# Carlos Ortiz de Solórzano

List of Publications by Year
in descending order

| 123 papers | 7,122 citations | 109321<br>35 h-index | 66911<br>78 g-index |
|---|---|---|---|
| 124 all docs | 124 docs citations | 124 times ranked | 11629 citing authors |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 1 | Objective comparison of particle tracking methods. Nature Methods, 2014, 11, 281-289. | 19.0 | 805 |
| 2 | 3D reconstruction of histological sections: Application to mammary gland tissue. Microscopy Research and Technique, 2010, 73, 1019-1029. | 2.2 | 565 |
| 3 | Combination Strategies in Multi-Atlas Image Segmentation: Application to Brain MR Data. IEEE Transactions on Medical Imaging, 2009, 28, 1266-1277. | 8.9 | 465 |
| 4 | An objective comparison of cell-tracking algorithms. Nature Methods, 2017, 14, 1141-1152. | 19.0 | 399 |
| 5 | Applying watershed algorithms to the segmentation of clustered nuclei. , 1998, 28, 289-297. | | 370 |
| 6 | A benchmark for comparison of cell tracking algorithms. Bioinformatics, 2014, 30, 1609-1617. | 4.1 | 345 |
| 7 | In situ analyses of genome instability in breast cancer. Nature Genetics, 2004, 36, 984-988. | 21.4 | 337 |
| 8 | Evaluation of autofocus functions in molecular cytogenetic analysis. Journal of Microscopy, 1997, 188, 264-272. | 1.8 | 329 |
| 9 | Adiposoft: automated software for the analysis of white adipose tissue cellularity in histological sections. Journal of Lipid Research, 2012, 53, 2791-2796. | 4.2 | 308 |
| 10 | Consistent and Elastic Registration of Histological Sections Using Vector-Spline Regularization. Lecture Notes in Computer Science, 2006, , 85-95. | 1.3 | 214 |
| 11 | Sustained release of VEGF through PLGA microparticles improves vasculogenesis and tissue remodeling in an acute myocardial ischemiaâ€"reperfusion model. Journal of Controlled Release, 2010, 147, 30-37. | 9.9 | 184 |
| 12 | Segmentation of confocal microscope images of cell nuclei in thick tissue sections. Journal of Microscopy, 1999, 193, 212-226. | 1.8 | 146 |
| 13 | Segmentation of nuclei and cells using membrane related protein markers. Journal of Microscopy, 2001, 201, 404-415. | 1.8 | 139 |
| 14 | Automated Neuromelanin Imaging as a Diagnostic Biomarker for Parkinson's Disease. Movement Disorders, 2015, 30, 945-952. | 3.9 | 138 |
| 15 | Comparing algorithms for automated vessel segmentation in computed tomography scans of the lung: the VESSEL12 study. Medical Image Analysis, 2014, 18, 1217-1232. | 11.6 | 131 |
| 16 | Characterization of three-dimensional cancer cell migration in mixed collagen-Matrigel scaffolds using microfluidics and image analysis. PLoS ONE, 2017, 12, e0171417. | 2.5 | 116 |
| 17 | Molecular Analysis of a Multistep Lung Cancer Model Induced by Chronic Inflammation Reveals Epigenetic Regulation of p16, Activation of the DNA Damage Response Pathway. Neoplasia, 2007, 9, 840-IN12. | 5.3 | 86 |
| 18 | Inhibition of telomerase activity preferentially targets aldehyde dehydrogenase-positive cancer stem-like cells in lung cancer. Molecular Cancer, 2011, 10, 96. | 19.2 | 86 |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 19 | Segmentation and Shape Tracking of Whole Fluorescent Cells Based on the Chan–Vese Model. IEEE Transactions on Medical Imaging, 2013, 32, 995-1006. | 8.9 | 86 |
| 20 | Treatment of Pancreatic Cancer With an Oncolytic Adenovirus Expressing Interleukin-12 in Syrian Hamsters. Molecular Therapy, 2009, 17, 614-622. | 8.2 | 84 |
| 21 | Preclinical Activity of the Oral Proteasome Inhibitor MLN9708 in Myeloma Bone Disease. Clinical Cancer Research, 2014, 20, 1542-1554. | 7.0 | 75 |
| 22 | A geometric model for 3-D confocal image analysis. IEEE Transactions on Biomedical Engineering, 2000, 47, 1600-1609. | 4.2 | 69 |
