

Emily Porter

Assistant Professor
Electrical and Computer Engineering
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Employment

The University of Texas at Austin, United States

Assistant Professor

July 2019 – (current)

Electrical and Computer Engineering

National University of Ireland (NUI) Galway, Ireland

Adjunct Lecturer

Aug. 2015 – Aug. 2019

Electrical and Electronic Engineering

EU Marie-Curie Research Fellow

May 2017 – May 2019

Translational Medical Device Laboratory

McGill University, Montreal, Canada

Postdoctoral Researcher

May 2015 – Dec. 2015

Electromagnetics Laboratory, Electrical Engineering

Education

University College Dublin, Dublin, Ireland

Professional Diploma for Entrepreneurial Educators

Jan. 2018 – Dec. 2018

McGill University, Montreal, Canada

Ph. D., Electrical Engineering

Sept. 2010 – May 2015

Supervisor: Dr. Milica Popović

D. W. Ambridge Prize Winner

M. Eng., Electrical Engineering

Jan. 2009 – Aug. 2010

Supervisor: Dr. Milica Popović

Cumulative GPA of 4.0/4.0, Dean's Honour List

B. Eng., Honours Electrical Engineering

Sept. 2005 – Dec. 2008

Cumulative GPA of 3.77/4.0, Distinctio

Awards and Honours

Co-Proposer and elected Vice-Chair of European Cooperation in Science & Technology (COST) Action MyWAVE: 'European network for advancing ElectroMagnetic hyperthermic medical technologies' (Sept. 2018)

International Union of Radio Science (URSI) Young Scientist Award (March 2018)

EU Marie-Curie Fellowship (May 2017)

International Union of Radio Science (URSI) Young Scientist Award (April 2017)

2016 Rising Stars in Electrical Engineering and Computer Science (EECS) workshop at Carnegie Mellon University, selected attendee (Oct. 2016)

Irish Research Council 'New Foundations' Grant (Feb. 2016)

Royal Irish Academy Charlemont Grant (Jan. 2016)

D. W. Ambridge Prize (May 2015)

- Awarded by McGill University for the most outstanding graduating doctoral student in Natural Sciences or Engineering

IEEE Antennas and Propagation Society Doctoral Research Award (Oct. 2013)

Natural Sciences and Engineering Research Council of Canada (NSERC)

- Postdoctoral Fellowship (PDF), 2015 – 2017
- Alexander Graham Bell Canada Graduate Scholarship (CGS D), 2011 – 2014
- Alexander Graham Bell Canada Graduate Scholarship (CGS M), 2009 – 2010
- Undergraduate Student Research Awards (USRA), Summer 2008 and Summer 2007

Le Fonds de recherche du Québec – Nature et technologies (FQRNT) [Research Fund of Quebec: Nature and Technologies]

- Postdoctoral research scholarship, 2015
- Bourses de doctorat en recherche (B2) [Doctoral Research Award], 2011
- Bourses de maîtrise en recherche (B1) [Master's Research Award], 2009

McGill Engineering Doctoral Award (MEDA), 2010 - 2013

- Hydro-Quebec Doctoral Award Fellowship
- Vadasz Doctoral Fellowship

Graduate Research Enhancement and Travel Awards (G.R.E.A.T.)

- 6 awards for travel to conferences (2010, 2011, 2013, 2014)

First place prize winner of poster competition at MEDTEQ (Quebec Consortium for Industrial Research and Innovation in Medical Technology) Forum (Oct. 2013)

A winner of the hSITE (Healthcare support through information technology advancements) ARR (annual research review) poster competition (June 2012, and again in Nov. 2013)

Publications

Theses:

- [1] **E. Porter**, "Microwave time-domain radar for monitoring breast health: development and testing of an early prototype," *Ph.D. Thesis, Department of Electrical and Computer Engineering, McGill University*, Montreal, Canada, 2015.
- [2] **E. Porter**, "Microwave breast tumor detection: simulation and design of experiments with tissue phantoms," *Master's Thesis, Department of Electrical and Computer Engineering, McGill University*, Montreal, Canada, 2010.

