

L.M.B.C. Campos

A. Summary of Activities

A.1 - Author of books:

- *Análise Aplicada e Campos de Força* (1989).
- *Aircraft Design Integration and Affordability* (1998)
- Author of Aerospace articles in *Enciclopédia Verbo* (1998-2001)
- *Forms of Existence* (1998)
- *Mecanica Aplicada I*(2003)
- *Mecanica Aplicada II*(2004)
- *Complex functions with applications to flows and fields* (2008)

A.2 - Published 108 scientific papers in 46 journals:

- 4 -Acustica: 1992, 1995a,b, 1997.
- 4 -Aeronautical Journal: 1984, 1986, 1988a,b; 2004.
- 1 – Applied mechanics reviews: 2007a,b
- 1 – Communications in statistics: 2004
- 1 -Computational Mechanics: 1987.
- 1 -Encyclopedia of Mathematics: 1998.
- 2 -European Journal of Mechanics: B, Fluids: 1993, 1994.
- 5 -Geophysical and Astrophysical Fluid Dynamics: 1985, 1988, 1989, 1990, 1999.
- 2 -IMA Journal of Mathematics and its Applications: 1984, 1986.
- 5 -Integral Transforms and Special Functions: 1992, 2000, 2002a,b, 2003a,b.
- 1 -International Journal of Aeroacoustics: 2006.
- 2 -International Journal of Mathematics and Mathematical Sciences: 1989, 1990.
- 1 – International Journal of Sound and Vibration: 2006.
- 1 -Journal de Mécanique Théorique et Appliquée: 1983.
- 2 -Journal of the Acoustical Society of America: 1996, 2004.
- 4 -Journal of Aircraft (AIAA): 1997a,b, 2001, 2006.
- 1 - Journal of Computational and Applied Mathematics: 2001
- 5 -Journal of Fluid Mechanics: 1977, 1978a,b, 1995, 2000.
- 1 -Journal of Fluids and Structures: 1999.
- 1 -Journal of Fractional Calculus: 1993.
- 1 -Journal of Physics: 1983, 1988.
- 5 -Journal of Plasma Physics: 1992, 1999, 2000, 2002,2004.
- 1 - Journal of the Royal Institute of Navigation: 2002.
- 9 -Journal of Sound and Vibration: 1984, 1986, 1987, 1988, 1999a,b, 2001, 2003,2004
- 1 -Journal of Vibration and Acoustics (ASME), 1999.
- 1 -Mathematiki Vesnik: 1987.
- 1 -Memorie della Societa Astrofisica Italiana: 1984.
- 3 -Monthly Notices of the Royal Astronomical Society 1984, 1988, 1995.
- 1 -Philosophical Transactions of the Royal Society 1999.
- 1 -Physics of Fluids. B: Plasma Physics 1992.
- 4 -Physics of Plasmas: 1999a,b, 2000, 2004.
- 2 -Portugalizæ Mathematica:1983, 1986.

- 2 -Portugaliæ Physica 1983a,b.
- 1 -Proceedings of the Royal Society: 1978.
- 3 -Progress in the Aerospace Sciences: 1985, 1995, 1997.
- 2 - Reviews of Applied Mechanics: 2007 a, b.
- 2 -Reviews of Modern Physics: 1986, 1987.
- 2 -Revue d'Acoustique: 1984, 1992.
- 2 -SIAM Journal of Mathematical Analysis: 1988a,b.
- 1 -SIAM Journal of Applied Mathematics: 2004.
- 2 -Solar Physics: 1983, 1999.
- 1 -Springer Lecture Notes on Physics: 1999.
- 1 -Theoretical and Computational Fluid Mechanics: 1998.
- 1 -Vistas in Astronomy 1988.
- 6 -Wave Motion: 1983, 1988, 1992, 1993, 2002, 2003.
- 1 -Zeitschrift fur Flugwissenschaften und Weltraumforschung: 1984.

