

Curriculum Vitae

1. Personal Information

- a) Name Syngellakis, Stavros, Dr
b) Date of Birth 24 March 1946

2. Present Appointment

- a) Present post Adjunct Professor
b) Date of appointment to present post 1 October 2011
c) Division Damage Mechanics
d) Institution Wessex Institute of Technology

3. Previous Substantive Appointments

Oct. 1976 – July 1979
Associate Research Assistant
Department of Civil and Municipal Engineering, University College London
Gower Street, London WC1E 6BT

Aug. 1979 – Aug. 1995
Lecturer
Department of Civil Engineering (Aug. 1979 – July 1990)
Department of Mechanical Engineering (Aug. 1990 – Aug. 1995)
University of Southampton

Sept. 1995 – Sept. 2011
Senior Lecturer
Department of Mechanical Engineering (Sept. 1995 – Aug. 1999)
School of Engineering Sciences (Sept. 1999 – Aug. 2011)
Faculty of Engineering and the Environment (from Sept. 2011)
University of Southampton

Nov. 2011 – Jan. 2012 & Oct. 2012 – Dec. 2012
Senior Teaching Fellow
Faculty of Engineering and the Environment
University of Southampton

4. Qualifications

| Date | Title of Award | Subject | Class | Awarding Body |
|--------------|----------------------------------|-------------------|---------|---|
| June 1969 | Diploma | Civil Engineering | 7.05/10 | National Technical University of Athens |
| June 1973 | Master of Science in Engineering | Civil Engineering | N/A | Princeton University |
| July 1974 | Master of Arts | Civil Engineering | N/A | Princeton University |
| October 1976 | Doctor of Philosophy | Civil Engineering | N/A | Princeton University |

5. Teaching Activities

Recent undergraduate teaching

2011-2013, Mechanics of Solids, Years 3 & 4, Mechanical Engineering, University of Southampton

Summary of previous significant activities at Southampton University

A completely new module was developed for the second year of the Mechanical Engineering course dedicated to the teaching of computer aided (finite element) analysis. This provided a balanced learning of fundamental theory and practical skills based on a general purpose computer package and required considerable effort in organisation, production of suitable teaching material and training in the use of relevant computer hardware and software. Further significant contributions of practical finite element teaching were introduced to relevant 3rd and 4th year modules taught across the School of Engineering Sciences.

A set of lectures on Automotive Structures were prepared comprising one third of a year 3 module in Automobile Systems. This exposed, for the first time, Mechanical Engineering students to fundamental design considerations and methodology employed in automotive industry.

The topic of design offshore installations and marine structures in general against collisions was introduced to a Ship Science module on Marine Safety, taught at year 4 and MSc level.

In addition to the above innovations, significant contributions to teaching traditional subjects have been made at all levels in both Civil as well as Mechanical Engineering. This has been combined with continuous expansion and upgrading of lecture notes and other teaching material as well as the adoption of evolving information technology methods such as computerised coursework marking, power point presentations, course web pages and, more recently, the Blackboard facilities for communicating information, advice and knowledge to students.

Significant research-led teaching was also introduced to the curriculum through numerous undergraduate and MSc projects in almost every aspect of personal research activity.

Examiner of advanced degrees (last 5 years)

May 2010, N. Thakur, PhD internal examiner, University of Southampton (Supervisors: A. Keane/P. B. Nair)

October 2010, F. Stanley, PhD internal examiner, University of Southampton (Supervisors: A. Keane/I. Voutchkov)

November 2010, C. Manders, PhD internal examiner, University of Southampton (Supervisor: M. Taylor)

May 2011, H. Ozturk, PhD internal examiner, University of Southampton (Supervisors: M. Browne, P. Nair)

November 2012, Peter Haderka, PhD internal examiner, University of Wales/WIT (Supervisor: Alex Galybin)

April 2013, Zhiwei Fu, PhD internal examiner, University of Wales/WIT (Supervisor: Victor Popov)

November 2013, Hakan Dogan, PhD internal examiner, University of Wales/WIT (Supervisor: Victor Popov)

6. Postgraduate Supervision (Higher Research Degrees)

a) Number of students

| Degree | Current | Completed | Total to Date |
|--------|---------|-----------|---------------|
| MPhil | 0 | 1 | 1 |
| PhD | 1 | 20 | 21 |

b) Details of the three most recent higher degree students supervised to completion

| Student | Degree and Title of Thesis | Start Date | Completion Date |
|---------------|---|--------------|-----------------|
| L De Fazio | MPhil Elastoplastic characterisation of CVD diamond based on nano-hardness data and finite element simulations | March 1999 | May 2006 |
| M S Ali | PhD Microstructural modelling of fatigue in layered bearing architectures | October 2003 | June 2007 |
| A Burke Veliz | PhD Finite element modelling of fatigue crack growth in multi-layered architectures | October 2006 | September 2009 |

c) Current PhD supervision

Alessandra Bonfanti, Elasto-plastic analysis of periodically structured materials and their applications to biostructures, jointly with Professor Bhaskar & Dr Bah, as Visitor to the University of Southampton.

7. Research and Scholarship

a) Summary of significant personal achievements in research and scholarship

Research work can be broadly described as mathematical modelling applied to a wide range of engineering applications of solids and structures. The analytical work included

- the application of rigorous mathematical reasoning for the generation of theoretical solutions from first principles;
- formulations, algorithm development and computer programming for numerical analysis using the boundary element method (BEM) and the transfer matrix method (TMM);
- advanced finite element (FE) simulations based on general purpose codes for the assessment and characterisation of complex material or structural behaviour under conditions leading to failure.

In particular, personal research has led to

- a new, validated and widely used theory for piezoelectric plate vibrations;
- the discovery of a new buckling mode for stiffened cylindrical shells and insight into their respective post-buckling behaviour;
- new, efficient TMM-based formulations for analysing material non-linearity, stability and dynamics of high-rise structures incorporating shear walls;
- greater understanding of the intensity and criticality of thermal stresses arising during solid plug-forming by freezing in fluid-transporting pipes;
- new BEM-based algorithms and codes for analysing linear and non-linear buckling of isotropic and anisotropic plates;
- a new BEM formulation for the coupled flexure-extension analysis of laminated plates
- reliable assessment of the stiffness characteristics of ankle foot orthoses based on experimentally validated FE simulations;
- improved elasto-plastic characterisation methodology for steels and coatings based on indentation experiments;
- a new approach, based on metamodelling, to the mechanical characterisation of composites from dynamic test data; new BEM formulations for analysing the non-linear and fracture behaviour of polymers;
- greater understanding of fatigue performance of aluminium alloys used in plain bearing linings with outcomes of direct relevance to design practices.

