

Constantino Carlos Reyes - Aldasoro

Current Position	Senior Lecturer in Biomedical Image Analysis
Work Address	School of Mathematics, Computer Science and Engineering City, University of London College, Northampton Square EC1V 0HB, UK
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Mathworks:	https://uk.mathworks.com/matlabcentral/fileexchange/?term=authorid%3A1015277
Nationality	British / Mexican

Skills and Interests

- Twenty years of academic experience at undergraduate, postgraduate and continuous education levels in the areas of Computer Science, Engineering, Physics and Medicine.
- Interdisciplinary experience in applied Image Processing, Analysis and Visualisation, mainly in biomedical areas, with emphasis on, but not exclusively, Cancer, Microcirculation and Inflammation.
- Extensive experience in algorithm development and programming for Image Analysis, Computer Vision, Machine Learning, Web-based Processing (www.caiman.org.uk), and Data Mining, (Published book "Biomedical Image Analysis Recipes in Matlab", Wiley).
- Practical experience with Intravital, Fluorescence, Multispectral Microscopy, Computed Tomography and Magnetic Resonance Imaging.
- Conference organisation experience: *European Conference Digital Pathology 2019, BMVA Computer Vision and Modelling in Cancer 2017, Medical Image Understanding and Analysis 2014, Angiogenesis Network Angionet 2007*.
- Academic editor: *PLOS ONE, Oncology News, Journal of Imaging, Immuno-informatics*.
- Guest editor: *IET Computer Vision, Medical Image Analysis, Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization*

Memberships

BMVA British Machine Vision Association	<i>Member</i>
IEEE Institution of Electrical and Electronic Engineers	<i>Senior Member</i>
IET The IET Vision and Imaging Network	<i>Committee Member</i>
MIUA Medical Image Understanding and Analysis	<i>Steering Committee (Chair 2015-17)</i>
BACR British Association for Cancer Research	<i>Member (ExCo Member 2013-16)</i>
EACR European Association for Cancer Research	<i>Member</i>
SNI Sistema Nacional de Investigadores CONACYT	<i>Investigador Nivel I</i>
HEA Higher Education Academy	<i>Fellow</i>

Education

2011-2012	<u>Postgraduate Certificate in Learning and Teaching in Higher Education</u> University of Sussex
2001-2004	<u>PhD in Computer Science</u> The University of Warwick, UK.
1993-1994	<u>MSc in Communications and Signal Processing</u> Imperial College of Science, Technology and Medicine, UK
1987-1993	<u>BS in Mechanical and Electrical Engineering</u> Facultad de Ingeniería, UNAM, México

Research Grants Awarded

2020	Co-I	Australian Research Council, The macrophage nucleus - its form and function during migration in vivo. <i>PI G Lieschke (Monash), Co-I CCRA</i>	AU\$ 389k
2018	Co-I	Innovate UK , Raven: to Locate and Identify Online Extremist Multimedia. <i>PI: T Chen, City, University of London</i>	£97k
2018	PI	Royal Devon And Exeter Healthcare Trust , Prediction of Failure of Emergency Department Closed Manipulation of Colles' Distal Radial Fractures, <i>Co-I Dr. K Knapp, Exeter U.</i>	£1,805
2016	Co-I	Leverhulme Trust , Measuring articulation asymmetry of English speech sounds, <i>PI: J. Verhoeven, City, University of London</i>	£238k
2016	Co-I	Australian Research Council , Nuclear plasticity during neutrophil migration and function, <i>PI: G. Lieschke, Monash U.</i>	AU\$390k ~£218k
2015	PI	Pump Priming, City University , Towards a Virtual Neutrophil	£5,000
2014	Co-I	Australian National Health and Medical Research Council , Cellular and molecular mechanisms of fungal infection pathogenesis and therapy, <i>PI: G. Lieschke, Monash University</i>	AU\$542k ~£300k
2012	PI	Seed Corn Funding, University of Sussex , Phagosight, an open-source MATLAB® package for the analysis of fluorescent neutrophil and macrophage migration. <i>RA: Carlos Ramos-López</i>	£3,000
2008	Co-I	Engineering and Medicine devolved budget, University of Sheffield . Modelling of in vivo Neutrophil Chemotaxis and activation in Zebrafish <i>PI: V. Kadiramanathan, Sheffield.</i>	£2,761

