

Stephen Lee's Publications List March 2018 (Chronological)

Submitted/forthcoming

Button, T & Lee, S (*tbc*) MEI Insights 2018: Using technology for problem solving. *Mathematics in School, Mathematical Association. Vol. 47 Issue 3.*

De Pomerai, S, Tripconey, S & Lee, S. (*tbc*) Online Professional development; how do synchronous and asynchronous compare to face to face. *British Congress on Mathematics Education.*

2018

Lee, S, Lord, K, Dudzic, S & Stripp, C (2018) Investigating the impact of curriculum and funding changes on Level 3 mathematics uptake: Comparison of A level Mathematics/Further Mathematics and Core Maths uptake in 2016-17 and 2017/18.

Lee, S (2018) MEI Insights 2018: Monthly Maths. *Mathematics in School, Mathematical Association. Vol. 47 Issue 1.*

2017

Lee, S, Saker, C & Baldwin, C (2017) Universities as a driver of AS/A level uptake: the case of Maths and Further Maths. *British Society for Research into Learning Mathematics.*

Lee, S & Dudzic, S (2017) Assessing new mathematics curricula 16-18 – lessons from developing Core Maths and A level Mathematics qualifications', *Mathematics Education beyond 16: Pathways and Transitions Conference.*

Baldwin, C & Lee, S (2017) Exploring the new AS and A levels in Mathematics and Further Mathematics, *The Institute of Mathematics and Its Applications (IMA) Mathematics TODAY.*

Lee, S & Lord, K (2017) Transition into Higher Education: Universities influence on school/college provision for AS/A level Mathematics and Further Mathematics, *Mathematics Education beyond 16: Pathways and Transitions Conference.*

Demack, S, Culliney, M, Boylan, M, Stevens, A, Lord, K & Lee, S. (2017) Number of A levels taken and subject combinations: An analysis of NPD data (2012/13 and 2014/15) for Mathematics and Further Mathematics.

Murphy, B, Steele, A & Lee, S (2017) MEI Insights 10: AS and A level Mathematics Scheme of Work. *Mathematics in School, Mathematical Association. Vol. 46 Issue 2.*

Knights, C & Lee, S (2017) MEI Insights 9: Developing Key Stage 4 Extension and Enrichment Courses. *Mathematics in School, Mathematical Association. Vol. 46 Issue 1.*

2016

Lee, S, Stevens, A, Boylan, M & Demack, S (2016) The fragility of A level Further Mathematics in schools/colleges in England. *British Society for Research into Learning Mathematics.*

Lee, S (2016) Mathematical Problems – 2016 Collection, *The Institute of Mathematics and Its Applications (IMA) Mathematics TODAY.*

Lee, S & Proffitt, K (2016) New A level maths qualifications: students' familiarity with large data sets and use of technology at the transition. *Proceedings of the MSOR-CETL Annual Conference*.

Lee, S, Murphy, B & Stripp, C (2016) Professional development of mathematics teachers: addressing the challenges of sustainability and scalability. *13th International Congress on Mathematical Education*.

Dawson, T, Lee, S, & Dudzic, S (2016) Developing new quantitative reasoning and quantitative problem solving qualifications with post 16 students. *13th International Congress on Mathematical Education*.

Lee, S & Murphy, B (2016) Teacher CPD – which 'type' is most appropriate for you? An evaluation of MEI's wide-ranging CPD provision. *Using STEM research conference: using research to improve teaching and learning of STEM subjects*.

Lee, S et al (2016) Understanding the UK Mathematics Curriculum Pre-Higher Education – A guide for Academic Members of Staff – 2016 Edition. Sigma Network.

Lissaman, R & Lee, S (2016) MEI Insights 8: Developing online AS/A level teaching and learning resources. *Mathematics in School, Mathematical Association. Vol. 45 Issue 5*

Chaffe, P & Lee, S (2016) MEI Insights 7: Enrichment. *Mathematics in School, Mathematical Association. Vol. 45 Issue 4*

Lord, K & Lee, S (2016) MEI Insights 6: The Further Mathematics Support Programme. *Mathematics in School, Mathematical Association. Vol. 45 Issue 3*

Lee, S & Chaffe, P (2016) MEI Insights 5: Revising the Format. *Mathematics in Schools, Mathematical Association. Vol. 45 Issue 2*

Barker, D et al (2016) MEI Insights 4: MEI and Professional Development. *Mathematics in School, Mathematical Association. Vol. 45 Issue 1*

2015

Lee, S & Proffitt, K (2015) When, what and how are changes being made in 14-19 mathematics education – repercussions for higher education. *Proceedings of the MSOR-CETL Annual Conference*.