| 23 | Cell Tracking Accuracy Measurement Based on Comparison of Acyclic Oriented Graphs. PLoS ONE, 2015, 10, e0144959. | 2.5 | 68 |
| 24 | The use of mixed collagen-Matrigel matrices of increasing complexity recapitulates the biphasic role of cell adhesion in cancer cell migration: ECM sensing, remodeling and forces at the leading edge of cancer invasion. PLoS ONE, 2020, 15, e0220019. | 2.5 | 62 |
| 25 | Functional benefits of PLGA particulates carrying VEGF and CoQ10 in an animal of myocardial ischemia. International Journal of Pharmaceutics, 2013, 454, 784-790. | 5.2 | 55 |
| 26 | High-throughput analysis of multispectral images of breast cancer tissue. IEEE Transactions on Image Processing, 2006, 15, 2259-2268. | 9.8 | 53 |
| 27 | Automated FISH spot counting in interphase nuclei: Statistical validation and data correction. , 1998, 31, 93-99. | | 52 |
| 28 | Telomeres and Telomerase in Lung Cancer. Journal of Thoracic Oncology, 2008, 3, 1085-1088. | 1.1 | 51 |
| 29 | Complement C5a induces the formation of neutrophil extracellular traps by myeloid-derived suppressor cells to promote metastasis. Cancer Letters, 2022, 529, 70-84. | 7.2 | 51 |
| 30 | Heterogenous presence of neutrophil extracellular traps in human solid tumours is partially dependent on <scp>IL</scp>‐8. Journal of Pathology, 2021, 255, 190-201. | 4.5 | 49 |
| 31 | Quantification of Lung Damage in an Elastase-Induced Mouse Model of Emphysema. International Journal of Biomedical Imaging, 2012, 2012, 1-11. | 3.9 | 47 |
| 32 | New Strategies for Echocardiographic Evaluation of Left Ventricular Function in a Mouse Model of Long-Term Myocardial Infarction. PLoS ONE, 2012, 7, e41691. | 2.5 | 47 |
| 33 | The Novel Pan-PIM Kinase Inhibitor, PIM447, Displays Dual Antimyeloma and Bone-Protective Effects, and Potently Synergizes with Current Standards of Care. Clinical Cancer Research, 2017, 23, 225-238. | 7.0 | 42 |
| 34 | System for combined three-dimensional morphological and molecular analysis of thick tissue specimens. Microscopy Research and Technique, 2002, 59, 522-530. | 2.2 | 40 |
| 35 | Evaluation of micro-CT for emphysema assessment in mice: comparison with non-radiological techniques. European Radiology, 2011, 21, 954-962. | 4.5 | 38 |
| 36 | Quantification of epithelial cells in coculture with fibroblasts by fluorescence image analysis. Cytometry, 2002, 49, 73-82. | 1.8 | 37 |

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| 37 | Influence of dietary macronutrient composition on adiposity and cellularity of different fat depots in Wistar rats. Journal of Physiology and Biochemistry, 2009, 65, 387-395. | 3.0 | 37 |
| 38 | Neuregulin-1Î² Induces Mature Ventricular Cardiac Differentiation from Induced Pluripotent Stem Cells Contributing to Cardiac Tissue Repair. Stem Cells and Development, 2015, 24, 484-496. | 2.1 | 36 |
| 39 | Dynamic Atlas-Based Segmentation and Quantification of Neuromelanin-Rich Brainstem Structures in Parkinson Disease. IEEE Transactions on Medical Imaging, 2019, 38, 813-823. | 8.9 | 36 |
| 40 | Airway segmentation and analysis for the study of mouse models of lung disease using micro-CT. Physics in Medicine and Biology, 2009, 54, 7009-7024. | 3.0 | 34 |
| 41 | Longitudinal study of a mouse model of chronic pulmonary inflammation using breath hold gated micro-CT. European Radiology, 2010, 20, 2600-2608. | 4.5 | 34 |
| 42 | Evaluation of bioluminescent imaging for noninvasive monitoring of colorectal cancer progression in the liver and its response to immunogene therapy. Molecular Cancer, 2009, 8, 2. | 19.2 | 33 |
| 43 | Phenotypic and metabolic features of mouse diaphragm and gastrocnemius muscles in chronic lung carcinogenesis: influence of underlying emphysema. Journal of Translational Medicine, 2016, 14, 244. | 4.4 | 29 |
