



Professor Carlos Alberto Mota Soares

See:

<https://www.idmec.ist.utl.pt/idmec/carlosmotasoares.html>

http://www.idmec.ist.utl.pt/laeta/ciencia_2008/CAMotaSoares.pdf

Professor of Instituto Superior Técnico of the Technical University of Lisbon
IDMEC/IST – Institute of Mechanical Engineering, Lisbon, Portugal

Areas of Interest:

Optimal structural design, composite materials and structures, adaptive structures, computational mechanics

Education:

- “Agregação” in Mechanical Design, Technical University of Lisbon, 1982;
- Ph.D. in Structural Dynamics, University of Surrey, 1975;
- M.Sc. in Mechanics of Solids, University of Aston in Birmingham, 1971;
- B.Sc. Mechanical Engineering, University of Aston in Birmingham, 1970;

Career:

- Chairman of LAETA – Associate Laboratory in Energy, Transports and Aeronautics, since 2006;
- Chairman of IDMEC - Institute of Mechanical Engineering, since 1992;
- Chairman, Department of Mechanical Engineering, I.S.T., 1998-2002;

- Chairman, Department of Mechanical Engineering, I.S.T., 1991 - 1996;
- Professor Technical University of Lisbon, since 1985;
- Visiting Professor, University of Iowa, 1983-1984;
- Director of CEMUL, 1982 - 1992;
- Associate Professor, Technical University of Lisbon, 1979-1985;
- Assistant Professor, Technical University of Lisbon, 1977-1979;
- Research Associate, Institute of Sound and Vibration Research, University of Southampton, 1974-1977;
- Mechanical Engineering Apprentice, British Leyland Motor Corporation, 1964-1971.

International recognition:

- Chairman of the ECCOMAS Thematic Conferences in Smart Structures and Materials, 2003, 2005 and 2007;
- Chairman of the III European Conference on Computational Mechanics: Solids, Structures and Coupled Problems in Engineering, 2006;
- Co-Chairman of the World Congresses on Structural and Multidisciplinary Optimization, 1993 and 2005;
- Director of the NATO Advanced Study Institute on Mechanics of Composite Materials and Structures, Portugal, 1998.
- Director of NATO Advanced Research Workshop on "Topology Design of Structures", Portugal, 1992.
- Director of the NATO/NASA Advanced Study Institute on Computer Aided Optimal Design: Structural and Mechanical Systems", Portugal, 1986.
- Supervisor or Co-Supervisor of 9 Ph.D. Thesis.
- Project leader of the AGARD Project "Computer Aided Analysis and Optimization of Structures", in collaboration with the University of Iowa.
- Project leader of the AGARD Project "Shape Optimal Design of Composite Structures", in collaboration with the University of Michigan and Technical University of Denmark.
- Coordinator of CASSEM – Composites and Adaptive Structures: Simulation, Experimentation and Modelling, NMP Program of UE.
- Coordinator of 40 COMETT Courses in Computer Aided Analysis and Design of Structural and Mechanical Systems, in 11 countries of UE.
- Coordinator of 10 FCT Research Projects.
- Participation in 10 European Research Projects.
- Guest Editor of the International Journal Computer & Structures.
- Guest Editor of the International Journal of Advanced Materials and Structures.
- Associate Editor of the International Journal of Structural and Multidisciplinary Optimization.
- Associate Editor of the International Journal of Structural Optimization.
- Associate Editor of the International Journal of Engineering Optimization.
- Associate Editor of the International Journal of Mechanics of Structures and Machines.
- Associate Editor of the International Journal of Mechanics of Composite Materials and Structures.
- Associate Editor of the Journal of Computational Engineering Science.
- Associated Editor of the International Journal of Boundary Elements.
- Associated Editor of the Brazilian Journal of Mechanical Science.
- Referee to the International Journal of Numerical Methods in Engineering.
- Referee to the ASME Journal of Mechanical Design.
- Referee to the Journal of IAAA.
- Referee to the Journal of Computer Methods in Applied Mechanics and Engineering.
- Referee to the Journal of Engineering Analysis.

- Referee to the Journal of Communications in Applied Numerical Methods.
- Adviser to the BRITE Program about priorities of research in UE.
- Referee of BRITE Research Projects
- National Delegate of the BRITE Program (1994-1998).
- National Delegate of the GROWTH Program, (1999-2004).
- National Delegate of the NMP Program, since 2004.
- National Delegate of EUCLID Program, (1990-2004).
- Member of Scientific Council of FCT (Foundation for Science and Technology), since 2002.
- Coordinator of the scientific area of Computational Mechanics of JNICT. (1987-1989)
- Member of the Executive Council of IACM (International Association of Computational Mechanics), since 2006.
- Member of Managing Board of ECCOMAS (European Community in Computational Methods in Applied Science), since 2004.
- Fellow of IACM (International Association of Computational Mechanics), since 2002.
- Honorary Member of APMTAC – National Association for Theoretical, Applied and Computational Mechanics, since 2004.
- Chairman of APMTAC – National Association for Theoretical, Applied and Computational Mechanics, since 1999.
- Vice-Chairman of APMTAC – National Association for Theoretical, Applied and Computational Mechanics, (1996-1999).