Critical complementary role in investigating

- numerical solution issues and strategies for problems governed by the Laplace equation (ill-posed problems, conformal mapping)
- response of offshore and buried structures to impulsive loads;
- the 'convolver' effect in non-linear piezoelectric surface wave propagation;
- piezo-optical coupling in optical fibre pressure sensors;
- predictive models for the stiffness and strength of metal matrix composites;
- the stiffness and strength of welded joints.

Contribution to the development of the boundary element method has been recognised through membership of international advisory committees of successive boundary element conferences since 1998.

b) Research grants and contracts

| Dates | Award Holder(s) | Funding Body | Title | Value |
|---------|--|--|--|----------|
| 1985/88 | S. Syngellakis R. E. Craine | SERC | Engineering Mathematics Studentship | £16,000 |
| 1989 | S. Syngellakis | Fellowship (Royal Academy) of Engineering | Industrial Secondment | £16,000 |
| 1992/94 | S. Syngellakis M. T. Thew M. Hill | SERC/DTI, Satellites International | Teaching Company Scheme | £73,400 |
| 1993/94 | R. J. Bowen S. Syngellakis | HSE Rolls Royce Shell Texaco | Research and Development project on pipe freezing, ph. 3 | £36,000 |
| 1994/95 | R. J. Bowen S. Syngellakis | HSE Rolls Royce Shell Texaco | Research and Development project on pipe freezing, ph. 4 | £42,000 |
| 1997/00 | S. Syngellakis P. A. S. Reed | EPSRC CASE studentship, Glacier Vandervell | Fatigue life of automotive bearings | £47,055 |
| 1997 | R. J. Bowen S. Syngellakis | Shell | A review of pipe stress during freezing | £10,000 |
| 1998/99 | R. J. Bowen S. Syngellakis | Shell | Stresses due to freezing a pipe bend | £30,000 |
| 1999 | R. J. Bowen S. Syngellakis | Shell | Upgrading code of practice on pipe freezing | £5,000 |
| 2000/03 | P. A. S. Reed S. Syngellakis | Dana Glacier Vandervell | Fatigue life of automotive bearings | £24,000 |
| 2003/06 | P. A. S. Reed S. Syngellakis | Dana Glacier Vandervell | Fatigue life of automotive bearings | £31,500 |
| 2008/11 | J. M. Barton (PI) S. W. Boyd R. A. Sheno S. Syngellakis | EPSRC | Composite material structural performance and damage tolerance | £367,000 |

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|---------|--|-----|---|----------|
| 2010/11 | A. Bhaskar (PI) S. M. Sharkh S. Syngellakis N. G. Stephen | KTP | Design and prototype manufacture of a marine system | £122,500 |
|---------|--|-----|---|----------|

8. Publications

Refereed Conference Contributions

1. **Lee, P.C.Y. and Syngellakis, S.** Waves and vibrations in an infinite piezoelectric plate. Proc. of the 29th Annual Frequency Control Symposium, Electronic Industries Association, Washington, D.C., 1975, 65-70.
2. **Syngellakis, S. and Lee, P.C.Y.** An approximate theory for the high frequency vibrations of piezoelectric crystal plates. Proc. of the 30th Annual Frequency Control Symposium, Electronic Industries Association, Washington, D.C., 1976, 184-190.
3. **Syngellakis, S. and Walker, A.C.** Elastic buckling of stiffened cylindrical shells. Proc. of the Symposium on the Integrity of Offshore Structures, Institution of Engineers and Shipbuilders Scotland, Glasgow, 1978, 12/1-12/21.
4. **Syngellakis, S. and Walker, A.C.** Elastic local buckling of longitudinally stiffened cylinders. In: T.H. Richards and P. Stanley eds *Stability problems in Engineering Structures and Components*, Essex, Applied Science Publishers, 1979, 159-178.
5. **Syngellakis, S. and Walker, A.C.** Elastic buckling of cylinders with widely spaced stiffeners. In: W.T. Koiter and G.K. Mikhailov eds *Theory of Shells*, Amsterdam, North Holland, 1980, 553-574.
6. **Lee, P.C.Y., Syngellakis, S. and Hou, J.P.** A two-dimensional theory for high-frequency vibrations of piezoelectric crystal plates with or without electrodes. Proc. of IEEE 1986 Ultrasonics Symposium, Vol. 1, B.R. McAvoy, ed., Williamsburg, VA, 1986, 349-354.
7. **Harvey, A.P., Craine, R.E. and Syngellakis, S.** Nonlinear piezoelectric surface acoustic waves using the multiple scales technique. In: D.F. Parker and G.A. Maugin, eds *Recent Developments in Surface Acoustic Waves*, Berlin, Springer-Verlag, 1988, 30-35.
8. **Syngellakis, S., Kameshki, E.S. and Younes, I.** A transfer matrix solution of the plane frame stability problem. Proc. of the 3rd Arab Structural Engineering Conference, Vol. 4, U.A.E. University, 1989, 159-181.
9. **Elzein, A. and Syngellakis, S.** High-order elements for the BEM stability analysis of imperfect plates, In: C.A. Brebbia and J.J. Connor, eds *Advances in Boundary Elements*, Vol. 3, Berlin, Springer-Verlag, 1989, 269-284.
10. **Syngellakis, S. and Younes, I.** A transfer matrix dynamic analysis of nonlinear frame-shear wall systems. In: B. H. V. Topping, ed. *Developments in Structural Engineering*, Vol. 2, London, E. & F. N. Spon, 1990, 883-894.
11. **Zintilis, G.M., Syngellakis, S. and Walker, A.C.** Analysis of buried r.c. and metal structures subject to blast loading. Proc. of the 5th International Symposium on Interaction of Conventional Munitions with Protective Structures, Mannheim, Germany, April 1991, 109-116.
12. **Syngellakis, S. and Ebdon, R.W.** Platform removal by explosive cutting: effect of stress waves on structural integrity. In: M. Petyt, H.F. Wolfe and C. Mei, eds, *Structural Dynamics: Recent Advances*, London, Elsevier, 1991, 289-298.
13. **Zintilis, G.M., Reynolds, P. and Syngellakis, S.** Design of buried blast-resistant RC structures. In: J.L. Clarke, F.K. Garas and G.S.T. Armer, eds *Structural Design for Hazardous Loads*, London, E & F N Spon, 1992, 216-226.
14. **Kameshki, E.S. and Syngellakis, S.** Stability analysis of frames with flexible connections by transfer matrices. In: B.H.V. Topping, ed. *Developments in Structural Engineering Computing*, Edinburgh, Scotland, Civil-Comp Press, 1993, 289-296.
15. **Syngellakis, S.** Dynamic tests for the determination of anisotropic composite properties. Proc. of 5th International Conference of Structural Dynamics, Vol. 1, N.S. Ferguson, H.F. Wolfe and C. Mei, eds., ISVR, University of Southampton, 1994, 253-262.
16. **Keary, A. C., Bowen, R. J. and Syngellakis, S.** An investigation of the stress development during cryogenic pipe freezing. Proc. of the 5th Int. Symp. on Thermal