Research and Academic Experience

2015 –	<u>Senior Lecturer in Biomedical Image Analysis</u> City, University of London School of Math, Computer Science & Engineering
2013 – 2015	<u>Lecturer in Biomedical Image Analysis</u> City University London School of Engineering and Mathematical Sciences,
2011 – 2013	<u>Lecturer in Biomedical Engineering</u> University of Sussex School of Engineering and Informatics,
2009 – 2011	<u>Research Fellow</u> The University of Sheffield , Cancer Research UK Tumour Microcirculation Group
2005 – 2008	<u>Postdoctoral Research Associate</u> The University of Sheffield , Cancer Research UK Tumour Microcirculation Group
2001 – 2004	<u>Graduate Teaching Assistant</u> The University of Warwick, UK
1998 – 2000	<u>Associate Professor</u> Instituto Tecnológico Autónomo de México , Digital Systems Department
1996 – 1997	<u>Assistant Professor</u> Instituto Tecnológico y de Estudios Superiores de Monterrey
1995	<u>Researcher</u> Instituto de Investigaciones Eléctricas, Cuernavaca Morelos <i>Telecommunications in Electrical Power Industry</i>

Administrative and Leadership Experience

- **Academic Programme Director**
 - MSc in Innovation and Entrepreneurship in Healthcare Technologies, City, under development
 - MSc in Biomedical Engineering with Healthcare Management, City, 2016-2020
 - BEng Telecommunications, City, 2014-2016
 - Telecommunications Engineering, ITAM, 1998-2000
 - Activities: promotional visit to schools, design of individual modules (UG/PG), laboratories (UG/PG), and UG programmes, critical review, a range of teaching and assessment activities, course alignment, admissions.

- **Senior Academic Advisor**, Sussex overseeing student experience and evaluating cases of extenuating circumstances and support for students.
- **Executive Committee Member**, British Association for Cancer Research 2013-2016. Oversee the general activities of the Association: organisation of scientific meetings, awarding funds to promote scientific exchange and collaborations. Proposed and delivered an overhaul of the Website, Communications, and Recording of meetings.
- **Steering Committee Member 2012-present (Chair 2015-2017)**, Medical Image Understanding and Analysis Conference. Oversee the smooth running of the annual conference. Evaluate bids to allocate the conference to different host institutions.

Teaching Experience

- Two decades of extensive teaching experience in different countries, students with backgrounds ranging from Engineering and Computer Science to Medicine and Physics. Modules delivered:
 - **BMVA Summer School**: Introduction to Biomedical Imaging
 - **City**: Introduction to Biomedical Engineering, Biosignal and Image Processing, Medical Imaging, Object Oriented Programming, Computer Networks and Systems
 - **Sussex**: Circuits and Electronics, Computer Networks, Advanced Network Technologies
 - **Sheffield**: Introduction to Image Analysis (to students of Medicine / Physics)
 - **Warwick**: Introduction to Computer Programming, Design of Information Structures, Distributed Multimedia Systems
 - **ITAM**: Electromagnetic Theory, Waves, Microwaves and Antennas, Telecommunications Systems and Services, Signals and Systems, Radiation and Propagation
 - **ITESM**: Communication Systems, Electromagnetic Theory, Computer Networks,
- Excellent teaching scores across institutions: *Best lecturer* of the Digital Systems Department, ITAM for two semesters. *Highest ranked lecturer* at Sussex (out of 595) in 2013 according to www.rateyourlecturer.co.uk. Regular MEQ evaluations of 4.5-5.0 at City.

Publications

***h*-index = 24, *i*10-index = 39, citations = 2,226 Google Scholar (Feb 2021)**

Books

1. **Reyes-Aldasoro, CC**, "Biomedical Image Analysis Recipes in Matlab®: For Life Scientists and Engineers", Wiley, ISBN: 978-1-118-65755-3, June 2015.

