DR. SORIA, Julio

Adjunct Research Professor, Aeronautical Engineering Dept., King Abdulaziz University
Professor, ARC DORA Fellow, Dept. Mechanical and Aerospace Eng., Monash University

Education

Degree	*Field of Study*	*Institution*	*Year*
PhD	Mechanial Engineering	University of Western Australia, Perth WA, Australia	1989
BS	Mechanial Engineering	University of Western Australia, Perth WA, Australia	1983

Academic Experience

From	*To*	*Institution*	*Rank*	*Title (Chair, Coordinator, etc.)*	*Full or Part Time*
1993	1997	Monash University	Senior Lecturer		Full Time
1998	2000	Monash University	Reader		Full Time
2001	Date	Monash University	Professor	Personal Chair in Mechanical Eng.	Full Time
2011	Date	King Abdulaziz University	Adjunct Research Prof.		Full Time
2013	Date	Monash University	Professor	ARC DORA Fellow	Full Time

Non Academic Industrial Experience *(including Consultations)*

From	*To*	*Company/Entity*	*Title*	*Position Description*	*Full or Part Time*
1982	1983	Western Australian Public Works Department	Engineer		Full Time
1989	1990	CSIRO (Commonwealth Scientific and Industrial Research Organisation)	Research Fellow		Full Time
1990	1991	NASA Ames Research Centre	Research Fellow		Full Time
1991	1992	CSIRO	Research Scientist		Full Time
1992	1993	CSIRO	Senior Research Scientist		Full Time

Funded Research Projects and Patents from the Past Five Years

1. 2014-15: Defence Science and Technology Organisation of the Department of Defence Research Grant $150,000, "PIV measurements of Joubert geometry in the LTRAC water tunnel and the AMC cavitation tunnel"
2. 2013-15: ARC Discovery Project Grant and DORA, $930,000 "Turbulent wall-bounded low in adverse pressure gradient environments".
3. 2013-15: ARC Discovery Project Grant, $500,000 "Impinging supersonic jets: stability and control- with application to cold spray".
4. 2013: ARC LIEF Grant, $590,000, "High -resolution molecular tagging velocimetry and thermometry facility".
5. 2012-14: Defence Science and Technology Organisation of the Department of Defence Research Grant$45,000, "Experimental investigation of noise generated by a bubbly plume."
6. 2012-14: ARC LIEF Grant, $3,750,000, "Strengthening merit-based access and support at the new National Computing Infrastructure petascale supercomputing facility".
7. 2011: ARC LIEF Grant, $1,000,000, "Experimental Facility for Extreme Air/Sea Interaction Studies".
8. 2011-13: Defence Science and Technology Organisation of the Department of Defence Research Grant $30,000 "An Experimental Investigation of Submarine Flows."
9. 2010-12: EU-FP7 (Theme: Flight physics propulsion transport including aeronautics) Grant, EUR2, 660,000, "Advanced Flow Diagnostics for Aeronautical Research (AFDAR)".
10. 2010-12: ARC Discovery Project Grant, $650,000 "Fluid Physics of Cold Gas-dynamic Spray Process".
11. 2010-12: ARC Discovery Project Grant, $390,000 "Structure, Dynamics and Control of Wall-Bounded Turbulence".
12. 2010-14: EU-FP7 1nternational Research Staff Exchange Scheme Grant, EUR240, 000, "Instability and Control of Massively Separated Flows".
13. 2 010-11: Australian Academy of Science Grant to support Australian Participation in the Marie Curie International Research Staff Exchange Scheme, $50,000 "Instability and Control of Massively Separated Flows".
14. 2009: US Air Force (AOARD) Grant, US$60,000 "Tomographic PIV Study of the Low Re Number Flow around a Pitching Plate with a Ramp Time History".