- Engineering and Science for Cold Regions*, Y. Lee and W. Halett, eds, Ottawa, Canada, 1996, 121-126.
17. **Bowen, R. J., Keary, A. C. and Syngellakis, S.** Pipe freezing operations offshore - some safety considerations. *Proc. of the 15th Int. Conf. on Offshore Mechanics and Arctic Engineering*, Vol. V: Pipeline Technology, A. Murray and Bruschi, eds, Florence, Italy, 1996, 511-516.
 18. **Kameshki, E.S. and Syngellakis, S.** Inelastic stability of rectangular frames by transfer matrices. *In: B.H.V. Topping, ed. Advances in Optimization for Structural Engineering*, Edinburgh, Scotland, Civil-Comp Press, 1996, 81-91.
 19. **Syngellakis, S.** A boundary element scheme for plate post-buckling analysis. *In: C.A. Brebbia, ed. Boundary Element Research in Europe*, Computational Mechanics Publications, Southampton, 1998, 305-316.
 20. **Joyce, M. R., Syngellakis, S. and Reed, P. A. S.** Short fatigue crack growth behaviour in plain bearings. *Progress in Mechanical Behaviour of Materials, ICM8*, Vol. I: Fatigue and Fracture, F. Ellyin and J. W. Provan, eds, Victoria, Canada, 1999, 295-300.
 21. **Parry, M. R., Syngellakis, S. and Sinclair, I.** Investigation of roughness induced crack closure effects in fatigue. *Damage & Fracture Mechanics 2000*, C.A. Brebbia and A.P.S. Selvadurai, eds, Montreal, Canada, 2000, 313-322.
 22. **Pérez, M., Thomazi, C. and Syngellakis, S.** Stress analysis of fluid film bearings. *Proc. of the Intern. Conf. on Gearing, Transmissions & Mechanical Systems*, D. Su, ed., Professional Engineering Publishing, London, 2000, 729-738.
 23. **Syngellakis, S.** Developments in boundary element applications to polymer analysis. *Boundary Elements XXII* (22nd Int. Conf. on the Boundary Element Method), C. A. Brebbia and H. Power, eds, WIT Press, Southampton, 2000, 319-328.
 24. **Cherukunnath, N. and Syngellakis, S.** A boundary element approach to buckling of laminated plates subjected to arbitrary in-plane loading. *Papers-AIAA (43rd AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference)*, vol. 2, 2002, 866-874.
 25. **Syngellakis, S. and Cherukunnath, N.** Stability analysis of laminate plates by the boundary element method. *Boundary Elements XXIV* (24th World Conf. on the Boundary Element Methods), C. A. Brebbia, A. Tadeu and V. Popov, eds, WIT Press, Southampton, 2002, 197-206.
 26. **Syngellakis, S. and Wu, J.** Comparison of current methods for polymer analysis by boundary element. *Boundary Elements XXIV* (24th World Conf. on Boundary Element Methods), C. A. Brebbia, A. Tadeu and V. Popov, eds, WIT Press, Southampton, 2002, 617-626.
 27. **Wu, A., Syngellakis, S. and Mellor, B.** Finite element prediction of residual stresses in a fillet welded T-joint. *Trends in Welding Research* (Proceedings of the 6th International Conference, Pine Mountain, GA, April 2002), S. A. David, T. DebRoy, J. C. Lippold, H. B. Smartt, and J.M. Vitek, eds, ASM International, 2003, 832-837.
 28. **Setiawan, R., Syngellakis, S. and Hill, M.** Composite plate mechanical characterisation through dynamic tests: a numerical simulation. *CD-ROM Proceedings of the 5th International Symposium on Advanced Composites*, Corfu, Greece, May 2003.
 29. **Syngellakis, S. and Wu, J.** Boundary element applications to polymer fracture. *Boundary Elements XXV* (presented at the 15th International Conference on Boundary Element Technology, Detroit), C. A. Brebbia, D. Poljak and V. Roje, eds, WIT Press, Southampton, 2003, 83-92.
 30. **Mwanza, M. C., Ali, M. S., Syngellakis, S., Perrin, C. and Reed, P. A. S.** Fatigue evaluation of novel HVOF spray coated Al bearing alloys. *Proc. of the 9th International Conference on Aluminium Alloys*, J. F. Nie, A. J. Morton and B. C. Muddle, eds, Institute of Materials Engineering Australasia, North Melbourne, Australia, 2004, 622-627.
 31. **Perrin, C., Harris, S., McCartney, D. G., Syngellakis, S. and Reed, P. A. S.** The potential of new processing routes in Al-based plain journal bearings. *Proc. of the 9th International Conference on Aluminium Alloys*, J. F. Nie, A. J. Morton and B. C. Muddle, eds, Institute of Materials Engineering Australasia, North Melbourne, Australia, 2004, 1371-1376.
 32. **Wu, A., Mellor, B. and Syngellakis, S.** Experimental and finite element study of welded T-joints. *Advances in Experimental Mechanics IV*, (Proceedings of the 4th International