Peer-Reviewed Journal Publications (first/senior-author):

- [1] E. Dunne, M. O'Halloran, D. Craven, P. Puri, P. Frehill, S. Loughney, and **E. Porter**, "Detection of Vesicoureteral Reflux using Electrical Impedance Tomography," *IEEE Trans. Biomed. Eng.*, 2018 [in press].
- [2] E. Dunne, A. Santorelli, B. McGinley, G. Leader, M. O'Halloran, and **E. Porter**, "Image-based classification of bladder state using electrical impedance tomography," *Physiol. Meas.*, vol. 39, no. 12, Article ID 124001, 2018.
- [3] A. La Gioia, M. O'Halloran, and **E. Porter**, "Modelling the sensing radius of a coaxial probe for dielectric characterisation of biological tissues," *IEEE Access*, vol. 6, pp. 46516 – 46526, 2018.
- [4] **E. Porter**, S. Salahuddin, A. La Gioia, M. A. Elahi, A. Shahzad, A. Kumar, D. Kilroy, and M. O'Halloran, "Characterisation of the Dielectric Properties of the Bladder over the Microwave Range," *IEEE J. Electromagn., RF., Microw. Med. Biol.*, vol. 2, no. 3, 2018.
- [5] A. La Gioia, S. Salahuddin, M. O'Halloran, and **E. Porter**, "Quantification of the Sensing Radius of a Coaxial Probe for Accurate Interpretation of Heterogeneous Tissue Dielectric Data," *IEEE J. Electromagn., RF., Microw. Med. Biol.*, vol. 2, no. 3, 2018.
- [6] E. Dunne, A. Santorelli, B. McGinley, G. Leader, M. O'Halloran, and **E. Porter**, "Supervised Learning Classifiers for Electrical Impedance-based Bladder State Detection," *Scientific Reports*, vol. 8, article no. 5363, 2018.
- [7] A. La Gioia, M. O'Halloran, M. A. Elahi, and **E. Porter**, "Investigation of Histology Radius for Dielectric Characterisation of Heterogeneous Materials," *IEEE Trans. Dielectr. Electr. Insul.*, vol. 25, no. 3, 2018.
- [8] E. Dunne, B. McGinley, M. O'Halloran and **E. Porter**, "A Realistic Pelvic Phantom for Electrical Impedance Measurement," *Physiological Measurement*, vol. 39, no. 3, 2018.
- [9] **E. Porter**, A. La Gioia, A. Santorelli and M. O'Halloran, "Modeling of the Dielectric Properties of Biological Tissues within the Histology Region", *IEEE Trans. Dielectr. Electr. Insul.*, vol. 24, no. 5, pp. 3290-3301, 2017.
- [10] **E. Porter** and M. O'Halloran, "Investigation of Histology Region in Dielectric Measurements of Heterogeneous Tissues," *IEEE Trans. Antennas Propag.*, vol. 65, no. 10, pp. 5541 – 5552, 2017.
- [11] S. Salahuddin, M. O'Halloran, L. Farrugia, J. Bonello, P. S. Wismayer, C. V. Sammut and **E. Porter**, "Effects of Standard Coagulant Agents on the Dielectric Properties of Fresh Human Blood," *IEEE Trans. Dielectr. Electr. Insul.*, vol. 24, no. 5, pp. 3283-3289, 2017.
- [12] B. McDermott, B. McGinley, K. Krukiewicz, B. Divilly, M. Jones, M. Biggs, M. O'Halloran, and **E. Porter**, "Stable Tissue-Mimicking Materials and an Anatomically Realistic, Adjustable Head Phantom for Electrical Impedance Tomography," *Biomed. Phys. Eng. Expr.*, vol. 4, no. 1, pp. 1-10, 2017.
- [13] **E. Porter**, A. La Gioia, S. Salahuddin, S. Decker, A. Shahzad, M. A. Elahi, M. O'Halloran, O. Beyan, "Minimum information for dielectric measurements of biological tissues (MINDER): A framework for repeatable and reusable data," *Int. J. RF Microw. Comp.-Aided Eng.*, Article ID: e21201, 2017.
- [14] **E. Porter**, H. Bahrami, A. Santorelli, B. Gosselin, L. Rusch, M. Popović, "A Wearable Microwave Antenna Array for Time-Domain Breast Tumor Screening," *IEEE Trans. Med. Imag.*, vol. 35, no. 6, pp. 1501-1509, 2016.