Lee, S & Knights, C (2015) Continuous Professional Development – enriching and engaging classroom teachers via a 'paired days' approach. *Proceedings of the British Society for Research into Learning Mathematics*.

Lee, S (2015) Mathematical Problems – 2015 Collection, *The Institute of Mathematics and Its Applications (IMA) Mathematics TODAY*.

Dudzic, S, Lee, S & Stripp, C (2015) MEI Insights 3: Statistics in Mathematics A level for teaching from 2017. *Mathematics in Schools, Mathematical Association. Vol. 44 Issue 5*.

Button, T, Lee, S & Stripp, C (2015) MEI Insights 2: The use of technology in Mathematics Education. *Mathematics in Schools, Mathematical Association. Vol. 44 Issue 4*.

Lee, S & Stripp, C (2015) MEI Insights 1: About MEI. *Mathematics in School, Mathematical Association. Vol. 44 Issue 3.*

Dawson, T & Lee, S (2015) Developing an innovative curriculum and teacher pedagogy for nurturing a positive disposition towards learning and using mathematics in post 16 students in England – ‘Critical Maths’. *IMA International Conference on Barriers and Enablers to Learning Maths.*

Butler, R, Button, T & Lee, S (2015) Enabling access to A level Further Mathematics across England via blended learning - ‘LIL FM’. *IMA International Conference on Barriers and Enablers to Learning Maths.*

2014

Lee, S. and Peters, M. (2014) Supporting Engineering students at the start of their university course: an industry-university collaboration to provide tailored online mathematics resources. *Proceedings of the SEFI Annual Conference September 2014.*

Lee, S. (2014) From the Physical classroom to the online classroom – providing tuition, revision and professional development in 16-19 education. *Proceedings of British Congress on Mathematics Education, Nottingham, April 2014.*

Baldwin, C & Lee, S (2014) *Transition to STEM degrees - the growth of Further Mathematics A level* The Institute of Mathematics and Its Applications (IMA) Mathematics TODAY, Vol. 50 Issue 6, p302-304.

2013

Lee, S, Tripconey, S and de Pomerai, S (2013) Extended teacher professional development courses – feedback on the impact of undertaking MEI’s Teaching Advanced Mathematics (TAM) and Teaching Further Mathematics (TFM) courses in *Smith, C. (Ed.) Proceedings of the British Society for Research into Learning Mathematics 33(3) November 2013*

Button, T. and Lee, S. (2013) Further Pure Mathematics with Technology: A post-16 unit of study that uses technology in the teaching, learning and assessment. *Proceedings of the International Conference on Technology in Mathematics Teaching, Bari, Italy, July 2013.*

Tripconey, S., de Pomerai, S. and Lee, S. (2013) The impact of training courses on mathematics teachers’ use of ICT in their classroom practice. *Proceedings of the International Conference on Technology in Mathematics Teaching, Bari, Italy, July 2013.*

Lee, S. and Lord, K. (2013) Student progression to STEM degrees – who has studied A level Further Mathematics? *Proceedings of the Higher Education Academy STEM Conference, Birmingham, April 2013.*

Lee, S. and Dudzic, S (2013) Understanding the UK Mathematics Curriculum Pre-Higher Education – Where are we now? *MSOR Connections, Higher Education Academy.*

Lee, S. and Button, T. (2013) Moving with the Times – A New A level Further Mathematics Unit: Further Pure Mathematics with Technology (FPT). *MSOR Connections, Higher Education Academy.*

Lee, S. and Button, T. (2013) Developing the A level curriculum – a new A2 Further Mathematics Unit: Further Pure Mathematics with Technology (FPT). *Mathematics in School, Mathematical Association.*

2012

Lee, S. and Searle, J. (2012) Stimulating an increase in the uptake of Further Mathematics through a multifaceted approach: Evaluation of the Further Mathematics Support Programme in Smith, C. (Ed.) *Proceedings of the British Society for Research into Learning Mathematics* 32(3) November 2012

Lee, S. and Morgan, K. (2012) Construction and student feedback of a 'transition to university' online support course in mathematics for STEM students. *Proceedings of the International Conference on Innovation, Good Practice and Research in Engineering Education* 2012.

