Eric R. Fossum - Publications List

(342 pubs as of 9-Feb-2025 not including patents, listed in reverse chronological order, 24,045 GS citations, H:79)

Jump to: *Other Conference Papers and Publications* *Google Scholar EF*

Peer-Reviewed Publications

1. E.R. Fossum, N. Teranishi, and A.J.P. Theuwissen, *Digital image sensor evolution and new frontiers*, (invited) Annual Review of Vision Science 2024, 10:20.1-20.28 Oct 2024. https://doi.org/10.1146/annurev-vision-101322-105538

2. J.P. Gallagher, L. Buntic, W. Deng, E.R. Fossum, D.F. Figer, *Radiation tolerance of a single-photon counting complementary metal-oxide semiconductor image sensor*, J. Astron. Telesc. Instrum. Syst. 10(3), 036003 Sept. 2024. https://doi.org/10.1117/1.JATIS.10.3.036003

3. A. J. Hendrickson, D. P. Haefner, S. H. Chan, N. R. Shade and E. R. Fossum, *PCH-EM: A Solution to Information Loss in the Photon Transfer Method*, IEEE Trans. on Electron Devices, vol. 71, no. 8, pp. 4781-4788, Aug. 2024. https://doi.org/10.1109/TED.2024.3414369

4. J. Zhang, J. Newman, Z. Wang, Y. Qian, P. Feliciano-Ramos, W. Guo, T. Honda, Z.S. Chen, C Linghu, R. Etienne-Cummings, E.R. Fossum, E. Boyden, and M. Wilson, *Pixel-wise programmability enables dynamic high-SNR cameras for high-speed microscopy*. Nature Communications **15**, 4480 (2024). https://doi.org/10.1038/s41467-024-48765-5

5. E.R. Fossum, *The Invention and Development of CMOS Image Sensors* (invited) in 75th Anniversary of the Transistor (eds A. Nathan, S.K. Saha and R.M. Todi) (2023). https://doi.org/10.1002/9781394202478.ch23

6. X. Yue and E.R. Fossum, *Design and Characterization of a Burst Mode 20 Mfps Low Noise CMOS Image Sensor*, Sensors, vol. 23, no. 14, p. 6356, Jul. 2023, doi: https://doi.org/10.3390/s23146356

7. A. Hendrickson, D.P. Haefner, N.R. Shade and E.R. Fossum, *Experimental Verification of PCH-EM Algorithm for Characterizing DSERN Image Sensors*, in IEEE Journal of the Electron Devices Society, vol. 11, pp. 376-384, 2023. doi: https://doi.org/10.1109/JEDS.2023.3290131

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9. X. Yue and E.R. Fossum, *The simulation and design of a burst mode 20Mfps global shutter high conversion-gain CMOS image sensor in a standard 180nm CMOS image sensor process using sequential transfer gates*, Electronic Imaging, 2023, pp 328-1 - 328-5, https://doi.org/10.2352/EI.2023.35.6.ISS-328

10. E. Lee, K.D. Larkin, X. Yue, Z. Wang, E.R. Fossum, J. Liu, *Design of Monolithic Bi-Layer High-Z PAL-Si Hard X-ray CMOS Image Sensors for Quantum Efficiency Enhancement*. Instruments 2023, 7, 24. https://doi.org/10.3390/instruments7030024

11. K.M. Anagnost, X. Yue, and E.R. Fossum, *Reset noise reduction method in 3-T pixels*, Electronic Imaging, 2023, pp 344-1 - 344-5, https://doi.org/10.2352/EI.2023.35.6.ISS-344

12. J. Ma, S. Chan, and E.R. Fossum, *Review of quanta image sensors for ultra-low-light imaging*, (invited), IEEE Trans. on Electron Devices, Special Issue on Solid-State Image Sensors, vol. 69, no. 6, pp. 2824-2839, June 2022. https://doi.org/10.1109/TED.2022.3166716

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14. Z. Yin, J. Ma, S. Masoodian, and E.R. Fossum, *Threshold uniformity in 1b quanta image sensor readout circuit,* MDPI Sensors, March 2022, 22, 2578. https://doi.org/10.3390/s22072578

15. E.R. Fossum, *Analog read noise and quantizer threshold estimation from quanta image sensor bit density*, IEEE J. Electron Devices Society, vol. 10, pp. 269-274, March 2022. https://doi.org/ 10.1109/JEDS.2022.3157785

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33. E.R. Fossum, N. Teranishi, A. Theuwissen, D. Stoppa and E. Charbon, (Eds.), Photon-Counting Image Sensors, MDPI ISBN 978-3-03842-375-1 (PDF) ISBN 978-3-03842-374-4 (Pbk), 366 pages, published 9-May-2017. retrieved 13-Aug-2017 from http://www.mdpi.com/books/pdfview/book/288

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