- Conference, Southampton, UK), J. M. Dulieu-Barton and S. Quinn, eds, 2005, Trans Tech Publications, Switzerland, 117-124.
33. **Ali, M. S., Reed, P. A. S., Syngellakis, S.** A comparison of fatigue performance of the HVOF spray coated and conventional roll bonded Al bearing alloys, *CD-ROM Proceedings of the 9th International Fatigue Congress (Fatigue 2006)*, Atlanta, USA, 2006.
 34. **Wu, A., Syngellakis, S. and Mellor, B.** Finite element analysis of a welded cruciform joint. *Computational Methods in Engineering & Science, (EPMESC X Proceedings, Sanya, China, 2006)*, Z. Yao and M. Yuan, (Eds.), 2007, Tsinghua UP & Springer, 237.
 35. **Burke-Veliz, A., Reed, P. A. S. and Syngellakis, S.** Elasto-plastic finite element studies of fatigue crack shielding in multi-layered systems. *CD-ROM Proceedings of the 8th World Congress on Computational Mechanics*, B. A. Schrefler and U. Perego, eds, Venice, Italy, July 2008.
 36. **Burke-Veliz, A., Syngellakis, S. and Reed, P. A. S.** Effects of tangential strains and shielding in large scale yielding in multi-layered architectures for bearings. *CD-ROM Proceedings of the 17th European Conference on Fracture*, Brno, Czech Republic, September 2008, 1800-1807.
 37. **Burke-Veliz, A., Reed, P. A. S. and Syngellakis, S.** Three-dimensional crack growth in multi-layered architectures for automotive plain bearings. *CD-ROM Proceedings of the 12th Int. Conf. on Fracture*, Ottawa, Canada, July 2009.
 38. **Syngellakis, S. and Wu, J.** A boundary element model for nonlinear viscoelasticity. *Advances in Boundary Element Techniques X* (Proc. of the 10th International Conference, Athens, Greece), E. J. Sapountzakis and M. H. Aliabadi, eds, 2009, EC Ltd, Eastleigh, UK, 241-248.
 39. **Syngellakis, S. and Cherukunnath, N.** Boundary element modelling of non-linear buckling for symmetrically laminated plates. *Boundary Elements XXXI* (31st International Conference on Boundary Elements and Other Mesh Reduction Methods), C. A. Brebbia, ed, 2009, WIT Press, Southampton, 211-222.
 40. **Longana, M. L., Dulieu-Barton, J. M. and Syngellakis, S.** Application of optical measurement techniques to high strain rate deformations in composite materials. *CD-Rom Proceedings of the 7th Asian-Australasian Conference on Composites Materials*, Taipei, Taiwan, November 2010.
 41. **Syngellakis, S. and Arnold, M. A.** Modelling considerations in finite element analyses of ankle foot orthoses. *Design & Nature VI* (6th International Conference on Comparing Design in Nature with Science and Engineering), S. Hernandez and C. A. Brebbia, eds, 2012, WIT Press, Southampton, 183-194.
 42. **Syngellakis, S.** A boundary element approach to buckling of general laminates. *Boundary Elements and other Mesh Reduction Methods XXXIV* (Thirty-Fourth International Conference on Boundary Elements and other Mesh Reduction Methods), C. A. Brebbia and D. Poljak, eds, 2012, WIT Press, Southampton, 145-155.
 43. **Syngellakis, S. and Wu, A.** Finite element predictions of residual stresses due to heat transfer during welding. *Heat Transfer XII* (Twelfth International Conference on Simulation and Experiments in Heat Transfer and their Applications), B. Sundén, C. A. Brebbia and D. Poljak, eds, 2012, WIT Press, Southampton, 333-344.
 44. **Syngellakis, S. and Burke-Veliz, A.** Residual and cyclic stresses in automotive plain bearings. *Tribology and Design II* (Proceedings of the 4th Int. Conf. on Tribology and Design, Kos, Greece, September 2012), M. Hadfield and C.A. Brebbia, eds, WIT Press, Southampton, 189-200.
 45. **Syngellakis, S.** Simple models for penetration of thick targets by rigid projectiles. *Structures under Shock and Impact XII* (Proceedings of the 12th Int. Conf. on Structures under Shock and Impact, Kos, Greece, September 2012), G. Schleyer and C. A. Brebbia, eds, WIT Press, Southampton, 63-74.
 46. **Syngellakis, S. and Brebbia, C. A.** Hydrodynamic aspects of ship collisions with tension leg platforms. *Fluid Structure Interaction VII* (7th Subrata Chakrabarti International Conference on Fluid Structure Interaction), C. A. Brebbia and G. R. Rodriguez, eds, 2013, WIT Press, Southampton, 23-35.
 47. **Syngellakis, S.** Longitudinal buckling of slender pressurised tubes. *Fluid Structure Interaction VII* (7th Subrata Chakrabarti International Conference on Fluid Structure Interaction), C. A. Brebbia and G. R. Rodriguez, eds, 2013, WIT Press, Southampton, 133-144.

48. **Syngellakis, S.** and **Setiawan, R.** Vibration tests and metamodelling for composite material characterisation. *Materials Characterisation VI, WIT Transactions on Engineering Sciences, Vol. 77* (6th International Conference on Computational Methods and Experiments in Materials Characterisation), C. A. Brebbia and A. Klemm, eds, 2013, WIT Press, Southampton, 113-124.
49. **Syngellakis, S.** and **Summerfield, O. C.** Vickers micro-indentation for the elasto-plastic characterisation of thin layers. *Surface Effects and Contact Mechanics XI, WIT Transactions on Engineering Sciences, Vol. 78* (11th International Conference on Surface Effects and Contact Mechanics: Computational Methods and Experiments), J. Th. M. De Hosson and C. A. Brebbia, eds, 2013, WIT Press, Southampton, 157-168.
50. **Syngellakis, S.** Stability analysis for laminates with general anisotropy using boundary elements. *Boundary Elements and other Mesh Reduction Methods XXXV* (35th International Conference on Boundary Elements and other Mesh Reduction Methods), C. A. Brebbia and A. H.-D. Cheng, eds, 2013, WIT Press, Southampton, 133-144.
51. **Park, J., Jang, T.S., Syngellakis, S. and Sung, H.G.** A numerical scheme for recovering the nonlinear characteristics of a single degree of freedom structure: non-parametric system identification. *Structures under Shock and Impact XIII* (13th International Conference on Structures under Shock and Impact), G. Schleyer and C. A. Brebbia, eds, 2014, WIT Press, Southampton, 335-344.

