, DOI: 10.1016/j.ijthermalsci.2015.05.013.
 118. B. Buonomo, O. Manca, L. Marinelli, S. Nardini, Effect of temperature and sonication time nanofluid thermal conductivity measurements by nano-flash method, *Applied Thermal Engineering*, vol. 91, pp. 181-190, 2015, doi:10.1016/j.applthermaleng.2015.07.077
 119. L. Cirillo, D. Di Ronza, V. Fardella, O. Manca, S. Nardini, Numerical and experimental investigations on an solar chimney integrated in a building facade, *International Journal of Heat and Technology*, Vol.33, No.4, pp. 246-254, 2015 doi:10.18280/ijht.3304
 120. A. Andreozzi, B. Buonomo, O. Manca, S. Tamburrino, Transient analysis of heat transfer in parallel squared channels for high temperature thermal storage, *Computational Thermal Sciences*, vol. 7 (5-6), pp. 477-489, 2015.
 121. O. Manca, D. Ricci, S. Nardini, and G. Di Lorenzo, Thermal and fluid dynamic behaviors of confined laminar impinging slot jets with nanofluids, *International Communications in Heat and Mass Transfer*, vol. 70, pp. 15-26, 2016, DOI:10.1016/j.icheatmasstransfer.2015.11.010.
 122. A. Andreozzi, O. Manca, S. Nardini, D. Ricci, Forced convection enhancement in channels with transversal ribs and nanofluids, *Applied Thermal Engineering*, vol. 98, pp. 1044-1053, 2016, doi:10.1016/j.applthermaleng.2015.12.140.
 123. L. Colla, L. Fedele, O. Manca, L. Marinelli, S. Nardini, Experimental and numerical investigation on forced convection in circular tubes with nanofluids, *Heat Transfer Engineering*, vol. 37, pp. 1201-1210, 2016, DOI: 10.1080/01457632.2015.1112617.
 124. B. Buonomo, G. Lauriat, O. Manca, S. Nardini, Numerical investigation on laminar slot-jet impinging in a confined porous medium in local thermal non-equilibrium, *International Journal of Heat and Mass Transfer*, *International Journal of Heat and Mass Transfer*, vol. 98, pp. 484-492, 2016, 10.1016/j.ijheatmasstransfer.2016.03.036.
 125. B. Buonomo, G. Lauriat, O. Manca, Forced convection in porous micro-channels with viscous dissipation in local thermal non-equilibrium conditions, *International Communications in Heat and Mass Transfer*, vol. 76, pp. 46-54, 2016,doi:10.1016/j.icheatmasstransfer.2016.05.004.
 126. L. Colla, L. Fedele, S. Mancin, L. Danza, O. Manca, Nano-PCMs for enhanced energy storage and passive cooling applications, *Applied Thermal Engineering*, vol. 110, pp. 584-589, 2017,doi:10.1016/j.applthermaleng.2016.03.161.
 127. G. Xie, R. Zhang, O. Manca, Thermal and Thermomechanical Performances of Pyramidal Core Sandwich Panels under Aerodynamic Heating, *Journal of Thermal Science and Engineering Applications*, vol. 9, n. 1, paper #014503-014503-9, 2017, doi:10.1115/1.4034914.
 128. A. A. Minea, O. Manca, Field-synergy and Figure of Merit Analysis of Two Oxide Water Based Nanofluid Flow in Heated Tubes, *Heat Transfer Engineering*, vol. 38, n. 10, pp. 909-918, 2017, DOI:10.1080/01457632.2016.1212569.
 129. L. Colla, D. Ercole, L. Fedele, S. Mancin, O. Manca, S. Bobbo, Nano-PCMs for electronics cooling applications, *ASME Journal of Heat Transfer*, Vol. 139, paper 052406, 2017, DOI: 10.1115/1.4036017.
 130. M. Sharifpur, N. Tshimanga, J. P. Meyer, O. Manca, Experimental Investigation and Model Development for Thermal Conductivity of α -Al₂O₃-Glycerol Nanofluids, *International Communications in Heat and Mass Transfer*, vol. 85, pp. 12-22, 2017, DOI:10.1016/j.icheatmasstransfer.2017.04.001
 131. H. Celik, M. Mobedi, O. Manca, B. Buonomo, Enhancement of heat transfer in a partially heated vertical channel under mixed convection by using Al₂O₃ nanoparticles, *Heat Transfer Engineering*, online March 2017. doi: 10.1080/01457632.2017.1295738
 132. A. Barletta, O. Manca, S. Nardini, V. Naso, T. W. Simon, Selected Papers from the ASME-ATI-UIT 2015 Conference on Thermal Energy Systems: Production, Storage, Utilization and the Environment, *Heat Transfer Engineering*, in press, 2017, DOI:10.1080/01457632.2017.1295729
 133. H. Celik, M. Mobedi, O. Manca, U. Ozkol, A pore scale analysis for determination of interfacial convective heat transfer coefficient for thin periodic porous media under mixed convection, accepted on *International Journal of Numerical Methods for Heat and Fluid Flow*, March 2017.
 134. D. Ercole, O. Manca, K. Vafai, An investigation of thermal characteristics of eutectic molten salt-