- [15] **E. Porter**, M. Coates, and M. Popović, "An Early Clinical Study of Time-Domain Microwave Radar for Breast Health Monitoring," *IEEE Trans. Biomed. Eng.*, vol. 63, no. 3, pp. 530-539, 2016.
- [16] **E. Porter**, A. Santorelli, R. Kazemi, and M. Popović, "Microwave Time-Domain Radar: Healthy Tissue Variations Over the Menstrual Cycle," *IEEE Antennas Wireless Propag. Lett.*, vol. 14, no. 1, pp. 1-4, 2015.
- [17] **E. Porter**, G. Walls, Y. Zhou, M. Popović, and J. D. Schwartz, "A Flexible Broadband Antenna and Transmission Line Network for a Wearable Microwave Breast Cancer Detection System," *Prog. Electromagn. Res. Lett.*, vol. 49, pp. 111-118, 2014.
- [18] **E. Porter**, A. Santorelli, and M. Popović, "Time-Domain Microwave Radar Applied to Breast Imaging: Measurement Reliability in a Clinical Setting," *Prog. Electromagn. Res.*, vol. 149, pp. 119-132, 2014.
- [19] **E. Porter**, E. Kirshin, A. Santorelli, and M. Popović, "Microwave Breast Screening in the Time-Domain: Identification and Compensation of Measurement-Induced Uncertainties," *Prog. Electromagn. Res. B*, vol. 55, pp. 115-130, 2013.
- [20] **E. Porter**, E. Kirshin, A. Santorelli, M. Coates, and M. Popović, "Time-Domain Multistatic Radar System for Microwave Breast Screening," *IEEE Antennas Wireless Propag. Lett.*, vol. 12, no. 1, pp. 229 – 232, 2013.
- [21] **E. Porter**, A. Santorelli, M. Coates, and M. Popović, "Time-domain microwave breast cancer detection: extensive system testing with phantoms," *Technol. Cancer Res. Treat.*, vol. 12, pp. 131 – 143, 2013.

Peer-Reviewed Journal Publications (co-author):

- [1] D. O'Loughlin, B. L. Oliveira, A. Santorelli, **E. Porter**, M. Glavin, E. Jones, M. Popović and M. O'Halloran, "Sensitivity and Specificity Estimation using Patient-Specific Microwave Imaging in Diverse Experimental Breast Phantoms," *IEEE Trans. Med. Imag.*, 2018 [Epub ahead of print].
- [2] B. McDermott, **E. Porter**, D. Hughes, B. McGinley, M. Lang, M. O'Halloran, and M. Jones, "Gamma Band Neural Stimulation in Humans and the Promise of a New Modality to Prevent and Treat Alzheimer's Disease," *J. Alzheimers Dis.*, vol. 65, no. 2, pp. 363-392, 2018.
- [3] B. McDermott, M. O'Halloran, **E. Porter**, A. Santorelli, "Brain Haemorrhage Detection using a SVM Classifier with Electrical Impedance Tomography Measurement," *PLoS ONE*, vol. 13, no. 7, 2018.
- [4] E. Dunne, M. O'Halloran; **E. Porter**, J. Bonello, L. Farrugia, C. V Sammut, P. Schembri-Wismayer, "Heparin as an Anticoagulant for the Dielectric Measurement of Blood," *IEEE Trans. Dielectr. Electr. Insul.*, 2018 [in press].
- [5] A. La Gioia, **E. Porter**, I. Merunka, A. Shahzad, S. Salahuddin, M. Jones, M. O'Halloran, "Open-Ended Coaxial Probe Technique for Dielectric Measurement of Biological Tissues: Challenges and Common Practices," *Diagnostics*, vol. 8, no. 2, pp. 1-38, 2018.
- [6] R. Balduino, B. McDermott, **E. Porter**, M. A. Elahi, A. Shahzad, M. O'Halloran, "Feasibility of Water Content-Based Dielectric Characterisation of Biological Tissues using Mixture Models," *IEEE Trans. Dielectr. Electr. Insul.*, 2018 [in press].
- [7] B. Amin, M. A. Elahi, A. Shahzad, **E. Porter**, B. McDermott, and M. O'Halloran. "Dielectric properties of bones for the monitoring of osteoporosis," *Med. Biol. Eng. & Comp.*, 2018 [Epub ahead of print].
- [8] B. McDermott, **E. Porter**, M. Jones, B. McGinley and M. O'Halloran, "Symmetry difference electrical impedance tomography - a novel modality for anomaly detection," *Physiol. Meas.*, vol. 39, no. 4, 2018.
- [9] S. Salahuddin, A. La Gioia, A. Shahzad, M. A. Elahi, A. Kumar, D. Kilroy, **E. Porter**, and M. O'Halloran, "An Anatomically Accurate Dielectric Profile of the Porcine Kidney," *Biomed. Phys. Eng. Expr.*, vol. 4, no. 2, 2018.
- [10] B. L. Oliveira, D. O'Loughlin, M. O'Halloran, **E. Porter**, M. Glavin, and E. Jones, "Microwave Breast Imaging: experimental tumour phantoms for the evaluation of new breast cancer diagnosis systems," *Biomed. Phys. Eng. Expr.*, vol. 4, no. 2, 2018.