Edited Works

1. **Syngellakis, S.**, ed. *Seismic Control Systems, WIT Transactions on State-of-the-art in Science and Engineering, Vol. 59*, Southampton, UK, WIT Press, 2012.
2. **Syngellakis, S.**, ed. *Design against Blast, WIT Transactions on State-of-the-art in Science and Engineering, Vol. 60*, Southampton, UK, WIT Press, 2012.
3. **Syngellakis, S.**, ed. *Retrofitting of Heritage Structures, WIT Transactions on State-of-the-art in Science and Engineering, Vol. 62*, Southampton, UK, WIT Press, 2013.
4. **Syngellakis, S.**, ed. *Heritage Masonry, WIT Transactions on State-of-the-art in Science and Engineering, Vol. 67*, Southampton, UK, WIT Press, 2013.
5. **Syngellakis, S.**, ed. *Projectile Impact: Modelling Techniques and Target Performance Assessment*, Southampton, UK, WIT Press, 2014.
6. **Syngellakis, S.**, ed. *Earthquake-Soil Interaction*, Southampton, UK, WIT Press, 2014.
7. **Syngellakis, S.**, ed. *Earthquake Ground Motion: Input Definition for Aseismic Design*, Southampton, UK, WIT Press, 2014.

Contributions to Edited Works

1. **Syngellakis, S.** Stability. In: M.H. Aliabadi, ed. *Plate Bending Analysis with Boundary Elements*, Southampton, UK, Computational Mechanics Publications, 1998, 309-353 (invited contribution).
2. **Syngellakis, S.** Boundary element methods in structural dynamic system problems. In: C.T. Leondes, ed. *Structural Dynamic Systems, Computational Techniques and Optimization: Finite Element Analysis Techniques*, Newark, NJ, Gordon and Breach, 1998, 97-147 (invited contribution).
3. **Syngellakis, S.** Boundary element formulations for composite laminated plates. In: E.J. Sapountzakis, ed. *Recent Developments in Boundary Element Methods*, Southampton, WIT Press, 2010, 255-268 (invited contribution).

Academic Journal Papers

1. **Lee, P.C.Y., Syngellakis, S. and Hou, J.P.** A two-dimensional theory for high-frequency vibrations of piezoelectric crystal plates with or without electrodes. *J. Appl. Phys.*, 61(4), 1987, 1249-1262.
2. **Syngellakis, S. and Kang, M.** A boundary element solution to the plate buckling problem. *Engng Analysis*, 4(2), 1987, 75-81.
3. **Syngellakis, S. and Papoulia, K.D.** A transfer matrix approach to free vibrations of coupled shear walls. *Engng Structures*, 9(4), 1987, 265-271.
4. **Akintilo, I.A. and Syngellakis, S.** Inelastic analysis of reinforced concrete coupled shear walls by the transfer matrix method. *The Structural Engineer*, 67(15), 1989, 284-288.

5. **Syngellakis, S. and Balaji, R.** Tension leg platform response to impact forces. *Marine Structures*, 2(2), 1989, 151-171.
6. **Akintilo, I.A. and Syngellakis, S.** An investigation of the beam-wall junction of coupled shear walls by the transfer matrix method. *The Structural Engineer*, 68(22), 1990, 444-450.
7. **Syngellakis, S., Elzein, A. and Walker, A.C.** Comparison between experimental and boundary element predictions of plate buckling behaviour. *Engineering Analysis with Boundary Elements*, 8(2), 1991, 103-108.
8. **Syngellakis, S. and Akintilo, I.A.** Nonlinear dynamic analysis of coupled shear walls by the transfer matrix method. *J. Struct. Engng, ASCE*, 117(4), 1991, 1003-1016.
9. **Syngellakis, S. and Younes, I.** The transfer matrix method applied to frame-shear wall systems. *Computers and Structures*, 41(2), 1991, 197-206.
10. **Elzein, A. and Syngellakis, S.** Dual reciprocity in boundary element formulations of the plate buckling problem. *Engineering Analysis with Boundary Elements*, 9(2), 1992, 175-184.
11. **Younes, I. and Syngellakis, S.** Transfer matrix analysis of asymmetric frame-shear wall systems. *Computers and Structures*, 43(6), 1992, 1057-1065.
12. **Syngellakis, S. and Chan, A. K. L.** Free vibrations of coupled walls by transfer matrices and finite element modelling of joints. *Computers and Structures*, 44(6), 1992, 1239-1247.
13. **Harvey, A.P., Craine, R.E. and Syngellakis, S.** Propagation of nonlinear surface acoustic waves on elastic and piezoelectric solids. *Journal of the Mechanics and Physics of Solids*, 40(7), 1992, 1529-1542.
14. **Syngellakis, S. and Lee, P. C. Y.** Piezoelectric wave dispersion curves for infinite anisotropic plates. *Journal of Applied Physics*, 73(11), 1993, 7152-7161.
15. **Syngellakis, S. and Bai, C.-X.** On the application of the boundary element method to plate-half space interaction. *Engineering Analysis with Boundary Elements*, 12(2), 1993, 119-125.
16. **Syngellakis, S. and Kameshki, E. S.** Elastic critical loads for plane frames by the transfer matrix method. *J. of Structural Engineering, ASCE*, 120(4), 1994, 1140-1157.
17. **Syngellakis, S. and Elzein, A.** Plate buckling loads by the boundary element method. *Int. J. for Numerical Methods in Engineering*, 37(10), 1994, 1763-1778.
18. **Li, B. C. and Syngellakis, S.** On improperly posed boundary value problems and their approximate solution. *IMA Journal of Applied Mathematics*, 55, 1995, 85-95.
19. **Kameshki, E. S. and Syngellakis, S.** Stability analysis of frames with flexible connections by transfer matrices. *Structural Engineering Review*, 8(2/3), 1996, 177-186.
20. **Syngellakis, S., Keary, A. C. and Bowen, R. J.** On the prediction of stresses in pipes caused by ice plug formation. *Proc. IMechE Part E, J. Process Mech. Eng.*, 210, 1996, 151-158.
21. **Li, B. C. and Syngellakis, S.** Numerical conformal mapping based on the generalised conjugation operator. *Mathematics of Computation*, 67(222), 1998, 619-639.
22. **Clowes, J. R., Syngellakis, S. and Zervas, M. N.** Pressure sensitivity of side-hole optical fiber sensors. *IEEE Photonics Technology Letters*, 10(6), 1998, 857-859.
23. **Starink, M. J. and Syngellakis, S.** Shear lag models for discontinuous composites: fibre end stresses and weak interface layers. *Materials Science and Engineering A*, A270, 1999, 270-277.
24. **Kameshki, E. S. and Syngellakis, S.** Inelastic stability of rectangular frames by transfer matrices. *Computers & Structures*, 73(1-5), 1999, 373-383.
25. **Joyce, M. R., Syngellakis, S. and Reed, P. A. S.** Microstructural influences on fatigue crack initiation and early growth behaviour in plain bearing AL-based linings. *Materials Science Forum*, Pts 1-3, 331-3, 2000, 1445-1450.
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27. **Parry, M. R., Syngellakis, S. and Sinclair, I.** Numerical modelling of combined roughness and plasticity induced crack closure effects in fatigue. *Materials Science and Engineering A*, 291, 2000, 224-234.