based nanofluids, *International Communications in Heat and Mass Transfer*, vol. 87, pp. 98-104, doi:10.1016/j.icheatmasstransfer.2017.06.022.

RIVISTE NAZIONALI

1. O. Manca, R. Mastrullo, P. Mazzei, Valutazione delle prestazioni di un collettore solare piano con il metodo dell'utilizzabilità, *La Termotecnica* vol. 36 n.12, pp. 73-81, 1982.
2. O. Manca, Analisi del transitorio termico in cilindri coassiali compositi soggetti a flusso termico sulla parete esterna, *La Termotecnica* vol. 37 n.11, pp.57-64, 1983.
3. A. Cesarano, F. Fucci, O. Manca, Acquisizione automatica dei dati negli impianti sperimentali di climatizzazione: le problematiche generali ed un esempio di applicazione, *Condizionamento dell'aria, Riscaldamento, Refrigerazione*, vol.XXVIII n.7, pp.617-626, 1984.
4. O. Manca, R. Mastrullo, P. Mazzei, Termocircolazione nel canale di un componente solare ad aria, *Tecnica Italiana*, vol.L n.3, pp.139-145, 1985.
5. O. Manca, R. Mastrullo, P. Mazzei, R. Vanoli, Sulle possibilità di utilizzazione di un sistema solare passivo, *Ingegneri*, anno XXV, n.2, pp.8-15, settembre 1985.
6. O. Manca, R. Mastrullo, P. Mazzei, Sulla sensibilità alla temperatura di sonde anemometriche a filo nella convezione naturale ad aria, *La Termotecnica*, vol.XXXIX n.10, pp.49-54, 1985.
7. A. Andreozzi, N. Bianco, O. Manca, S. Nardini, V. Naso, Three Dimensional Numerical Analysis and Optimization of a Fin Heat Sink System for the Thermal Control of a Compound Parabolic Concentrator, *La Termotecnica*, vol. LXVI n. 3, pp. 75-81, 2012.

