# Alistair Mackenzie

List of Publications by Year
in descending order



| 82 | 1,173 | 394286 | 414303 |
|---|---|---|---|
| papers | citations | 19 h-index | 32 g-index |

| 84 | 84 | 84 | 533 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Unenhanced helical CT for renal colic - is the radiation dose justifiable?. Clinical Radiology, 1999, 54, 444-447. | 0.5 | 105 |
| 2 | Effect of image quality on calcification detection in digital mammography. Medical Physics, 2012, 39, 3202-3213. | 1.6 | 71 |
| 3 | OPTIMAM Mammography Image Database: A Large-Scale Resource of Mammography Images and Clinical Data. Radiology: Artificial Intelligence, 2021, 3, e200103. | 3.0 | 65 |
| 4 | Detector or System? Extending the Concept of Detective Quantum Efficiency to Characterize the Performance of Digital Radiographic Imaging Systems. Radiology, 2008, 249, 926-937. | 3.6 | 60 |
| 5 | Effective DQE (eDQE) and speed of digital radiographic systems: An experimental methodology. Medical Physics, 2009, 36, 3806-3817. | 1.6 | 59 |
| 6 | Conversion of mammographic images to appear with the noise and sharpness characteristics of a different detector and xâ€ray system. Medical Physics, 2012, 39, 2721-2734. | 1.6 | 54 |
| 7 | Characterization of noise sources for two generations of computed radiography systems using powder and crystalline photostimulable phosphors. Medical Physics, 2007, 34, 3345-3357. | 1.6 | 49 |
| 8 | Development and validation of a modelling framework for simulating 2D-mammography and breast tomosynthesis images. Physics in Medicine and Biology, 2014, 59, 4275-4293. | 1.6 | 48 |
| 9 | Investigation of optimum energies for chest imaging using filmâ€“screen and computed radiography. British Journal of Radiology, 2005, 78, 422-427. | 1.0 | 47 |
| 10 | Image simulation and a model of noise power spectra across a range of mammographic beam qualities. Medical Physics, 2014, 41, 121901. | 1.6 | 42 |
| 11 | One yearâ€™s clinical experience with unenhanced spiral computed tomography for the assessment of acute loin pain suggestive of renal colic. BJU International, 2001, 85, 632-636. | 1.3 | 39 |
| 12 | Design and validation of realistic breast models for use in multiple alternative forced choice virtual clinical trials. Physics in Medicine and Biology, 2017, 62, 2778-2794. | 1.6 | 37 |
| 13 | The relationship between cancer detection in mammography and image quality measurements. Physica Medica, 2016, 32, 568-574. | 0.4 | 32 |
| 14 | Comparison of the x-ray attenuation properties of breast calcifications, aluminium, hydroxyapatite and calcium oxalate. Physics in Medicine and Biology, 2013, 58, N103-N113. | 1.6 | 30 |
| 15 | Characterisation of noise and sharpness of images from four digital breast tomosynthesis systems for simulation of images for virtual clinical trials. Physics in Medicine and Biology, 2017, 62, 2376-2397. | 1.6 | 30 |
| 16 | The effect of system geometry and dose on the threshold detectable calcification diameter in 2D-mammography and digital breast tomosynthesis. Physics in Medicine and Biology, 2017, 62, 858-877. | 1.6 | 29 |
| 17 | Quality control measurements for digital x-ray detectors. Physics in Medicine and Biology, 2011, 56, 979-999. | 1.6 | 28 |
| 18 | The Effect of Image Processing on the Detection of Cancers in Digital Mammography. American Journal of Roentgenology, 2014, 203, 387-393. | 1.0 | 28 |