A.3 - Patents

- GB 2291388 B “A fail-safe towing bracket”
- US 6705547 “An active noise reducing nozzle”

A.4 - Research Projects

- European Union -22: Helinoise, Asanca, Acoufat, Amaks, Snaap, Helishape, Asanca II, Apian, S-Wake, Enable, Jean, Silencer, Rosas, Vela, X-noise, Vela, Nefa,Nacre,Friendcopter,Sefa.
- Other International –1: Efedal (Eurocontrol);
- Aerospace Facilities -3: Basic Aircraft for Flight Research, National Flight Test Facility, Research Simulator Facility;
- National Scientific -6: acoustics of inhomogeneous and moving media; special functions in mechanics of continua; solar physics; solar wind, solar-terrestrial physics, solar atmosphere;
- National Aeronautical: Fiat G.91R, SA330 Puma, A-7P Corsair II, P-3P Orion.

A.5 - Refereed scientific papers for 16 journals:

- Applicable Analysis
- Applied Mathematics Letters
- Astronomy & Astrophysics
- European Journal of Mechanics, B: Fluids
- Geophysical and Astrophysical Fluid Dynamics
- International Journal of Acoustics and Vibration
- International Journal of Mathematics and Mathematical Sciences
- Journal of Computational and Applied Mathematics
- Journal of Fluid Mechanics
- Journal of Mathematical Analysis and Applications
- Journal of Physics A
- Journal of Sound and Vibration
- Physics of Plasmas
- Proceedings of the Royal Society
- Real Annalysis Exchange.
- Solar Physics

A.6 - Degrees:

- Mechanical Engineer, Instituto Superior Técnico, 1972;
- Ph.D. on “Waves in Fluids”, Engineering Department, Cambridge University, 1978;
- Habilitation on “Applied Mathematics and Mechanics”, Lisbon Technical University, 1982.

A.7 - Awards:

- Senior Rouse Ball Scholar, Trinity College, Cambridge, 1977-8;
- Van Karman Medal, 2002, Research and Technology Organization.

A.8 - Present Positions:

- Full Professor, Instituto Superior Técnico, Lisbon Technical University;
- Coordinator of Aerospace Engineering Degree, IST/UTL;
- Coordinator of Aerospace Mechanics Section, Engineering Department, IST/UTL.
- Director of Center for Aeronautical and Space Science and technology, CCTAE/FCT

A.9 - Some Past Activities:

- Senior Visitor, Department of Applied Mathematics and Theoretical Physics, Cambridge 1982-4;
- Alexander von Humboldt Scholar, Max-Planck Institut für Aeronomie, Katlenburg – Lindau, 1991/2;
- Member of Board, Portuguese Academy of Engineering 1998-2002.

A.10 - Memberships

- **Member of Editorial Board of:**
 - Progress of Aerospace Sciences
 - Air & Space Europe
- **Member Honorary Committee:**
 - Integral Transforms and Special Functions;
 - Revue d'Acoustique.
- **Fellow of:**
 - Cambridge Philosophical Society;
 - Royal Astronomical Society;
 - Royal Aeronautical Society.
- **Associated Fellow of:**
 - American Institute of Aeronautics and Astronautics.
- **Founding member of:**
 - European Society of Astronomy,

- **Member of the:**

- Acoustical Society of America,
- American Astronomical Society,
- American Mathematical Society,
- American Society of Mechanical Engineers,
- Committee on Space Research (COSPAR)
- European Society of Mathematics,
- International Astronomical Union,
- London Mathematical Society,
- Société Française d'Acoustique,
- Society for Industrial and Applied Mathematics.

- **Has participated in:**

- Flight Test Techniques Working Group of AGARD (Advisory Group for Aerospace Research and Development);
- Space Science Committee of ESF (European Science Foundation);
- Committee on Data Management and Computation of the Space Science Board of the NSF (National Science Foundation, USA);
- Working Group on Air Traffic Control Automation of Aerospace Committee of IFAC (International Federation of Automatic Control);
- Management Committee of Aeronautics Program of European Union;
- Commission on Peaceful Uses of Outer Space, of the United Nations;
- International Council of Aeronautical Sciences;
- Space Advisory Committee of European Union.

- **Has been:**

- Vice-Chairman and Chairman of Flight Mechanics Panel (FMP) / Flight Vehicle Integration Panel (FVP) of Advisory Group for Aerospace Research and Development (AGARD);
- Vice-Chairman of Aeronautical Research and Technology Advisory Committee (ARTCO).