| 44 | Targeting aberrant DNA methylation in mesenchymal stromal cells as a treatment for myeloma bone disease. Nature Communications, 2021, 12, 421. | 12.8 | 29 |
| 45 | Segmentation of Touching Cell Nuclei Using a Two-Stage Graph Cut Model. Lecture Notes in Computer Science, 2009, , 410-419. | 1.3 | 26 |
| 46 | Î²3 integrin expression is required for invadopodia-mediated ECM degradation in lung carcinoma cells. PLoS ONE, 2017, 12, e0181579. | 2.5 | 25 |
| 47 | Free Form Deformationâ€"Based Image Registration Improves Accuracy of Traction Force Microscopy. PLoS ONE, 2015, 10, e0144184. | 2.5 | 23 |
| 48 | Modeling the Mechanobiology of Cancer Cell Migration Using 3D Biomimetic Hydrogels. Gels, 2021, 7, 17. | 4.5 | 23 |
| 49 | Efficient Blind Spectral Unmixing of Fluorescently Labeled Samples Using Multi-Layer Non-Negative Matrix Factorization. PLoS ONE, 2013, 8, e78504. | 2.5 | 23 |
| 50 | Halton sampling for autofocus. Journal of Microscopy, 2009, 235, 50-58. | 1.8 | 22 |
| 51 | Complementary Effects of Interleukin-15 and Alpha Interferon Induce Immunity in Hepatitis B Virus Transgenic Mice. Journal of Virology, 2016, 90, 8563-8574. | 3.4 | 22 |
| 52 | Tumor ENPP1 (CD203a)/Haptoglobin Axis Exploits Myeloid-Derived Suppressor Cells to Promote Post-Radiotherapy Local Recurrence in Breast Cancer. Cancer Discovery, 2022, 12, 1356-1377. | 9.4 | 22 |
| 53 | CD137 (4-1BB) costimulation of CD8+ T cells is more potent when provided in cis than in trans with respect to CD3-TCR stimulation. Nature Communications, 2021, 12, 7296. | 12.8 | 22 |
| 54 | Automatic segmentation of histological structures in mammary gland tissue sections. Journal of Biomedical Optics, 2004, 9, 444. | 2.6 | 21 |

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|---|---------|-----|-----------|
| 55 | Mapping mammary gland architecture using multi-scale in situ analysis. Integrative Biology (United) Tj ETQq1 1 0.784314 rgBT /Overl | 1.3 | 21 |
| 56 | Absence of telomerase and shortened telomeres have minimal effects on skin and pancreatic carcinogenesis elicited by viral oncogenes. Cancer Cell, 2004, 6, 373-385. | 16.8 | 19 |
| 57 | Evaluation of Monocytes as Carriers for Armed Oncolytic Adenoviruses in Murine and Syrian Hamster Models of Cancer. Human Gene Therapy, 2012, 23, 1258-1268. | 2.7 | 19 |
| 58 | Modulation of Haemophilus influenzae interaction with hydrophobic molecules by the VacJ/MlaA lipoprotein impacts strongly on its interplay with the airways. Scientific Reports, 2018, 8, 6872. | 3.3 | 19 |
| 59 | 3-D Quantification of Filopodia in Motile Cancer Cells. IEEE Transactions on Medical Imaging, 2019, 38, 862-872. | 8.9 | 19 |
| 60 | Individual nodule tracking in micro-CT images of a longitudinal lung cancer mouse model. Medical Image Analysis, 2013, 17, 1095-1105. | 11.6 | 18 |
| 61 | Limiting-Dilution Transplantation Assays in Mammary Stem Cell Studies. Methods in Molecular Biology, 2010, 621, 29-47. | 0.9 | 18 |
| 62 | Non-rigid consistent registration of 2D image sequences. Physics in Medicine and Biology, 2010, 55, 6215-6242. | 3.0 | 16 |
| 63 | Applications of quantitative digital image analysis to breast cancer research. Microscopy Research and Technique, 2002, 59, 119-127. | 2.2 | 15 |
| 64 | Efficient classifier generation and weighted voting for atlas-based segmentation: two small steps faster and closer to the combination oracle. Proceedings of SPIE, 2008, , . | 0.8 | 15 |
| 65 | NaroNet: Discovery of tumor microenvironment elements from highly multiplexed images. Medical Image Analysis, 2022, 78, 102384. | 11.6 | 15 |
| 66 | A tool for the quantitative spatial analysis of complex cellular systems. IEEE Transactions on Image Processing, 2005, 14, 1300-1313. | 9.8 | 14 |
| 67 | Robust, Standardized Quantification of Pulmonary Emphysema in Low Dose CT Exams. Academic Radiology, 2011, 18, 1382-1390. | 2.5 | 14 |
