Translational Medical Device Lab
Close to Patient, Close to Market

Translational Medical Device Lab - Recent Publications

Microwave Imaging

Microwave Breast Imaging: Clinical Advances and Remaining Challenges:
http://ieeexplore.ieee.org/document/8302576/

Microwave Breast Imaging: experimental tumour phantoms for the evaluation of new breast cancer diagnosis systems:
http://iopscience.iop.org/article/10.1088/2057-1976/aaaaff/meta

Parameter Search Algorithms for Microwave Radar-Based Breast Imaging: Focal Quality Metrics as Fitness Functions:
http://www.mdpi.com/1424-8220/17/12/2823

Development of Clinically Informed 3-D Tumor Models for Microwave Imaging Applications:
http://ieeexplore.ieee.org/abstract/document/7155480/?reload=true

Anatomically and Dielectrically Realistic Microwave Head Phantom with Circulation and Reconfigurable Lesions:
http://www.jpier.org/PIERB/pier.php?paper=17071805

Stable Tissue-Mimicking Materials and an Anatomically Realistic, Adjustable Head Phantom for Electrical Impedance Tomography:
http://iopscience.iop.org/article/10.1088/2057-1976/aa922d

Electrical Impedance Imaging

Realistic pelvic phantom to bridge the gap between simulation and clinical trials for electrical impedance:
http://iopscience.iop.org/article/10.1088/1361-6579/aaa3c0

Urinary Incontinence Management using Electrical Impedance Tomography and Female Pelvic Finite Element Model (Page 150; Password: BinI2018-DCU)
https://bini2017.files.wordpress.com/2018/01/conference-proceedings-bini-2018-3.pdf

3D Finite Element Mesh of the Adult Human Pelvis for Electrical Impedance Tomography:
http://eprints.mdx.ac.uk/22324/1/eit2017%281%29.pdf#page=73

Microwave Ablation
A description of the technical requirements of using microwave ablation for the treatment of Conn's Syndrome:
http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=7928268

Dielectric Spectroscopy
A standard minimum information model that describes the types of raw data and metadata needed to interpret or replicate a dielectric study:
http://onlinelibrary.wiley.com/doi/10.1002/mmce.21201/full

Modelling the histology depth of heterogeneous tissue samples, based on varying dielectric properties of the samples:
http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=8120390

An Accurate Dielectric Profile of Rat Brain over Microwave Frequency Range:
https://bini2017.files.wordpress.com/2018/01/conference-proceedings-bini-2018-3.pdf

An Anatomically Accurate Dielectric Profile of the Porcine Kidney:
http://iopscience.iop.org/article/10.1088/2057-1976/aaad7b/meta

Dielectric Properties of Fresh Human Blood:
http://ieeexplore.ieee.org/document/8065249/

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Comparison of In-vivo and Ex-vivo Dielectric properties of Biological Tissues: http://ieeexplore.ieee.org/document/8065312/

Effects of Standard Coagulant Agents on the Dielectric Properties of Fresh Human Blood: http://ieeexplore.ieee.org/document/8120389/

Dielectric Measurement of Porcine Pancreas for Medical Application Design: https://bini2017.files.wordpress.com/2018/01/conference-proceedings-bini-2018-3.pdf

Impact of radial heterogeneities of biological tissues on dielectric measurements: http://ieeexplore.ieee.org/document/8065267/

Towards a FAIR Sharing of Scientific Experiments: Improving Discoverability and Reusability of Dielectric Measurements of Biological Tissues: http://www.swat4ls.org/wp-content/uploads/2017/12/paper_11.pdf