CAPITOLI DI LIBRI

1. F. de' Rossi, O. Manca, R. Mastrullo, P. Mazzei, Exergy-enthalpy diagrams of R503 and R502 and their application, *ASHRAE Trans.* vol.94, pt. 2, pp.2045-2058, 1988.
2. O. Manca, S. Nardini, V. Naso, Effects of radiation on natural convection in a tilted channel, Eurotherm seminar No.29, Delft, June 1993, in *Thermal Management of Electronic Systems*, pp. 117-126, Kluwer Academic Publ., 1994.
3. O. Manca, B. Morrone, S. Nardini, Visualization of Natural Convection in Inclined Parallel Plates, Eurotherm Seminar No.45, Lovanio 20-22 June 1995, in *Thermal Management of Electronic Systems*, Vol. II, pp. 283-292, Kluwer Academic Publ., 1997.
4. N. Bianco, O. Manca, B. Morrone, V. Naso, Experimental analysis of chimney effect for vertical isoflux symmetrically heated parallel plates, *Thermal Management of Electronic Systems*, vol. III, pp. 73-79, 1998.
5. O. Manca, B. Morrone, S. Nardini, V. Naso, Natural convection in open channels, in *Computational Analysis of Convection Heat Transfer*, eds B. Sunden, G. Comini, pp. 235-278, WIT Press, Southampton, U. K., 2000.
6. A. Andreozzi, O. Manca, B. Morrone, Procedura di calcolo per la convezione naturale, Capitolo 7 in *Fondamenti di Termofluidodinamica computazionale*, a cura di G. Comini, SGE Editoriali, Padova, 2004.
7. A. Andreozzi, B. Buonomo, O. Manca, B. Morrone, La costruzione di un codice calcolo per la termofluidodinamica, Capitolo 6, in *Fondamenti di Termofluidodinamica Computazionale*, a cura di G. Comini, G. Croce e E. Nobile, 3a edizione, SGE Editoriali, Padova, 2008, ISBN 978-88-89884-12-6.
8. M. Ferraiuolo, O. Manca, A New Methodology to Preliminary Design Structural Components of Re-Entry and Hypersonic Vehicles, in J. Colman Lerner and U. Boldes (eds.) *Wind Tunnels and Experimental Fluid Dynamics Research*, Chapter 19, pp. 409-426, Intech, Rijeka Croatia, 2011, ISBN 978-953-307-623-2.
9. V. Bianco, O. Manca, S. Nardini, Heat Transfer in Nanofluids, in A. A. Minea (ed.) *Advances in Industrial Heat Transfer*, Chapter 5, pp. 165-200, CRC Press, Boca Raton, FL, 2012, ISBN 978-1-4398-9907-6.
10. A. Andreozzi, B. Buonomo, O. Manca, S. Nardini and S. Tamburrino, Heat Transfer Behaviors of Thermal Energy Storages for High Temperature Solar Systems, in J. M. P. Q. Delgado (ed.), *Industrial and Technological Applications of Transport in Porous Materials*, *Advanced Structured Materials* 36, Chap. 5, pp. 119-139, DOI: 10.1007/978-3-642-37469-2_5, Springer-Verlag Berlin Heidelberg 2013.
11. B. Buonomo, O. Manca, S. Nardini, Impinging Jets in Porous Media, in K. Vafai, ed., *Handbook of Porous Media-Third Edition*, Chapter 19, pp. 631-662, CRC Press, 2015, ISBN: 978-1-4398-8554-3.

12. B. Buonomo, O. Manca, S. Nardini, D. Ricci, Nanofluid Impinging Jets in Porous Media, Chapter 6, in J.M.P.Q. Delgado, ed., Diffusion Foundations, vol. 7, pp. 84-113, 2016, doi:10.4028/www.scientific.net/DF.7.84.
13. V. Bianco, O. Manca, S. Nardini, A. A. Minea, Comparative methods in convective heat transfer enhancement by nanofluids: entropy generation, Chapter 2 pp. 29-50, in A. A. Minea, ed., Advanced Fluids in Heat Transfer, CRC, 2017. DOI: 10.1201/9781315368184
14. B. Buonomo, D. Ercole, O. Manca, S. Nardini, Nanoparticles and Metal Foam in Thermal Control and Storage by Phase Change Materials, F.A. Kulacki (ed.), Handbook of Thermal Science and Engineering, Springer International Publishing AG 2017 DOI 10.1007/978-3-319-32003-8_39-1