- [11] B. McDermott, **E. Porter**, A. Santorelli, B. Divilly, L. Morris, M. Jones, B. McGinley, and M. O'Halloran, "Anatomically and dielectrically realistic microwave head phantom with circulation and reconfigurable lesions," *Prog. Electromagn. Res. B*, vol. 78, pp. 47-60, 2017.
- [12] S. Salahuddin, **E. Porter**, F. Krewer, M. Glavin, E. Jones, R. Dwyer, M. Kerin and M. O'Halloran, "Optimised Analytical Models of the Dielectric Properties of Biological Tissue," *Med. Eng. Phys.*, vol. 43, pp. 103-111, 2017.
- [13] S. Salahuddin, **E. Porter**, P. M. Meaney, and M. O'Halloran, "Effect of Logarithmic and Linear Frequency Scales on Parametric Modelling of Tissue Dielectric Data," *Biomed. Phys. Eng. Expr.*, vol. 3, no. 1, 2017.
- [14] Y. Li, **E. Porter**, A. Santorelli, M. Popović, and M. Coates, "Microwave Breast Cancer Detection via Cost-sensitive Ensemble Classifiers: Phantom and Patient Investigation," *Biomed. Signal Proc. Control*, vol. 31, pp. 366-376, Jan. 2017.
- [15] A. Santorelli, **E. Porter**, E. Kang, T. Piske, M. Popović, and J. Schwartz, "A Time-Domain Microwave System for Breast Cancer Detection Using a Flexible Circuit Board," *IEEE Trans. Instrum. Meas.*, vol. 64, no. 11, pp. 2986-2994, 2015.
- [16] H. Bahrami, **E. Porter**, A. Santorelli, B. Gosselin, M. Popović, and L. A. Rusch, "Flexible Sixteen Antenna Array for Microwave Breast Cancer Detection," *IEEE Trans. Biomed. Eng.*, vol. 62, no. 10, pp. 2516-2525, 2015.
- [17] A. Santorelli, **E. Porter**, E. Kirshin, Y. J. Liu, and M. Popović, "Investigation of Classifiers for Tumor Detection with an Experimental Time-domain Breast Screening System," *Prog. Electromagn. Res.*, vol. 144, pp. 45-57, 2014.
- [18] A. Santorelli, M. Chudzik, E. Kirshin, **E. Porter**, A. Lujambio, I. Arnedo, M. Popović, and J. Schwartz, "Experimental Demonstration of Pulse Shaping for Time-Domain Microwave Breast Imaging," *Prog. Electromagn. Res.*, vol. 133, pp. 309 – 329, 2013.

Peer-Reviewed Conference Publications (primary author & presented):