Selected Publications (see http://www.idmec.ist.utl.pt/laeta/ciencia_2008/CAMotaSoares.pdf for complete list):

Chapters in books:

18. C.A. Mota Soares, C.M. Mota Soares, I. Pinto Correia, “Modeling of Laminated Shells with integrated sensors and actuators”, Progress in Computational Structures Technology, Ed. B.H.V. Topping and C.A. Mota Soares, Saxe-Coburg Publication, Stirling, Scotland, UK, Chapter 11, pp 281-309, 2004.
17. M.A. Ramos Loja, C.M. Mota Soares, C. A. Mota Soares, “Recent Developments in Modeling and Design of Laminated and Piezolaminated Structures by the Finite Strip Method”, Computational Structures Technology, Ed. B.H.V. Topping and Z. Bittnar, Saxe-Coburg Publication, Stirling, Scotland, Chapter 8, pp 197-220, 2002.
16. C.A. Mota Soares , C.M. Mota Soares & V.M. Franco Correia, “Modeling and Design of Laminated Composites Structures with Integrated Sensors and Actuators”, Computer Mechanics for the Twenty-First Century, Ed. B.H.V. Topping, Saxe-Coburg Publ., Edinburgh, Chapter 9, pp.165-185, 2000.
15. V.M. Franco Correia, C.M. Mota Soares and C.A. Mota Soares, “Optimal Design of Composite Structures with Integrated Piezoelectric Laminae”, Ed. C.A. Mota Soares, C.M. Mota Soares and M.J.M. Freitas, Mechanics of Composite Materials and Structures, Kluwer Academic Publishers, pp. 389-408, 1999.
- 14• P. P. Leal & C. A. Mota Soares, "Mixed Elements in Shape Optimal Design of Structures Based on Compliance", Editor S. Hernandez, Advanced Techniques in the Optimum Design of structures, Computational Mechanics Publications, pp. 141-159, 1993.

13• C. M. Mota Soares, C. A. Mota Soares, V. F. Correia & H. C. Mateus, "Optimal Design of Thin Laminated Composite Structures", Editors M. Bendsoe and C. A. Mota Soares, Topology Design of Structures, Kluwer Academic Publishers, pp. 313-317, 1993.

13• C. A. Mota Soares, C. M. Mota Soares & J. I. Barbosa, "Shape Optimal Design of Axisymmetric Shell Structures", Editor G. Rozvani, Optimization of Large Structural Systems, Kluwer Academic Publishers, Vol. 2, pp. 1023-1049, 1993.

12. C. A. Mota Soares & R. P. Leal, "Mixed Elements in Shape Optimal Design of Structures Based on Global Criteria", Editor G. Rozvani, Layout and Shape Optimal Design of Structures, Springer-Verlag, pp. 279-300, 1992.

11•C. A. Mota Soares & R. P. Leal, "Mixed Elements in Shape Sensitivity, Analysis of Structures Based on Local Criteria", Editor M. Kamat, Structural Optimization: Status & Promise, AIAA, pp. 549-567, 1992.

8• C. A. Mota Soares & R. P. Leal, "Shape Optimal Design Using Mixed Elements and Compliance Techniques", Editor S. Sagal, S. Mukherjee, Sensitivity Analysis and Optimization with Numerical Methods, pp. 79-93, ASME, 1990.

6• C.A. Mota Soares, J.I. Barbosa, C.M. Mota Soares & P.Pinto, "Optimal Design of Axisymmetric Shell Structures With Static and Dynamic Constraints", Discretization-Procedures and Applications, Ed. H.A. Eschenauer & G. Thierauf, Springer-Verlag, Berlin, pp. 239-246, 1989.

5• C. A. Mota Soares, R. P. Leal & K. K. Choi, "Boundary Elements in Shape Optimal Design of Structural Components", Editor C. A. Mota Soares, Computer Aided Optimal Design: Structural and Mechanical Systems, Springer-Verlag, pp. 605-631, 1987.

4• C. A. Mota Soares & K. K. Choi, "Boundary Elements in Shape Optimal Design of Structures", Editors J. A. Bennett, M. E. Botkin, The Optimum-Shape: Automated Structural Design, Plenum, pp. 199-231, 1986.

2• C. A. Mota Soares, M. Petyt & A. M. Salama, "Finite Element Analysis of Bladed Disks", Editor A. V. Srinivasan, Structural Dynamic Aspects of Bladed Disk Assemblies, ASME, pp. 73-91, 1976.

1• C. A. Mota Soares, M. Petyt & A. M. Salama. "Dynamic Analysis of Bladed Disks by Wave Propagation and Matrix Difference Techniques", Editor A. V. Srinivasan, Structural Dynamic Aspects of Bladed Disk Assemblies, ASME, pp. 45-46, 1976.

The web site continues with the citation of 66 Papers Published in International Journals, 1 Paper published in a national journal, and 124 papers published in international books and proceedings.