Lee, S. and Richards, J. (2012). Connecting Industry and Education *The Institute of Mathematics and Its Applications (IMA) Mathematics TODAY*, 48(5), pp204.

Lee, S. (2012). Dissections: Highlights from a masterclass IMA Virtual Branch Talk 3 *The Institute of Mathematics and Its Applications (IMA) Mathematics TODAY*, 48(4), pp174.

Lee, S. (2012). Interesting Ideas in Search Engines, Games and Social Networks: IMA Virtual Branch Talk 2 *The Institute of Mathematics and Its Applications (IMA) Mathematics TODAY*, 48(1), pp21.

Lee, S. (2012) Pre-university online mathematics course for STEM undergraduates, HESTEM National Newsletter.

2011

Berry, C. et al (2011) Revise for MEI Structured Mathematics – M2. Hodder Education, ISBN 978 0 340 95741 7

Lee, S. (2011) *Sport Handicapping* Encyclopaedia of Mathematics and Society.

Vorderman, C. et al (2011) A world-class mathematics education for all our young people.

Browne, R., Lee, S. and Robbins, C. (2011) Motivating learning in engineering mathematics through online exemplars *Proceedings of the Seventh IMA conference on The Mathematical Education of Engineers* 2011.

Lee, S. and Browne, R. (2011) Supporting and enhancing learning with a virtual learning environment: Mathematics in the Level 3 Engineering Diploma and beyond *Proceedings of the International Conference on Engineering Education, Ulster, 2011*.

Lee, S. and Browne, R. (2011). Mathematics in Work: Exemplars Competition *The Institute of Mathematics and Its Applications (IMA) Mathematics TODAY*, 47(5), pp217.

Lee, S. (2011). IMA Virtual Branch Talk 2 *The Institute of Mathematics and Its Applications (IMA) Mathematics TODAY*, 47(5), pp226.

Lee, S. et al (2011) Summary of Integral – Mathematics Resources for Education and Industry Teacher and Student Survey, *MEI Report*.

Lee, S., Lissaman, R. and Stripp, C. (2011) Evaluation of MEI Online Mathematics Support for Prospective Students of Cambridge University, *MEI evaluation report for Cambridge University*.

2010

Lee, S., Browne, R., Dudzic, S. & Stripp, C. (2010) Understanding the UK Mathematics Curriculum Pre-Higher Education – A guide for Academic Members of Staff, Higher Education Academy, ISBN 978-1-907632-08-2

Lee, S. (2010). 12th Early Career Mathematicians' Conference Report *The Institute of Mathematics and Its Applications (IMA) Mathematics TODAY*, 46(4), pp176 – 177.

Lee, S. (2010). 11th Younger Mathematicians' Conference Report *The Institute of Mathematics and Its Applications (IMA) Mathematics TODAY*, 46(1), pp13 – 14.

Berry, C., Lee, S., Owen, S and Stripp, C. (2010) Summary of MEI Online Resources Teachers and Student Survey, *MEI Report*.

2009

Lee, S. (2009). IMA Education Grant – Maths at Work? *The Institute of Mathematics and Its Applications (IMA) Mathematics TODAY*, 45(1).

Lee, S (2009) Measuring the Mechanics Problem in UK Universities. In Savage M. and Stripp, C. *Newton's Mechanics: Who needs it?* MSOR. ISBN 978-0-9555914-4-0

Dudzic, S., Lee, S. and Porkess, R. (2009) The effects of 2-tier GCSE Mathematics on transition to AS and A Level , *MEI report*.

Porkess, R. and Lee, S (2009) A Level Mathematics & Further Mathematics - An investigation into the reasons for increased uptake in 2009, *MEI report*.

2008

Lee, S. (2008) An Introduction to Mathematics for Engineers: Mechanics. Hodder Education. ISBN 978 0 340 96552 8

Lee, S., Harrison, M.C., Pell, G. and Robinson, C.L. (2008). Predicting performance of first year engineering students and the importance of assessment tools therein *Engineering education – The Journal of the Higher Education Academy Engineering Subject Centre*, 3(1), pp44 - 51.

Lee, S., Harrison, M.C. and Robinson, C.L. (2008) Identifying what makes a good question in a mechanics diagnostic test. *International Journal of Mechanical Engineering Education*. 36(2)

Button, T., Lee, S. and Stripp, C. (2008) A comprehensive web-based learning environment for upper-secondary level mathematics students: promoting good-practice for teachers and encouraging students to become independent learners. *Proceedings of the Eighth International Conference on Mathematics Education, Mexico*.