- [1] E. Dunne, A. Santorelli, B. McGinley, M. O'Halloran, **E. Porter**, "Linear Regression for Estimating Bladder Volume with Voltage Signals," in *Proc. 1st EMF-Med World Conference on Biomedical Applications of Electromagnetic Fields*, Split, Croatia, Sept. 10-13, 2018, [accepted].
- [2] A. La Gioia, M. O'Halloran, **E. Porter**, "Modelling of Tissue Dielectric Contribution Within the Sensing Radius of a Coaxial Probe," in *Proc. 1st EMF-Med World Conference on Biomedical Applications of Electromagnetic Fields*, Split, Croatia, Sept. 10-13, 2018, [accepted].
- [3] E. Dunne, A. Santorelli, B. McGinley, M. O'Halloran, G. Leader and **E. Porter**, "EIT Image-Based Bladder State Classification for Nocturnal Enuresis," in *Proc. 19th International Conference on Biomedical Applications of Electrical Impedance Tomography (EIT 2018)*, Edinburgh, Scotland, June 11-13, 2018.
- [4] B. McDermott, M. O'Halloran, A. Santorelli, B. McGinley, and **E. Porter**, "Classification Applied to Brain Haemorrhage Detection: Initial Phantom Studies using Electrical Impedance Measurements," in *Proc. 19th International Conference on Biomedical Applications of Electrical Impedance Tomography (EIT 2018)*, Edinburgh, Scotland, June 11-13, 2018.
- [5] **E. Porter**, A. La Gioia, A. Bottiglieri, and M. O'Halloran, "Challenges in the Dielectric Measurement of Heterogeneous Tissues: Impact of Uncertainty in Sensing Depth Calculation," in *Proc. 2nd URSI Atlantic Radio Science Meeting (URSI AT-RASC)*, Gran Canaria, Spain, May 28 – June 1, 2018.
- [6] **E. Porter**, A. La Gioia, S. Salahuddin, A. Shahzad, M. A. Elahi, and M. O'Halloran, "Minimum Reporting Requirements for Dielectric Property Measurements of Biological Tissues," *European Conference on Antennas and Propagation (EUCAP)*, London, UK, April 9-13, 2018.
- [7] E. Dunne, B. McGinley, M. O'Halloran, and **E. Porter**, "Female Pelvic Model for Urinary Incontinence Management using Electrical Impedance Tomography," in *Proc. Bioengineering in Ireland (BinI 2018)*, Meath, Ireland, Jan. 26-27, 2018.
- [8] S. Salahuddin, L. Farrugia, C. V. Sammut, M. O'Halloran, and **E. Porter**, "Dielectric Properties of Fresh Human Blood," in *Proc. International Conference on Electromagnetics in Advanced Applications (ICEAA)*, Verona, Italy, Sept. 11-15, 2017.

- [9] **E. Porter**, A. La Gioia, M. A. Elahi, and M. O'Halloran, "Significance of Heterogeneities in Accurate Dielectric Measurements of Biological Tissues," in *Proc. XXXIInd International Union of Radio Science General Assembly & Scientific Symposium (URSI GASS)*, Montreal, Canada, Aug. 19-26, 2017.
- [10] **E. Porter**, A. La Gioia, and M. O'Halloran, "Impact of Histology Region Size on Measured Dielectric Properties of Biological Tissues," in *Progress In Electromagnetics Research Symposium (PIERS)*, St. Petersburg, Russia, May 21-25, 2017.
- [11] **E. Porter**, K. Duff, M. Popović, and M. Coates, "Investigation of Time-Domain Microwave Radar with Breast Clinic Patients," in *Proc. 10th European Conference on Antennas and Propagation (EUCAP)*, Davos, Switzerland, Apr. 10-15, 2016.
