Scott Allan Orr

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EDUCATION

2018 *Currently enrolled* – DPhil in Science and Engineering in Arts, Heritage, and Archaeology; St. Cross College, University of Oxford, UK.

2015 MRes (Master of Research) in Science and Engineering in Arts, Heritage, and Archaeology with distinction; Institute for Sustainable Heritage, University College London, UK.
THESIS: Comparative synthesis of handheld damp meters and infrared thermography with 2D-resistive tomography: informing moisture monitoring of historic masonry

2014 LLCM (Diploma of Licentiate) in Music Literacy with merit; London College of Music, University of West London, UK.
THESIS: In situ haptic-sensitive acoustic analysis of two carillons in Toronto

2014 Diploma summa cum laude; Royal Carillon School 'Jef Denyn', Belgium.
THESIS: Evaluating two new tuning systems for carillons via digital FM synthesis simulation

2014 BASc (Bachelor of Applied Science) in Chemical Engineering and Environmental Engineering with honours; University of Toronto, Canada.
THESIS: Spatial and temporal variation of ultrafine particle size distributions across Toronto

2012 ALCM (Diploma of Associate) in Music Literacy with merit; London College of Music, University of West London, UK.

2010 ARCT (Associate of the Royal Conservatory of Toronto) in Piano Pedagogy; Royal Conservatory of Music, Toronto, Canada.

2010 A. Mus (Associate of Music) in Piano Pedagogy with first-class honours; Canadian National Conservatory of Music, Mount Forest, Canada.

2010 A. Mus (Associate of Music) in Piano Performance with first-class honours; Canadian National Conservatory of Music, Mount Forest, Canada.

PUBLICATIONS

Orr, S.A., Viles, H.A, Leslie, A., Stelfox, D. (2016). **'**Comparability of non-invasive moisture measurement techniques on masonry during artificial post-rainspell drying', *Proceedings of the 13th International Congress on the Deterioration and Conservation of Stone.* Paisley, UK. In print.

Orr, S.A. (2014). 'Land-use regression modelling of highway ultrafine particle number concentrations', *Canadian Young Scientist Journal*, 1, pp. 1–10.

PROFESSIONAL EXPERIENCE

Research Assistant; Southern Ontario Centre for Atmospheric Aerosol Research and Health Canada, Summer 2013, 2014.

Laboratory Assistant; Unit Operations Teaching Facility. Dept. of Chemical Engineering & Applied Chemistry, University of Toronto, Summer 2012.

CONFERENCE ACTIVITY/PARTICIPATION

Organisation

Chair, Organising Committee. 2nd International Conference on Science and Engineering in Arts, Heritage, and Archaeology (SEAHA), Oxford, UK. June 20–21, 2016.

Member, Organising Committee; Environmental Session Chair. 1st International Conference on Science and Engineering in Arts, Heritage, and Archaeology (SEAHA), London, UK. July 13–14, 2015.

Papers presented

Orr, S.A., Leslie, A., Stelfox, D. Viles, H.A. (2016). 'Tipping the balance: a novel model for spatially resolved moisture content calibration of non-destructive sensors. *Paper presented at the 2016 SEAHA Student Seminar.* London, UK. March 7–8, 2016.

Orr, S.A., Viles, H.A., Strlič, M., Curran, K., Leslie, A., Stelfox, J. (2015). 'Set in stone…or is it?: exploring an alternative to gravimetric calibration'. *Paper presented at the Bartlett MRes conference*, University College London, London, UK.

Orr, S.A., Viles, H.A., Leslie, A., Stelfox, D. (2015). 'Comparability of moisture measurement devices on historical masonry', *Poster presented at the* 1st International Conference on Science and Engineering in Arts, Heritage, and Archaeology (SEAHA), London, UK. July 13–14, 2015.

Brown, N., Webb, E.K., Coon, C., Fusade, L., Garside, D., Kissi, N., Liu, Y., Orr, S.A. (2015). 'Public perception of the interaction between light and heritage objects'. *Paper presented at Lights On: cultural heritage and museums!*, July 20–22, Porto, Portugal.

Orr, S.A., Lee, R. (2014). 'Soldier's Tower Memorial Carillon: An audible and daily reminder of those that gave their lives in war efforts'. World Carillon Congress, June 29–July 3, Antwerpen, Belgium.

Orr, S.A., Weiss, P. (2013). 'Social and historical context in undergraduate curricula: Taking cues from heritage science'. Canadian Chemical Engineering Conference, October 22–25, Fredericton, NB, Canada.

Orr, S.A., Sabaliauskas, K., Evans, G. (2013). 'Local investigation of on-road nanoparticles and characterization around Toronto'. *Paper presented at Undergraduate Engineering Research Day (UnERD),* Faculty of Applied Science & Engineering, University of Toronto, August 22, Canada.