Browne, R. and Lee, S. (2008) Attracting the best students of mathematics into engineering. In Hibberd, S. and Mustoe, L.R. (eds) *Proceedings of the Sixth IMA conference on The Mathematical Education of Engineers 2008*.

Lee, S. and Porkess, R. (2008) An investigation into the increase in C1 candidate numbers in January 2008, *MEI report*.

2007

Lee, S. (2007) Repercussions in Higher Education of the Changes in the Teaching and Learning of Mechanics in Schools in England. Doctoral Thesis. Loughborough University.

Golden, K. and Lee, S. (2007) The Impact of Web-Based Materials on Student Learning and Course Delivery in Engineering Mathematics. *Proceedings of the International Conference on Engineering Education 2007*.

Lee, S., Harrison, M.C. and Robinson, C.L. (2007). Recent changes in A-level Mathematics: is the availability and uptake of mechanics declining yet more? *Teaching Mathematics and Its Applications*, 26(3), pp154 - 166

Lee, S and Porkess, R (2007), MEI Support for Mathematics at University, *MSOR Connections*, 7(3), pp36-37.

Golden, K., Stripp, C. and Lee, S. (2007), Encouraging student use of feedback, reflection and engagement through web-based learning support, *MSOR Connections*, 7(2), pp32 - 35.

Lee, S., Bond, R.M., Robinson, C.L and B.L. Rundle. (2007). University school links: An experience that benefits all - A workshop on mechanics: what could be more interesting? *The Institute of Mathematics and Its Applications (IMA) Mathematics TODAY*, 43(3), pp89 – 92.

2006

Lee, S., Harrison, M.C. and Robinson, C.L. (2006). UK engineering students' knowledge of mechanics upon arrival at university: expectation and reality. *Engineering education – The Journal of the Higher Education Academy Engineering Subject Centre*, 1(1), pp32 - 38.

Lee, S., Harrison, M.C. & Robinson, C.L. (2006). *UK Engineering students knowledge of mechanics on entry: Has it all gone?* In Aung, W. et al. (eds), *Innovations 2006, World Innovations in Engineering Education and Research*, INEER/Begell House Publishing. Ch 20 pp247 - 255, ISBN 0-9741252-5-3.

Lee, S., Harrison, M.C. and Robinson, C.L. (2006). What Prior Mechanics Knowledge is Useful for Studying Engineering at University? The Student Perspective. In Doyle, S. & Mannis, A. (eds), *Proceedings of the International Conference on Innovation, Good Practice and Research in Engineering Education 2006*, pp433 - 439.

Lee, S., Harrison, M.C. and Robinson, C.L. (2006). Recent changes in A-level Mathematics - is the availability and uptake of mechanics declining yet more? In Hibberd, S. and Mustoe, L.R. (eds) *Proceedings of the Fifth IMA conference on The Mathematical Education of Engineers 2006*.

2005

Lee, S., Robinson, C.L. (2005). Diagnostic testing in mathematics: paired questions, *Teaching Mathematics and Its Applications*, 24(4), pp154 - 166.

Lee, S., Harrison, M.C. and Robinson, C.L. (2005). UK engineering students' knowledge of mechanics on entry: Has it all gone? In Moscinski, J. and Obracaj, D. (eds) *Proceedings of the International Conference on Engineering Education - Global Education Interlink 2005*, pp570 - 575.

Robinson, C.L., Harrison, M.C. & Lee, S. (2005). The Mechanics Report – Responding to the Changes in the Teaching and Learning of Mechanics in Schools, 2005. Higher Education Academy Engineering Subject Centre.

Lee, S. (2005). A postgraduate's experience of teaching, *MSOR Connections*, 5(4), pp38 - 39.

Lee, S, Robinson, C.L., Croft, A.C., and Bamforth, S.E. (2005). Magic of Mechanics, *MSOR Connections*, 5(2), pp33 - 37.

Pre-2005

Lee, S., Harrison, M.C. and Robinson, C.L. (2004). Mechanics Teaching in Schools: Implications for Undergraduate Engineering Courses. In Halstead, A. & Lister, P. (eds),

Proceedings of the International Conference on Innovation, Good Practice and Research in Engineering Education 2004, Vol 2, pp93 - 98.

(Unpublished BSc Dissertation - Lee, S. (2003) An Investigation into Diagnostic Testing of Algebraic Skills. Loughborough University)