- [12] **E. Porter**, R. Kazemi, A. Santorelli, M. Popović, "Study of Daily Tissue Changes through Breast Monitoring with Time-Domain Microwave Radar," in *Proc. 9th European Conference on Antennas and Propagation (EUCAP)*, Lisbon, Portugal, Apr. 12-17, 2015.
- [13] **E. Porter**, A. Santorelli, M. Coates and M. Popović, "Breast Tissue Screening with Microwave Time-Domain Radar: Initial Clinical Trials," *2014 IEEE Conference on Antenna Measurements and Applications*, Antibes Juan les Pins, France, Nov. 16-20, 2014.
- [14] **E. Porter**, A. Santorelli, and M. Popović, "Breast Monitoring via Time-Domain Microwave Radar: Early Clinical Trial Study," in *Proc. 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Chicago, U.S.A., Aug. 26-30, 2014.
- [15] **E. Porter**, A. Santorelli, and M. Popović, "Time-Domain Microwave Radar for Breast Screening: Initial Testing with Volunteers," in *Proc. 8th European Conference on Antennas and Propagation (EUCAP)*, The Hague, The Netherlands, Apr. 6-11, 2014.
- [16] **E. Porter**, A. Santorelli, and M. Popović, "Measurement Uncertainties in Differential Radar Applied to Breast Imaging," in *Proc. 2014 IEEE Sensors Applications Symposium (SAS)*, Queenstown, New Zealand, Feb. 18-20, 2014.
- [17] **E. Porter**, E. Kirshin, A. Santorelli, and M. Popović, "A Clinical Prototype for Microwave Breast Imaging Using Time-Domain Measurements," in *Proc. 7th European Conference on Antennas and Propagation (EUCAP)*, Gothenburg, Sweden, Apr. 8-12, 2013.
- [18] **E. Porter**, A. Santorelli, S. Winkler, M. Coates, and M. Popović, "Time- domain microwave cancer screening: optimized pulse shaping applied to realistically shaped breast phantoms," *Microwave Symposium Digest (MTT), 2012 IEEE MTT-S International*, Montréal, Canada, pp. 1 – 3, June 17 – 22, 2012.
- [19] **E. Porter**, A. Santorelli, D. Coulibaly, M. Coates, and M. Popović, "Time-domain microwave breast screening system: Testing with advanced realistic breast phantoms," in *Proc. 6th European Conference on Antennas and Propagation (EUCAP)*, Prague, Czech Republic, Mar. 26-30, 2012.
- [20] **E. Porter**, A. Santorelli, A. Bourdon, D. Coulibaly, M. Coates and M. Popović, "Time-domain microwave breast cancer detection: experiments with comprehensive glandular phantoms," in *Proc. 2011 Asia-Pacific Microwave Conference (APMC)*, Melbourne, Australia, Dec. 5-8, 2011.
- [21] **E. Porter**, A. Santorelli, M. Coates and M. Popović, "Microwave Breast Imaging: Time-Domain Experiments on Tissue Phantoms," in *Proc. 2011 IEEE International Symposium on Antennas and Propagation (AP-S)*, Spokane, Washington, July 3-8, 2011.
- [22] **E. Porter**, A. Santorelli, M. Coates and M. Popović, "An experimental system for time-domain microwave breast imaging," in *Proc. 5th European Conference on Antennas and Propagation (EUCAP)*, Rome, Italy, April 11-15, 2011.
- [23] **E. Porter**, J. Fakhoury, R. Oprisor, M. Coates and M. Popović, "Improved tissue phantoms for experimental validation of microwave breast cancer detection," in *Proc. 4th European Conference on Antennas and Propagation (EUCAP)*, Barcelona, Spain, April 12-16, 2010.