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|---|---|---|---|
| 19 | Breast cancer detection rates using four different types of mammography detectors. European Radiology, 2016, 26, 874-883. | 2.3 | 23 |
| 20 | The threshold detectable mass diameter for 2D-mammography and digital breast tomosynthesis. Physica Medica, 2019, 57, 25-32. | 0.4 | 18 |
| 21 | Validation of correction methods for the non-linear response of digital radiography systems. British Journal of Radiology, 2008, 81, 341-345. | 1.0 | 17 |
| 22 | Chest radiography: a comparison of image quality and effective dose using four digital systems. Radiation Protection Dosimetry, 2005, 114, 273-277. | 0.4 | 15 |
| 23 | Validation of simulation of calcifications for observer studies in digital mammography. Physics in Medicine and Biology, 2013, 58, N217-N228. | 1.6 | 15 |
| 24 | Toward image quality assessment in mammography using model observers: Detection of a calcificationâ€like object. Medical Physics, 2017, 44, 5726-5739. | 1.6 | 14 |
| 25 | Threshold contrast detail detectability curves for fluoroscopy and digital acquisition using modern image intensifier systems. British Journal of Radiology, 2004, 77, 751-758. | 1.0 | 12 |
| 26 | Lesion detectability in 2D-mammography and digital breast tomosynthesis using different targets and observers. Physics in Medicine and Biology, 2018, 63, 095014. | 1.6 | 12 |
| 27 | Reduction of extremity dose in the radiopharmacy. Nuclear Medicine Communications, 1997, 18, 578-581. | 0.5 | 10 |
| 28 | Use of a quality index in threshold contrast detail detection measurements in television fluoroscopy. British Journal of Radiology, 2003, 76, 464-472. | 1.0 | 10 |
| 29 | Virtual clinical trial to compare cancer detection using combinations of 2D mammography, digital breast tomosynthesis and synthetic 2D imaging. European Radiology, 2022, 32, 806-814. | 2.3 | 10 |
| 30 | Extension of DQE to include scatter, grid, magnification, and focal spot blur: a new experimental technique and metric. , 2009, , . | | 9 |
| 31 | How does image quality affect radiologistsâ€™ perceived ability for image interpretation and lesion detection in digital mammography?. European Radiology, 2021, 31, 5335-5343. | 2.3 | 9 |
| 32 | Artifacts Found During Quality Assurance Testing of Computed Radiography and Digital Radiography Detectors. Journal of Digital Imaging, 2009, 22, 383-392. | 1.6 | 8 |
| 33 | Image resampling effects in mammographic image simulation. Physics in Medicine and Biology, 2011, 56, N275-N286. | 1.6 | 8 |
| 34 | The oncology medical image database (OMI-DB). , 2014, , . | | 8 |
| 35 | Validation of a method to simulate the acquisition of mammographic images with different techniques. , 2019, , . | | 8 |
| 36 | Simulation of images of CDMAM phantom and the estimation of measurement uncertainties of threshold gold thickness. Physica Medica, 2017, 39, 137-146. | 0.4 | 7 |

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|---|---|---|---|
| 37 | Comparison of synthetic 2D images with planar and tomosynthesis imaging of the breast using a virtual clinical trial. , 2018, , . | | 7 |
| 38 | Use of effective detective quantum efficiency to optimise radiographic exposures for chest imaging with computed radiography. , 2009, , . | | 6 |
| 39 | Simulation of 3D DLA masses in digital breast tomosynthesis. , 2013, , . | | 6 |
| 40 | Performance comparison of breast imaging modalities using a 4AFC human observer study. Proceedings of SPIE, 2015, , . | 0.8 | 6 |
| 41 | Validation of a candidate instrument to assess image quality in digital mammography using ROC analysis. European Journal of Radiology, 2021, 139, 109686. | 1.2 | 5 |
| 42 | A method to modify mammography images to a appear as if acquired using different radiographic factors. , 2019, , . | | 5 |
| 43 | Automatic density prediction in low dose mammography. , 2020, , . | | 5 |
| 44 | COMPARISON OF RADIATION EXPOSURE TO THE PATIENT AND CONTRAST DETAIL RESOLUTIONS ACROSS LOW DOSE 2D/3D SLOT SCANNER AND TWO CONVENTIONAL DIGITAL RADIOGRAPHY X-RAY IMAGING SYSTEMS. Radiation Protection Dosimetry, 2019, 185, 252-265. | 0.4 | 4 |
| 45 | Effect of glandularity on the detection of simulated cancers in planar, tomosynthesis, and synthetic 2D imaging of the breast using a hybrid virtual clinical trial. Medical Physics, 2021, 48, 6859-6868. | 1.6 | 4 |
| 46 | OPTIMAM Image Simulation Toolbox - Recent Developments and Ongoing Studies. Lecture Notes in Computer Science, 2016, , 668-675. | 1.0 | 4 |
| 47 | Visual Evaluation of Image Quality of a Low Dose 2D/3D Slot Scanner Imaging System Compared to Two Conventional Digital Radiography X-ray Imaging Systems. Diagnostics, 2021, 11, 1932. | 1.3 | 4 |
| 48 | Validation of a method to convert an image to appear as if acquired using a different digital detector. Proceedings of SPIE, 2011, , . | 0.8 | 3 |
| 49 | MedXViewer: an extensible web-enabled software package for medical imaging. Proceedings of SPIE, 2014, , . | 0.8 | 3 |
| 50 | Using image simulation to test the effect of detector type on breast cancer detection. Proceedings of SPIE, 2014, , . | 0.8 | 3 |
| 51 | Virtual clinical trials using inserted pathology in clinical images: investigation of assumptions for local glandularity and noise. Proceedings of SPIE, 2015, , . | 0.8 | 3 |
| 52 | Using non-specialist observers in 4AFC human observer studies. Proceedings of SPIE, 2017, , . | 0.8 | 3 |
| 53 | Validation of a mammographic image quality modification algorithm using 3D-printed breast phantoms. Journal of Medical Imaging, 2021, 8, 033502. | 0.8 | 3 |
| 54 | Quantitative Image Quality Metrics of the Low-Dose 2D/3D Slot Scanner Compared to Two Conventional Digital Radiography X-ray Imaging Systems. Diagnostics, 2021, 11, 1699. | 1.3 | 3 |