28. **Syngellakis, S., Arnold, M. A. and Rassoulia, H.** Assessment of the non-linear behaviour of plastic ankle foot orthoses by the finite element method. *Proc. IMechE Part H, J. Engng. Medicine*, 214, 2000, 527-539.
29. **De Fazio, L., Syngellakis, S., Wood, R. J. K., Fugieuele, F. and Sciume, G.** Nanoindentation of CVD diamond: comparison of an FE model with analytical and experimental data. *Diamond and Related Materials*, 10, 2001, 765-769.
30. **Keary, A., Syngellakis, S. and Bowen, R. J.** Experimental and analytical study of thermal stresses during pipe freezing. *Proc. IMechE Part E, J. Process Mech. Engng.*, 215, 2001, 63-78.
31. **Liu, J., Christensen, S. W., Reed, P. A. S. and Syngellakis, S.** Elastic-plastic characterisation of aluminium bearing alloys. *Aluminium Alloys: Their Physical and Mechanical Properties* (Proc. ICAA-8), P. J. Gregson and S. J. Harris, eds, *Mater. Sci. Forum*, 2002, 396-402, 1091-1096.
32. **Lee, P.C.Y., Edwards, N. P., Lin, W.-S. and Syngellakis, S.** Second-order theories for extensional vibrations of piezoelectric crystal plates and strips. *IEEE Trans. Ultras. Ferroel. Freq. Control*, 49(11), 2002, 1497-1506.
33. **Syngellakis, S.** Boundary element methods for polymer analysis. *Engineering Analysis with Boundary Elements*, 27, 2003, 125-135.
34. **Joyce, M. R., Reed, P. A. S. and Syngellakis, S.** Numerical modelling of crack shielding and deflection in plain bearing materials, *Mat. Sci. Eng A*, 342, 2003, 11-22.
35. **Mwanza, M.C., Joyce, M. R., Lee, K. K., Syngellakis, S. and Reed, P. A. S.** Microstructural characterisation of fatigue crack initiation in Al based plain bearing alloys. *Int. J. Fatigue*, 25, 2003, 1135-1145.
36. **Joyce, M. R., Syngellakis, S. and Reed, P. A. S.** Fatigue crack initiation and early growth in a multiphase Al alloy included in a multilayer material system. *Materials Science and Technology*, 20, 2004, 47-56.
37. **Syngellakis, S. and Wu, J.** Evaluation of various schemes for quasi-static boundary element analysis of polymers. *Engineering Analysis with Boundary Elements*, 28, 2004, 733-745.
38. **Syngellakis, S. and Cherukunnath, N.** Boundary element analysis of symmetrically laminated plates. *Engineering Analysis with Boundary Elements*, 28, 2004, 1005-1016.
39. **Joyce, M.R., Lee, K.K., Syngellakis, S. and Reed, P.A.S.** Quantitative assessment of preferential fatigue initiation sites in a multi-phase aluminium alloy. *Fat. Fract. Engng Mater. Struct.*, 27, 2004, 1025-1036.
40. **Habbab, H., Mellor, B. G. and Syngellakis, S.** Post-yield characterisation of metals with significant pile up through spherical indentations. *Acta Mater.*, 54, 2006, 1965-1973.
41. **Ali, M.S., Reed, P. A. S., Syngellakis, S., Moffat, A. and Perrin, C.** Microstructural factors affecting fatigue initiation in various Al based bearing alloys. *Mater. Sci. Forum*, 519-521, 2006, 1071-1076. (Aluminium Alloys: Their Physical and Mechanical Properties, ed. Bilh, Proc. ICAA-10).
42. **Syngellakis, S. and Wu, J.** Evaluation of polymer fracture parameters by the boundary element method. *Engineering Fracture Mechanics*, 75(5), 2008, 1251-1265.
43. **Wu, A., Mellor, B.G. and Syngellakis, S.** Effect of defects on load-carrying capability of fillet welded T-joints, *Journal of Tongji University (Natural Science)*, 36, 2008, 155-160.
44. **Ali, M.S., Reed, P. A. S. and Syngellakis, S.** Comparison of fatigue performance of HVOF spray coated and conventional roll bonded aluminium bearing alloys. *Mater. Sci. Technol.*, 25(5), 2009, 575-581, DOI 10.1179/174328408X322213.
45. **Burke-Veliz, A., Reed, P. A. S. and Syngellakis, S.** A numerical study of crack shielding and deflection under extensive plasticity. *Engineering Fracture Mechanics*, 76(9), 2009, 1345-1356, DOI 10.1016/j.engfracmech.2009.02.003.
46. **Leonardi, A., Furgiuele, F., Syngellakis, S. and Wood, R. J. K.** Analytical approaches to stress intensity factor evaluation for indentation cracks. *Journal of the American Ceramic Society*, 92(5), 2009, 1093-1097.
47. **Setiawan, R., Syngellakis, S. and Hill, M.** A metamodelling approach to mechanical characterisation of anisotropic plates. *Journal of Composite Materials*, 43(21), 2009, 2333-2349, doi:10.1177/0021998308099008.
48. **Burke-Veliz, A., Wang, D., Wahdy, N., Reed, P.A.S., Merritt, D. and Syngellakis, S.** Plain bearing stresses due to forming and oil film pressure. *Journal of Physics: Conference Series*, 181, 2009, 012010, doi:10.1088/1742-6596/181/1/012010. Presented at the 7th

Int. Conf. on Modern Practice in Stress and Vibration Analysis, Cambridge, September 2009.