Discussions

Roundtable panel student representative, 'The Future of Heritage Science'. 1st International Conference on Science and Engineering in Arts, Heritage, and Archaeology (SEAHA), London, UK. July 13–14, 2015.

Chairing

Hyper spectral imaging session. SEAHA 2016 Student Seminar. London, UK. March 7–8, 2016.

FUNDING AND AWARDS

Santander Academic Travel Award (2016). University of Oxford.

Language study bursary (2015–2016). School of Geography and the Environment, University of Oxford.

Alexander Graham Bell Postgraduate Doctoral Scholarship (2015–2018). Natural Sciences and Engineering Research Council of Canada.

Conservation Summer School Bursary (2015). Historic Scotland.

Exceptional Doctoral Scholarship (2015–2016). UK Engineering & Physical Sciences Research Council, Centre for Doctoral Training in Science and Engineering in Arts, Heritage, and Archaeology.

Graduate Scholarship (2014–2016). Department of Chemical Engineering & Applied Chemistry, University of Toronto, *Offered.*

Grand Winner (2013). Undergraduate Engineering Research Day, University of Toronto.

Reg Freisen Oral Competition Winner; Conference Travel Grant (2013). Canadian Society for Chemical Engineering Symposium, University of Toronto.

Entrance Scholarship (2010). Faculty of Applied Science & Engineering, University of Toronto.

John Loweth Memorial Scholarship (2010). Canadian National Conservatory of Music.

Alma H. Corbould Award for Music Theatre (2010). Etobicoke School of the Arts.

TEACHING EXPERIENCE

Post-graduate

Tutor (2014–Present). Chemistry for Conservators, administered by International Academic Projects.

Guest lecturer, MRes Science and Engineering in Arts, Heritage, and Archaeology (2015). *Water and building envelopes – sources, transport, influence on indoor environments*. Institute for Sustainable Heritage, University College London.

Undergraduate

Tutor, Engineering: an active introduction (2016). Residential Schools Program, The Open University.

Seminar coordinator, Engineering Strategies and Practice (2012–2013). Faculty of Applied Science & Engineering, University of Toronto.

Guest lecturer, Representing Science on Stage (2013). Faculty of Applied Science & Engineering, University of Toronto.

UNIVERSITY AND COMMUNITY SERVICE

Webmaster and Newsletter Editor (2016–Present), British Carillon Society.

Graduate representative (2016–2017), LBGTQ+ Society, University of Oxford.

Research student representative (2015–Present), School of Geography and the Environment, University of Oxford.

Student Representative, Steering Committee (2014–2015). ESPRC Centre for Doctoral Training in Science and Engineering in Arts, Heritage, and Archaeology.

Student Representative, MRes Committee (2014–2015). Bartlett Faculty of the Built Environment, University College London.

Class representative, Postgraduate Student Committee (2014–2015). Bartlett Faculty of the Built Environment, University College London.

Member, Student Representative Committee (2014–2015). ESPRC Centre for Doctoral Training in Science and Engineering in Arts, Heritage, and Archaeology.

Engineering Representative (2011–2014), University of Toronto Health and Wellness Committee.

Co-editor, Incoming Students' Handbook (2010–2011). University of Toronto Engineering Society.

PROFESSIONAL MEMBERSHIP

Associate member (2016–Present), Royal Society of Chemistry.

Student member (2012–2014), Professional Engineers of Ontario.

RELATED PROFESSIONAL SKILLS

Programming Languages: LaTeX, R, MATLAB, C, VBA, Python

Laboratory Experience: Organic and Inorganic Techniques, Thermodynamics, Unit Operations, Separation Processes, Electrical Fundamentals, Permanent and mobile aerosol instrumentation

Software: Microsoft Office, Adobe Creative Suite, ChemDraw, ASPENPlus, Maple, AutoCAD, MATLAB (with Simulink), ArcGIS

CONTRIBUTED BLOG POSTS

Water and historical buildings: modelling from the global- to micro-scale. S.A. Orr, Heritage Science Research Network, Mar. 2016.

The UK Comprehensive Spending Review 2015: Opportunities for heritage science, S.A. Orr, Heritage Science Research Network, Jan. 2016.

'How can my buildings still be damp after restoration?' – Public perception of historic buildings and physical realities, S.A. Orr, Heritage Science Research Network, Oct. 2015.

Wabi sabi and the (self-imposed?) limits of heritage science, S.A. Orr, Heritage Science Research Network, Mar. 2015.

Heritage science and the public sector, S.A. Orr, Heritage Science Research Network, Feb. 2015.

Managing references and citations as a Pages user, S.A. Orr, Personal blog. Nov. 2014.

LANGUAGES

	Reading	*Speaking*	*Writing*
English	Native	Native	Native
French	Excellent	Conversational	Excellent
Dutch	Good	Good	With dictionary
German	Basic	Rudimentary	Basic

OTHER INTERESTS

Music and composition, campanology, architectural design, 20th century political and economic history.

References available upon request.