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|---|---|---|---|
| 55 | A Modelling Framework for Evaluation of 2D-Mammography and Breast Tomosynthesis Systems. Lecture Notes in Computer Science, 2012, , 338-345. | 1.0 | 3 |
| 56 | The relationship between age of digital mammography systems and number of reported faults and downtime. Physica Medica, 2022, 98, 113-121. | 0.4 | 3 |
| 57 | Mammographic calcification cluster detection and threshold gold thickness measurements. Proceedings of SPIE, 2012, , . | 0.8 | 2 |
| 58 | Characterisation of a breast tomosynthesis unit to simulate images. , 2013, , . | | 2 |
| 59 | Effect of image processing version on detection of non-calcification cancers in 2D digital mammography imaging. Proceedings of SPIE, 2013, , . | 0.8 | 2 |
| 60 | Detection of Microcalcification Clusters in 2D-Mammography and Digital Breast Tomosynthesis and the Relation to the Standard Method of Measuring Image Quality. IFMBE Proceedings, 2016, , 217-221. | 0.2 | 2 |
| 61 | Detection of microcalcification clusters by 2D-mammography and narrow and wide angle digital breast tomosynthesis. Proceedings of SPIE, 2016, , . | 0.8 | 2 |
| 62 | Validation of a Simulated Dose Reduction Methodology Using Digital Mammography CDMAM Images and Mastectomy Images. Lecture Notes in Computer Science, 2010, , 78-85. | 1.0 | 2 |
| 63 | Validation of noise estimation for a clinical contrast-to-noise ratio for digital mammographic imaging. , 2018, , . | | 2 |
| 64 | Breast phantom validation of a mammographic image modification method. , 2018, , . | | 2 |
| 65 | An observer study to assess the detection of calcification clusters using 2D mammography, digital breast tomosynthesis, and synthetic 2D imaging. , 2019, , . | | 2 |
| 66 | 24. Comparison of radiation safety aspects between robotic pnd manual systems for the preparation of radiopharmaceuticals. Nuclear Medicine Communications, 1997, 18, 295. | 0.5 | 1 |
| 67 | Development and content validity evaluation of a candidate instrument to assess image quality in digital mammography: A mixed-method study. European Journal of Radiology, 2021, 134, 109464. | 1.2 | 1 |
| 68 | Converting One Set of Mammograms to Simulate a Range of Detector Imaging Characteristics for Observer Studies. Lecture Notes in Computer Science, 2012, , 394-401. | 1.0 | 1 |
| 69 | Effect of Dose on the Detection of Micro-Calcification Clusters for Planar and Tomosynthesis Imaging. Lecture Notes in Computer Science, 2016, , 152-159. | 1.0 | 1 |
| 70 | Validation of modelling tools for simulating wide-angle DBT systems. , 2019, , . | | 1 |
| 71 | Historical trends in image quality and mean glandular dose in digital mammography. , 2020, , . | | 1 |
| 72 | Threshold-contrast detectability curves for digital acquisition. British Journal of Radiology, 2005, 78, 469-470. | 1.0 | 0 |

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|---|---|---|---|
| 73 | Improving the Quality of Optimisation Studies Undertaken in Mammography and General Radiology Using High Level Blended Teaching. Lecture Notes in Computer Science, 2016, , 75-82. | 1.0 | 0 |
| 74 | Civil engineering heritage: country profile â€“ Canada. Proceedings of the ICE - Engineering History and Heritage, 2017, 170, 31-37. | 0.1 | 0 |
| 75 | TUâ€EEâ€A4â€06: Experimental Evaluation of Effective Detective Quantum Efficiency for Digital Radiographic Imaging Systems. Medical Physics, 2007, 34, 2564-2564. | 1.6 | 0 |
| 76 | Adapting Clinical Images to Appear with Different Noise and Sharpness to Model a Different Detector. Lecture Notes in Computer Science, 2010, , 319-326. | 1.0 | 0 |
| 77 | Mammographic Image Database (MIDB) and Associated Web-Enabled Software for Research. Lecture Notes in Computer Science, 2014, , 514-519. | 1.0 | 0 |
| 78 | Independent images: a need for phantom based image quality assessment using model observers?. , 2018, , . | | 0 |
| 79 | Mammographic image quality assessment by a contrast-to-noise ratio for clinical images. , 2020, , . | | 0 |
| 80 | Methodology for undertaking quality control testing of ghosting in digital breast tomosynthesis systems. , 2020, , . | | 0 |
| 81 | The relationship between age of digital mammography systems and number of reported faults and downtime. , 2020, , . | | 0 |
| 82 | Development of an algorithm to convert mammographic images to appear as if acquired with different technique factors. Journal of Medical Imaging, 2022, 9, . | 0.8 | 0 |