49. **Leonardi, A., Furgiuele, F., Wood, R. J. K. and Syngellakis, S.** Numerical analysis of brittle materials fractured by sharp indenters. *Engineering Fracture Mechanics*, **77**(2) 2010, 264-276, doi:10.1016/j.engfracmech.2009.08.003.
50. **Burke-Veliz, A., Reed, P. A. S. and Syngellakis, S.** Fatigue crack shielding and deflection in plain bearings under large scale yielding. *Engineering Failure Analysis*, **17**(3) 2010, 648-657, doi:10.1016/j.engfailanal.2009.03.032.
51. **Syngellakis, S. and Wu, J.** Nonlinear viscoelastic fracture mechanics using boundary elements. *Key Engineering Materials*, 454(2011) 2010, 137-148, doi:10.4028/www.scientific.net/KEM.454.137.
52. **Wu, A., Syngellakis, S. and Mellor, B.G.** Effect of thermal input on finite element predictions of welding residual stresses, *Advanced Materials Research*, **399-401**, 2011, 1976-1983, doi:10.4028/www.scientific.net/AMR.399-401.1976.
53. **Syngellakis, S.** Stress concentrations in narrow zones produced by cavities, *Theoretical & Applied Mechanics*, **39**(1), 2012, 71-97.
54. **Burke-Veliz, A., Reed, P. A. S. and Syngellakis, S.** Assessment of three-dimensional crack growth in ductile layered material systems. *Engineering Fracture Mechanics*, **88**, 2012, 15-27.
55. **Syngellakis, S., Ali, M. S. and Reed, P. A. S.,** Microstructural modelling of fatigue initiation in aluminium bearing alloys, *International Journal of Computational Methods and Experimental Measurements*, **1**(3), 2013, 249-264, doi:10.2495/CMEM-V1-N3-249-264.

Official Reports

1. **Keary, A., Bowen, R. J. and Syngellakis, S.** *Numerical investigation of the stress development in pipelines during cryogenic pipe freezing: final report*, ME/94/22, Department of Mechanical Engineering, University of Southampton, December 1994.
2. **Keary, A. C., Bowen, R. J. and Syngellakis, S.** *Numerical and Experimental Investigation of the Stress Development during Cryogenic Pipe Freezing*, Cryogenic Pipe Freezing - Phase IV, Final Report ME/96/05, Department of Mechanical Engineering, University of Southampton, 1996.
3. **Bowen, R. J., Keary, A. C. and Syngellakis, S.** Review of Pipe Freezing Offshore, (Report OTO 97001), Offshore Technology Office Report, Health and Safety Executive, 1997.
4. **Keary, A.C., Bowen, R.J. and Syngellakis, S.** *Stress development during pipe freezing: Review and Analysis*. Department of Mechanical Engineering, Departmental Report, Report No.98/01, 1998, 80pp.

Reviews of Single Academic Books

1. **Syngellakis, S.** Review of *Impact: Effects of Fast Transient Loadings* (W.J. Ammann, W.K. Liu, J.A. Studer and T. Zimmermann, eds, Rotterdam, A.A. Balkema, 1988). *J. Sound and Vibration*, 131(3), 1989, 541-542.
2. **Syngellakis, S.** Review of *Impact Mechanics* (W.J. Stronge, Cambridge UP, 2000). *THES*, November, 2000, (online, www.thes.co.uk).

Other Research Publications

Syngellakis, S. *Exact and Approximate Theories of Vibrations of Piezoelectric Crystal Plates*, PhD Thesis, Department of Civil Engineering, Princeton University, 1976.

9. Other Academic and Professional Activities

External examiner of advanced degrees

Eight appointments [NCAA, Portsmouth, Warwick, Wales (4), London(2)]

Membership of editorial boards - academic journals

Engineering Analysis with Boundary Elements (since 1990)

International Journal of Computational Methods and Experimental Measurements (since 2012)

International Journal of Energy Production and Management (co-editor, since 2014)

Major conferences attended

| Dates | Title and Nature of Involvement |
|----------------|--|
| June 2014 | 13 th International Conference on Structures under Shock and Impact, New Forest, UK Co-author of a paper, member of the International Scientific Advisory Committee |
| June 2013 | 35 th International Conference on Boundary Elements and Other Mesh Reduction Methods, New Forest, UK Author and presenter of a paper, session chair, member of the International Scientific Advisory Committee |
| June 2013 | 11 th International Conference on Surface Effects and Contact Mechanics, Siena, Italy Co-author and presenter of a paper, session chair |
| June 2013 | 6 th International Conference on Computational Methods and Experiments in Materials Characterisation, Siena, Italy Co-author and presenter of a paper |
| April 2013 | 7 th Subrata Chakrabarti International Conference on Fluid Structure Interaction, Gran Canaria, Spain Author, co-author and presenter of two papers |
| September 2012 | 4 th International Conference on Tribology and Design, Kos, Greece Co-author and presenter of a paper |
| September 2012 | 12 th International Conference on Structures under Shock and Impact, Kos, Greece Author and presenter of a paper |
| June 2012 | 12 th International Conference on Simulation and Experiments in Heat Transfer and their Applications, Split, Croatia Co-author and presenter of a paper |
| June 2012 | 34 th International Conference on Boundary Elements and Other Mesh Reduction Methods, Split, Croatia Author and presenter of a paper, session chair, member of the International Scientific Advisory Committee |
| June 2012 | 6 th International Conference on Relating Design in Nature with Science and Engineering, A Coruna, Spain Co-author and presenter of a paper |
| September 2009 | 31 st International Conference on Boundary Elements and Other Mesh Reduction Methods, Southampton, UK Co-author and presenter of a paper, session chair, member of the International Scientific Advisory Committee |
| July 2009 | 10 th International Conference on Boundary Element Techniques, Athens, Greece Co-author and presenter of a paper |
| September 2005 | 4 th International Conference on Advances in Experimental Mechanics, Southampton, UK Co-author and presenter of a paper |
| May 2003 | 15 th International Conference on Boundary Element Technology, Detroit, USA Author and presenter of an invited paper, member of the International Scientific Advisory Committee |
| June 2002 | 24 th World Conference on Boundary Element Methods, Sintra, Portugal Author and presenter of a paper, co-author of another presented paper, member of the International Scientific Advisory Committee. |
| September 2000 | 22 nd International Conference on the Boundary Element Method, Cambridge, UK Author and presenter of a paper, member of the International Scientific Advisory Committee, session chairman |
| July 2000 | International Conference on Gearing, Transmissions, and Mechanical Systems, Nottingham, UK |

| | |
|----------------|--|
| | Co-author and presenter of a paper |
| May 1998 | Second European Boundary Element Method Symposium (EUROBEM 98), Southampton, UK Author and presenter of an invited paper, session chair |
| July 1994 | 5th International Conference on Structural Dynamics: Recent Advances, Southampton, UK Author and presenter of a paper, session chair |
| September 1993 | Euromech 306 Colloquium on Mechanics of Contact Impact, Prague, Czech Republic Presenter of a paper |
| July 1991 | 4th International Conference on Recent Advances in Structural Dynamics, Southampton, UK Co-author and presenter of a paper |
| August 1990 | Forth Rail Bridge Centenary Conference, Edinburgh, UK Co-author and presenter of a paper |
| May 1989 | 4th International Conference on Computational Methods and Experimental Measurements, Capri, Italy, Co-author and presenter of a paper, session chair |