Peer-Reviewed Conference Publications (co-authored):

- [1] A. Santorelli, E. Dunne, **E. Porter**, and M. O'Halloran, "Multiclass SVM for Bladder Volume Monitoring using Electrical Impedance Measurements," in *Proc. 1st EMF-Med World Conference on Biomedical Applications of Electromagnetic Fields*, Split, Croatia, Sept. 10-13, 2018.
- [2] B. McDermott, **E. Porter**, M. O'Halloran, A. Poudel, M. Biggs, N. S. Karode, and A. B. Coffey, "3D Printable Solid Tissue-Mimicking Material for Microwave Phantoms," in *Proc. 1st EMF-Med World Conference on Biomedical Applications of Electromagnetic Fields*, Split, Croatia, Sept. 10-13, 2018.
- [3] B. McDermott, M. O'Halloran, **E. Porter**, and A. Santorelli, "Brain Haemorrhage Detection through SVM Classification of Impedance Measurements," in *Proc. 40th International Engineering in Medicine and Biology Conference (EMBC)*, Honolulu, Hawaii, U.S.A, July 17-21, 2018.
- [4] J. Bonello, A. Elahi, L. Farrugia, C. V. Sammut, M. O'Halloran, **E. Porter** and R. Balduino, "Temperature-dependent dielectric properties of lung," in *Proc. 2nd URSI Atlantic Radio Science Meeting (URSI AT-RASC)*, Gran Canaria, Spain, May 28 – June 1, 2018.
- [5] M. Ragulskis, A. La Gioia, M. Kasper, I. Alic, M. O'Halloran, **E. Porter**, Ferry Kienberger, "Effect of Network Analyzer Trace Noise on Dielectric Measurements with an Open-ended Coaxial Probe," in *Proc. European Conference on Antennas and Propagation (EUCAP)*, London, UK, April 9-13, 2018.
- [6] D. O'Loughlin, M. A. Elahi, **E. Porter**, A. Shahzad, B. L. Oliveira, M. Glavin, E. Jones and M. O'Halloran, "Open-source Software for Microwave Radar-based Image Reconstruction," in *Proc. European Conference on Antennas and Propagation (EUCAP)*, London, UK, April 9-13, 2018.
- [7] S. Salahuddin, A. La Gioia, A. Shahzad, M. A. Elahi, A. Kumar, D. Kilroy, **E. Porter**, and M. O'Halloran, "Demonstration of dielectric heterogeneity of previously assumed homogeneous tissues: Examination of the Heart," in *Proc. European Conference on Antennas and Propagation (EUCAP)*, London, UK, April 9-13, 2018.
- [8] A. La Gioia, S. Salahuddin, A. Shahzad, M. A. Elahi, **E. Porter**, M. O'Halloran, "Dielectric measurement of porcine pancreas for medical application design," in *Proc. Bioengineering in Ireland (Binl 2018)*, Meath, Ireland, Jan. 26-27, 2018.
- [9] S. Salahuddin, E. Bagnoli, M. Jones, U. FitzGerald, A. Shahzad, M. A. Elahi, **E. Porter**, and M. O'Halloran, "An Accurate dielectric profile of rat brain over microwave frequencies," in *Proc. Bioengineering in Ireland (Binl 2018)*, Meath, Ireland, Jan. 26-27, 2018.
- [10] B. McDermott, **E. Porter**, M. Jones, B. McGinley, and M. O'Halloran, "Electrical Impedance Tomography with exploitation of symmetry," in *Proc. Bioengineering in Ireland (Binl 2018)*, Meath, Ireland, Jan. 26-27, 2018.
- [11] B. Amin, M. A. Elahi, **E. Porter**, A. Shahzad, and M. O'Halloran, "Dielectric Properties of Bones: A Potential Indicator for Osteoporosis," in *Proc. Bioengineering in Ireland (Binl 2018)*, Meath, Ireland, Jan. 26-27, 2018.
- [12] M. R. Karim, M. Heinrichs, L. C. Gleim, M. Cochez, **E. Porter**, A. La Gioia, S. Salahuddin, M. O'Halloran, S. Decker, and O. Beyan, "Towards a FAIR Sharing of Scientific Experiments: Improving Discoverability and Reusability of Dielectric Measurements of Biological Tissues," in *Proc. 10th International Semantic Web Applications and Tools for Health Care and Life Sciences (SWAT4LS)*, Rome, Italy, Dec. 4-7, 2017.
- [13] A. La Gioia, S. Salahuddin, **E. Porter** and M. O'Halloran, "Impact of radial heterogeneities of biological tissues on dielectric measurements," in *Proc. International Conference on Electromagnetics in Advanced Applications (ICEAA)*, Verona, Italy, Sept. 11-15, 2017.
- [14] S. Salahuddin, A. La Gioia, M. A. Elahi, **E. Porter**, M. O'Halloran and A. Shahzad, "Comparison of *in-vivo* and *ex-vivo* Dielectric Properties of Biological Tissues," in *Proc. International Conference on Electromagnetics in Advanced Applications (ICEAA)*, Verona, Italy, Sept. 11-15, 2017.
- [15] M. A. Elahi, B. Lavoie, **E. Porter**, M. Glavin, E. Jones, E. C. Fear, and M. O'Halloran, "Comparison of Radar-based Microwave Imaging Algorithms applied to Experimental Breast Phantoms," in *Proc. XXXIInd International Union of Radio Science General Assembly & Scientific Symposium (URSI GASS)*, Montreal, Canada, Aug. 19-26, 2017.
- [16] A. La Gioia, **E. Porter**, and M. O'Halloran, "Examination of the Sensing Radius of Open-ended Coaxial Probes in Dielectric Measurements of Biological Tissues," in *Proc. IEEE AP-S Symposium on Antennas*

and Propagation and USNC-URSI Radio Science Meeting (APS/URSI), San Diego, U.S.A., July 9-14, 2017.

- [17] B. J. McDermott, **E. Porter**, M. Jones and M. O'Halloran, "A Novel Tissue-Mimicking Material for Phantom Development in Medical Applications of EIT," in *Proc. 18th International Conference on Biomedical Applications of Electrical Impedance Tomography*, Hanover, U.S.A., June 21 - 24, 2017.
- [18] E. Dunne, **E. Porter**, B. McGinley, and M. O'Halloran, "3D Finite Element Mesh of the Adult Human Pelvis for Electrical Impedance Tomography," in *Proc. 18th International Conference on Biomedical Applications of Electrical Impedance Tomography*, Hanover, U.S.A., June 21 - 24, 2017.
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