Oronzio Manca , ha conseguito, con lode, la laurea in Ingegneria Meccanica presso la Facoltà di Ingegneria dell'Università di Napoli il 27 luglio 1979.

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 ordinario dall'1.11.2002 a oggi, in regime di tempo pieno nel raggruppamento ING-IND/10 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;

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 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;

Attualmente afferisce al Dipartimento di Ingegneria Industriale e dell'Informazionedella Seconda Università degli Studi di Napoli.

ha tenuto numerosi corsi di Fisica tecnica, Trasmissione del calore e Misure termotecniche presso l'Università degli Studi di Napoli Federico II e la Seconda Università degli Studi di Napoli;

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

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;

è attualmente coordinatore del corso di Dottorato in Ingegneria Industriale e Informatica dal Settembre 2015 e direttore della Scuola di Dottorato Politecnica e delle Scienze di Base.

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 “ELIOSLAB – Laboratorio di ricerca per le tecnologie solari ad alta temperatura;

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" come leader 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), dell'Unione Italiana di Termofluidodinamica (UIT), dell'Associazione Italiana dell’Automobile (ATA), vice presidente dell'AIGE.

Membro dello Scientific Council of International Center for Heat and Mass Transfer;

è Associate Editor del Journal of Heat Transfer da Luglio 2010 fino a Giugno 2016 e del Journal of Porous Media da Settembre 2010 a oggi;

è membro dell'Editorial Advisory Boards per The Open Thermodynamics Journal, Advances in Mechanical Engineering, The Open Fuels & Energy Science Journal and The Open Civil Engineering Journal;

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.

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 Commitee 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.

Esaminatore Esterno nel Thesis Examining Committee for PhD examination in Mechanical Engineering a The University of Hong Kong, Hong Kong, The University of Limerick nel 2012 e 2014, The University of Queensland, University of Pretoria, South Africa

Collaborazioni scientifiche

con Università Italiane:Università di Bologna, Università di Catania, Università di Napoli; Università di Genova, Università di Modena, 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 Valleé, France; Professor Alina Minea, Technical University GH.Asachi Iasi, Romania; Professor Kambiz Vafai, University of California Riverside, CA USA; Professor Liqiu Wang, The University of Hong Kong, Hong Kong; Gongnan Xie, Northwestern Polytechnical University, China.

È autore o coautore di 530 lavori scientifici (134 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 256 documenti registrati in SCOPUS, con 2563 citazioni da 1697 documenti, h-index di 25 e i10-index pari a 64 al 24 Ottobre 2017. In Google Scholar le citazioni sono 3951, h-index 32 e i10-index 82.

L’attività di ricerca è 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 fotovotaici-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 e PCM e nano-PCM;

- incremento dello scambio termico.

RIVISTE INTERNAZIONALI

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with an open cavity below, Experimental Heat Transfer, vol. 21, pp. 99-114, 2008.
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flux, International Journal of Thermal Science, vol. 49, pp. 1333-1344, 2010, DOI: 10.1016/j.ijthermalsci.2010.03.005.
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