Contributions to the University of Southampton

| Dates | Nature of Contribution |
|-------------------------|---|
| Jan. 2008 – Sept. 2011 | School Library Representative |
| April 2006 – Sept. 2011 | Senior member of the Special Consideration Board, School of Engineering Sciences (SES) |
| 1999 – 2007 | Part III Mechanical Engineering course co-ordinator (Mech Eng Dept/SES) |
| 1999 – 2007 | Individual project co-ordinator for the Mechanical Engineering course (Mech Eng Dept/SES) |
| 2001-2003 | Working Party on IMechE Accreditation (Mech Eng Dept/SES) |
| 1998-2004 | Academic Liaison - Computing Services (Mech Eng Dept/SES) |
| 1995-1999 | Editing/co-ordination – Student Questionnaires (Mech Eng Dept) |
| 1995-1998 | Member of the Academic Staff Development Committee, Faculty of Engineering and Applied Science (FEAS) |
| 1990-1999 | Co-ordination of Part II Mechanical Engineering course (Mech Eng Dept) |
| 1998 | Departmental QAE committee (Mech Eng Dept) |
| 1990-1998 | Academic staff development co-ordination (Mech Eng Dept) |
| 1993-1996 | Member of the Senate |
| 1993 | Working party on Teaching Quality Assessment (Mech Eng Dept) |
| 1991 | Working party on Semesterisation (Mech Eng Dept) |
| 1984-1990 | Director (academic), Master of Engineering course, (FEAS) |
| 1984-1988 | Deputy Admissions Tutor (Civil Eng Dept) |

Activities and achievements in the most recent period of study leave

September 1995 - January 1996,

Visiting Professor, Princeton University

Full responsibility of a core undergraduate and a postgraduate unit

Examiner at two PhD vivas

Research on modelling the dynamic behaviour of piezoelectric devices (spherical ceramic shells, multi-layered composite ceramic plates, bimorphs)

Review article on BEM applications to structural dynamics

External course evaluator

January 2000 Post-graduate instructional programme in earthquake-resistant design of engineering works, Aristotle University of Thessaloniki, Department of Civil Engineering

Engineering Consultancy (last 5 years)

March 2011 Finite element analysis and fatigue life assessment of ground run-up enclosure,
– Aug. 2011 Upton McGougan, Winchester (through the SES Consultancy Service).

Nov. 2010 Critical review of driveshaft fatigue analysis, Stannah Lifts Ltd, Andover (through the SES Consultancy Service).

Reviews (2011-2013)

- March 2014 Manuscript: "High temperature effects on the nanoindentation behaviour of polyethylene-based nanocomposites", for the International Journal of Computational Methods & Experimental Measurements.
- Feb. 2014 Manuscript: "An efficient method for the static deflection analysis of an infinite beam on a nonlinear elastic foundation of one-way spring model", for Ships and Offshore Structures.
- Dec. 2013 Manuscript: "A series method applied to engineering calculations in structural dynamics", for the International Journal of Safety and Security Engineering.
- Dec. 2013 Manuscript: "Performance of FRP-retrofitted concrete bridge columns under blast loading", for the International Journal of Computational Methods & Experimental Measurements.
- Nov. 2013 Manuscript: "Residual capacity prediction of blast loaded steel columns using physics based fast running models", for the International Journal of Safety and Security Engineering.
- June 2013 Manuscript: "Investigation into the probability of fragments impact on spherical vessel by Monte Carlo method", for the International Journal of Safety and Security Engineering.
- Dec. 2012 Manuscript: "Inverse problems of the inhomogeneous theory of elasticity for thick walled shells", for the International Journal of Computational Methods & Experimental Measurements.
- Oct. 2012 Manuscript: "Fuzzy logic control system to model scaffold failure", for the International Journal of Safety and Security Engineering.
- Oct. 2012 "Vibrations of doubly-rotated quartz crystal plates with corrected first-order Mindlin plate equations", for IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control
- Aug. 2012 Manuscript: "Experimental study of indentation fracture toughness in HVOF sprayed hardmetal coatings", for Engineering Fracture Mechanics.
- July 2012 Manuscript: "Structural safety in wooden beams under thermal and mechanical loading conditions", for the International Journal of Safety and Security Engineering.
- July 2012 Manuscript: "Boundary element solution of PT-slabs", for Engineering Analysis with Boundary Elements.
- June 2012 Manuscript: "Adaptable dual control systems. A comparative parametric analysis", for the International Journal of Safety and Security Engineering.
- May 2012 Manuscript: "The response of a two-degree-of-freedom dynamic sliding system subjected to uni-direction horizontal dynamic and seismic excitations", for the International Journal of Computational Methods & Experimental Measurements.
- March 2012 Manuscript: "An anisotropic elastic-linear boundary element formulation for masonry wall analysis", for Engineering Analysis with Boundary Elements.
- Jan. 2012 Manuscript: "Energy distributions in actively and passively controlled nonlinear structures", for the International Journal of Computational Methods & Experimental Measurements.
- Jan. 2012 Manuscript: "Volume integral equation method for multiple circular and elliptical inclusion problems in plane elasticity", for Engineering Analysis with Boundary Elements.

- Oct. 2011 Manuscript: "Boundary element formulation of axisymmetric problems for an elastic halfspace", for Engineering Analysis with Boundary Elements.
- Sept. 2011 Manuscript: " Experimental Investigation of Large Plastic Deformation and Fracture in Explosively Loaded Open-ended Steel Cylinders", for the International Journal of Computational Methods & Experimental Measurements.
- June 2011 Manuscript: "Boundary element formulation for the coupled stretching-bending analysis of thin laminated plates", for Engineering Analysis with Boundary Elements.