LIBRI E ATTIVITÀ EDITORIALE

1. O. Manca, Y. Jaluria, D. Poulikakos, eds., Heat Transfer in Nanofluids, Special Issue, Advances in Mechanical Engineering, vol. 2010, pp. 1-61, 2010, ISSN: 1687-8132 (Print) ISSN: 1687-8140 (Online) doi:10.1155/5263.
2. A. A. Minea, O. Manca, H. Raupenstrauch, E. Mihailov, eds., Heat Transfer, International Review of Mechanical Engineering - Special Issue, vol. 4, pp. 123-215, February 2010, ISSN: 1970 - 8734.
3. S. Choi, Y. Jaluria, O. Manca, L. Wang, eds., Nanofluids, Nanoscale Research Letters, Special Issue, vol. 6, 2011, ISSN: 1931-7573; E-ISSN: 1556-276X.
4. A. A. Minea, O. Manca, H. Raupenstrauch, E. Mihailov, eds., Heat Transfer, International Review of Mechanical Engineering - Special Issue, vol. 5, pp. 211-375, February 2011, ISSN: 1970 - 8734
5. Y. Jaluria, O. Manca, D. Poulikakos, K. Vafai, L. Wang, eds., Heat Transfer in Nanofluids 2012, Special Issue, Advances in Mechanical Engineering, vol. 2012, pp. 1-86, 2012, ISSN: 1687-8132 (Print) ISSN: 1687-8140 (Online) doi:10.1155/5263.
6. A. A. Minea, O. Manca, H. Raupenstrauch, E. Mihailov, eds., Heat Transfer, International Review of Mechanical Engineering - Special Issue, vol. 6, pp. 171-301, February 2012, ISSN: 1970 - 8734
7. J. Jansen, O. Manca, R. Manca, Applied Diffusion Processes from Engineering to Finance, Wiley-ISTE, 2013, ISBN: 9781848212497.
8. A. A. Minea, O. Manca, H. Raupenstrauch, E. Mihailov, eds., Heat Transfer, International Review of Mechanical Engineering - Special Issue, vol. 7, pp. 271-391, February 2013, ISSN: 1970 - 8734
9. O. Manca, Y. Jaluria, G. Lauriat, K. Vafai, L. Wang, eds., Heat Transfer in Nanofluids 2013, Special Issue, Advances in Mechanical Engineering, vol. 2013, pp. 1-86, 2013, ISSN: 1687-8132 (Print) ISSN: 1687-8140 (Online) doi: 10.1155/5263.
10. K. Vafai, A. Bejan, A. Nakayama, O. Manca, eds., Proceedings of the 5th International Conference on Porous Media and its Applications in Science, Engineering and Industry, ICPM5, June 22-27, 2014, Kona, Hawaii. ECI Symposium Series, Volume (2014). http://dc.engconfintl.org/porous_media_V/14
11. V. Bianco, O. Manca, S. Nardini, K. Vafai, Eds., Heat Transfer Enhancement with Nanofluids, Publisher CRC, Taylor and Francis Group, 2015, ISBN 9781482254006.
12. K. Vafai, A. Bejan, A. Nakayama, O. Manca, eds., Proceedings of the 6th International Conference on Porous Media and its Applications in Science, Engineering and Industry, ICPM6, July 3-8, 2016 - Hilton Waikoloa Village Waikoloa, Hawaii, USA. ECI Symposium Series, Volume (2016). http://dc.engconfintl.org/porous_media_VI.

LIBRI DIDATTICI

1. O. Manca, V. Naso, Complementi di trasmissione del calore, Centro stampa Opera Universitaria, Napoli, 1987.
2. A. Carotenuto, F. Cascetta, A. Cesarano, O. Manca, Esercitazioni di termodinamica, Cuen, Napoli, 1988.
3. O. Manca, V. Naso, Applicazioni di trasmissione del calore, Centro stampa E.D.I.S.U., Napoli, 1989.
4. A. Carotenuto, F. Cascetta, A. Cesarano, O. Manca, Elementi di trasmissione del calore, Centro stampa E.D.I.S.U., Napoli, 1990.
5. A. Carotenuto, F. Cascetta, A. Cesarano, O. Manca, Fondamenti di termofisica dell'edificio, Centro stampa E.D.I.S.U., Napoli, 1990.