| 68 | NMF-RI: blind spectral unmixing of highly mixed multispectral flow and image cytometry data. Bioinformatics, 2020, 36, 1590-1598. | 4.1 | 14 |
| 69 | Spatially Variant Convolution With Scaled B-Splines. IEEE Transactions on Image Processing, 2010, 19, 11-24. | 9.8 | 13 |
| 70 | Multiscalein situanalysis of the role of dyskerin in lung cancer cells. Integrative Biology (United) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 14 | 1.3 | 13 |
| 71 | Toward a Morphodynamic Model of the Cell: Signal processing for cell modeling. IEEE Signal Processing Magazine, 2015, 32, 20-29. | 5.6 | 13 |
| 72 | Quantitative Image Analysis in Mammary Gland Biology. Journal of Mammary Gland Biology and Neoplasia, 2004, 9, 343-359. | 2.7 | 12 |

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| 73 | A Novel Automated Microscopy Platform for Multiresolution Multispectral Early Detection of Lung Cancer Cells in Bronchoalveolar Lavage Samples. IEEE Systems Journal, 2014, 8, 985-994. | 4.6 | 12 |
| 74 | Quantitative in vivo microscopy: the return from the â€˜omicsâ€™. Current Opinion in Biotechnology, 2006, 17, 501-510. | 6.6 | 11 |
| 75 | Numerical estimation of 3D mechanical forces exerted by cells on non-linear materials. Journal of Biomechanics, 2013, 46, 50-55. | 2.1 | 11 |
| 76 | Registration of multiple stained histological sections. , 2013, , . | | 11 |
| 77 | Preclinical Evaluation of the Antimicrobial-Immunomodulatory Dual Action of Xenohormetic Molecules against Haemophilus influenzae Respiratory Infection. Biomolecules, 2019, 9, 891. | 4.0 | 10 |
| 78 | Smokers with CT Detected Emphysema and No Airway Obstruction Have Decreased Plasma Levels of EGF, IL-15, IL-8 and IL-1ra. PLoS ONE, 2013, 8, e60260. | 2.5 | 9 |
| 79 | Blind Spectral Unmixing of M-FISH Images by Non-negative Matrix Factorization. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 6248-51. | 0.5 | 8 |
| 80 | Cardiotrophin-1 determines liver engraftment of syngenic colon carcinoma cells through an immune system-mediated mechanism. OncoImmunology, 2012, 1, 1527-1536. | 4.6 | 8 |
| 81 | Segmentation of actin-stained 3D fluorescent cells with filopodial protrusions using convolutional neural networks. , 2018, , . | | 8 |
| 82 | In Situ Analysis of Cell Populations: Long-Term Label-Retaining Cells. Methods in Molecular Biology, 2010, 621, 1-28. | 0.9 | 8 |
| 83 | Use of Stem Cell Markers in Dissociated Mammary Populations. Methods in Molecular Biology, 2010, 621, 49-55. | 0.9 | 8 |
| 84 | Validation tool for traction force microscopy. Computer Methods in Biomechanics and Biomedical Engineering, 2015, 18, 1377-1385. | 1.6 | 7 |
| 85 | <title>Analysis of the 3D spatial organization of cells and subcellular structures in tissue</title>. , 2000, 3921, 66. | | 6 |
| 86 | Design and validation of a tunable inertial microfluidic system for the efficient enrichment of circulating tumor cells in blood. Bioengineering and Translational Medicine, 2022, 7, . | 7.1 | 5 |
| 87 | Fast tracking of fluorescent cells based on the Chan-Vese model. , 2012, , . | | 4 |
| 88 | Muscular and Tendon Degeneration after Achilles Rupture: New Insights into Future Repair Strategies. Biomedicines, 2022, 10, 19. | 3.2 | 4 |
| 89 | Segmentation on nuclei and cells using membrane related protein markers. Journal of Microscopy, 2006, 222, 67-67. | 1.8 | 3 |
| 90 | Computer Assisted Detection of Cancer Cells in Minimal Samples of Lung Cancer. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 5517-20. | 0.5 | 3 |

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| 91 | A Two-Phase Segmentation of Cell Nuclei Using Fast Level Set-Like Algorithms. Lecture Notes in Computer Science, 2009, , 390-399. | 1.3 | 3 |