15. 2008-10: ARC Linkage Project Grant, $300,000 "The effect of turbulence scale and intensity on water

Certifications and Professional Registrations

None

Current Membership in Professional Societies and Organizations

	Society/organization	*Rank*	*Member Since*
1.	American Institute of Physics (APS)	Member	1990
2.	European Mechanics Society (EUROMECH)	Member	1995
3.	American Institute of Aeronautics & Astronautics (AIAA)	Senior Member	2005
4.	Australasian Fluid Mechanics Society (AFMS), 2008	Founding/ Executive	2008
5.	AIAA Aerodynamic Measurement Technology Technical Committee (AMTIC)	Committee Member	2006
6.	Editorial Advisory Board of "Experiments in Fluids"	Member	2005
7.	Editorial Advisory Board of "Aircraft Engineering and Aerospace Technology"	Member	2005
8.	Editorial Advisory Board of "Experimental Thermal and Fluid Sciences"	Member	2009

Honours and Awards

1. 1982 CSBP and Farmers Prize for best Honours Thesis in Mechanical Engineering in 1982 entitled "Heuristic, Unconstrained Optimisation Methods".
2. 1989 CSIRO Post-doctoral Research Fellowship at the Division of Building, Construction and Engineering.
3. 1990 Inaugural President's Prize for the best paper presented at the Annual Acoustical Society of Australia Conference entitled "The evaluation of sound intensity from tape recorded signals via the quarter- square multiplier principle".
4. 1991 Harold V Disney Prize of the Institute of Mechanical Engineers (London, UK), Power Industries Division Prize Award 1991 for the best paper of the year entitled "Flow-excited resonance in a duct: the feedback mechanism".
5. Research Fellowship at the Center for Turbulence Research (CTR), Stanford University/NASA Ames Research Center to participate at the Turbulence Research Program during June/July of 1992, 1996, 2006, 2010
6. 2004 Senior Fellow, Institute of Mathematical Sciences at the National University of Singapore in the "WALL-BOUNDED AND FREE- SURFACE TURBULENCE AND ITS COMPUTATION' program (July- December 2004)
7. 2005 Distinguished Research Fellow of Excellence, University of Zaragoza (Spain), Department of Applied Physics (June-July 2005)
8. Member of the American Institute for Aeronautics and Astronautics (AIAA) Fluid Dynamics Technical Committee (FDTC), 2005-2010.
9. 1982 CSBP and Farmers Prize for best Honours Thesis in Mechanical Engineering in 1982 entitled "Heuristic, Unconstrained Optimisation Methods".

Institutional and Professional Services *(administration, committees, units, etc.)*

Principal Publications/Presentations from the Past Five Years

1. Edgington-Mitchell, D., Oberleithner, K., Honnery, D. R. and Soria, J. 2014 Coherent structure and sound production in the helical mode of a screeching axisymmetric jet. Journal of Fluid Mechanics 748, 822-847.
2. De Vicente, J., Easley, J., Meseguer-Garrido, F., Soria, J. and Theofilis, V. 2014 Three-dimensional instabilities over a rectangular open cavity: from linear stability analysis to experimentation. Journal of Fluid Mechanics 748, 189-220.
3. Silva, C. M., Gnanamanickam, E. P., Atkinson, C., Buchmann, N. A., Hutchins, N., Soria, J. and Maru- sic, I. 2014 High spatial range velocity measurements in a high Reynolds number turbulent boundary layer. Physics of Fluids 26(2), 025117.
4. DubiefY, Terrapon V E and Soria, J 2013 On the mechanism of elasto-inertial turbulence. Physics of Fluids 25(11), 110817-16.
5. Atkinson C., Chumakov S., Bermejo-Moreno I. and Soria J. 2012 Lagrangian evolution of the invariants of the velocity gradient tensor in a turbulent boundary layer. Physics of Fluids 24, 105104-15.
6. Duke D, Honnery D and Soria J 2012 Experimental investigation of nonlinear instabilities in annular liquid sheets. Journal of Fluid Mechanics 691, 594-604.
7. Buchmann NA, Willert C and Soria J 2012 Pulsed, High-Power LED Illumination for Tomographic Particle Image Velocimetry. Experiments in Fluids 53(5), 1545-560.
8. Kitsios, V., Cordier, L., Bonnet, J.P., Ooi, A. and Soria, J. 2011 On the coherent structures and stability properties of a leading-edge separated aerofoil with turbulent recirculation. Journal of Fluid Mechanics 683, 395-416.
9. Amili O and Soria J 2011 A film-based wall shear stress sensor for wall-bounded turbulent flows. Experiments in Fluids 51(1), 137–147.
10. Atkinson C. and Soria J. 2009 An efficient simultaneous reconstruction technique for tomographic particle image velocimetry. Experiments in Fluids 47, 553–568.

Recent Professional Development Activities *(Workshops, training, etc.)*