| 92 | Automatic leakage detection and recovery for airway tree extraction in chest CT images. , 2010, , . | | 3 |
| 93 | Quantification of the 3D collagen network geometry in confocal reflection microscopy. , 2015, , . | | 3 |
| 94 | Quantitative Assessment of Emphysema Severity in Histological Lung Analysis. Annals of Biomedical Engineering, 2015, 43, 2515-2529. | 2.5 | 3 |
| 95 | Unsupervised Learning of Contextual Information in Multiplex Immunofluorescence Tissue Cytometry. , 2020, , . | | 3 |
| 96 | Restoration of Biomedical Images using Locally Adaptive B-Spline Smoothing. , 2007, , . | | 2 |
| 97 | Modeling airway probability. , 2013, , . | | 2 |
| 98 | Characterization of the role of collagen network structure and composition in cancer cell migration. , 2015, 2015, 8139-42. | | 2 |
| 99 | Development and multimodal characterization of an elastase-induced emphysema mouse disease model for the COPD frequent bacterial exacerbator phenotype. Virulence, 2021, 12, 1672-1688. | 4.4 | 2 |
| 100 | CRMP2 as a Candidate Target to Interfere with Lung Cancer Cell Migration. Biomolecules, 2021, 11, 1533. | 4.0 | 2 |
| 101 | A tool for the quantitative spatial analysis of mammary gland epithelium. , 2004, 2004, 1549-52. | | 1 |
| 102 | Photon migration simulator for fluorescence tomography. Proceedings of SPIE, 2008, , . | 0.8 | 1 |
| 103 | Characterization of emphysema in low dose computed tomography images using maximum likelihood estimation of the scale exponent. , 2012, , . | | 1 |
| 104 | Detecting airway remodeling in COPD and emphysema using low-dose CT imaging. Proceedings of SPIE, 2012, , . | 0.8 | 1 |
| 105 | A probabilistic model of emphysema based on granulometry analysis. , 2013, , . | | 1 |
| 106 | Atlas-based segmentation of brainstem regions in neuromelanin-sensitive magnetic resonance images. , 2015, , . | | 1 |
| 107 | Synplex: a synthetic simulator of highly multiplexed histological images. , 2021, , . | | 1 |
| 108 | Miniaturized microscope for high throughput screening of tumor spheroids in microfluidic devices. , 2018, , . | | 1 |

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| 109 | <title>Two-dimensional defocusing correction using artificial neural nets</title>. , 1998, 3261, 127. | | 0 |
| 110 | A System for Computer-based Reconstruction of 3-Dimensional Structures from Serial Tissue Sections: an Application to the Study of Normal and Neoplastic Mammary Gland Biology. Microscopy and Microanalysis, 2001, 7, 964-965. | 0.4 | 0 |
| 111 | Microscopy environment for quantitative spatial and temporal analysis of multicellular interactions. , 2002, , . | | 0 |
| 112 | Automatic segementation of histological structures in normal and neoplastic mammary gland tissue sections. , 2003, , . | | 0 |
| 113 | Quantitative Three-Dimensional Microscopy Approaches With Applications in Breast Cancer Biology Including Measurement of Genomic Instability. Journal of Mammary Gland Biology and Neoplasia, 2004, 9, 383-391. | 2.7 | 0 |
| 114 | RESTORATION OF MICRO-CT IMAGES USING LOCALLY ADAPTIVE B-SPLINE SMOOTHING. , 2007, , . | | 0 |
| 115 | Automation of the detection of lung cancer cells in minimal samples of bronchioalveolar lavage. , 2008, , . | | 0 |
| 116 | Individual nodule tracking in micro-CT images of a mouse model of lung cancer. , 2012, , . | | 0 |
| 117 | Automatic quantification of filopodia-based cell migration. , 2013, , . | | 0 |
| 118 | Quantification of pulmonary vessel diameter in low-dose CT images. Proceedings of SPIE, 2015, , . | 0.8 | 0 |
| 119 | Abstract 178: Quantification of matrix remodeling during H1299 lung cancer cell migration in microfluidic devices. , 2018, , . | | 0 |
| 120 | Title is missing!. , 2020, 15, e0220019. | | 0 |
| 121 | Title is missing!. , 2020, 15, e0220019. | | 0 |
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