Edited Proceedings

1. Reyes-Aldasoro, et al. (Eds), **15th European Congress in Digital Pathology**, Warwick, UK, April 10-13, ECDP, LNCS 11435, 2019.
2. **Constantino Carlos Reyes-Aldasoro**, Greg Slabaugh, (Eds.) **Medical Image Understanding and Analysis 2014**, ISBN: 1-901725-51-0, July 2014.

Book Chapters

- 1 GM Tozer, R Daniel, SJ Lunt, **CC Reyes-Aldasoro**, VJ Cunningham, Haemodynamics and Oxygenation of the Tumour Microcirculation, *Adv Intravital Microscopy*, R Weigert (Ed.) 2014 125-141
- 2 **Reyes-Aldasoro, CC** and A. Bhalerao, "Volumetric Texture Analysis in Biomedical Imaging", in *Biomedical Diagnostics and Clinical Technologies: Applying High-Performance Cluster and Grid Computing*, Pereira, M., Freire, M. (Eds.), 200-252, 2011.

Peer-Reviewed Journals

1. R Jaffari, MA Hashmani, **CC Reyes-Aldasoro**, A Novel Focal Phi Loss for Power Line Segmentation with Auxiliary Classifier U-Net, *Sensors* (2021) 21 (8), 2803
2. F Bianconi, JN Kather, **CC Reyes-Aldasoro**, Experimental Assessment of Color Deconvolution and Color Normalization for Automated Classification of Histology Images Stained with Hematoxylin and Eosin, *Cancers* (2020) 12 (11), 3337
3. C Karabağ, ML Jones, CJ Peddie, AE Weston, LM Collinson, **CC Reyes-Aldasoro**, Semantic segmentation of HeLa cells: An objective comparison between one traditional algorithm and four deep-learning architectures, *PLOS One* (2020), 15(10), e0230605
4. MA Ortega-Ruiz, C Karabağ, V García Garduño, **CC Reyes-Aldasoro**, Morphological Estimation of Cellularity on Neo-Adjuvant Treated Breast Cancer Histological Images, *J Imaging* (2020), 6 (10)
5. **CC Reyes-Aldasoro**, KH Ngan, Ananda, A d'Avila Garcez, A Appelboam, KM Knapp, Geometric semi-automatic analysis of radiographs of Colles' fractures, *PLOS One* (2020), 15 (9), e0238926
6. C Mitchell, L Caroff, JA Solis-Lemus, **CC Reyes-Aldasoro**, A Vigilante, F Warburton, F de Chaumont, A Dufour, S Dallongeville, JC Olivo-Marin, R Knight, Cell Tracking Profiler: a user-driven analysis framework for evaluating 4D live cell imaging data, *Journal of Cell Science* (2020) jcs.241422 doi: 10.1242/jcs.241422

7. T Stiff, FR Echegaray-Iturra, HJ Pink, A Herbert, **CC Reyes-Aldasoro**, Helfrid Hochegger, Prophase-Specific Perinuclear Actin Coordinates Centrosome Separation and Positioning to Ensure Accurate Chromosome Segregation, *Cell reports* (2020) 31 (8), 107681
8. JA Solís-Lemus, BJ Sánchez-Sánchez, S Marcotti, M Burki, B Stramer, **CC Reyes-Aldasoro**, Comparative Study of Contact Repulsion in Control and Mutant Macrophages Using a Novel Interaction Detection, *Journal of Imaging* (2020), 6 (5), 36
9. JM Nouri, I Vasilakos, Y Yan, **CC Reyes-Aldasoro**, Effect of Viscosity and Speed on Oil Cavitation Development in a Single Piston-Ring Lubricant Assembly, *Lubricants* (2019) 7(10), 88
10. V Pazhakh, F Ellett, JA O'Donnell, L Pase, KE Schulze, RS Greulich, **CC Reyes-Aldasoro**, BA Croker, A Andrianopoulos, GJ Lieschke, β -glucan dependent shuttling of conidia from neutrophils to macrophages occurs during fungal infection establishment, *PLOS Biology* (2019), 17(9), e3000113
11. C Karabağ, J Verhoeven, NR Miller, **CC Reyes-Aldasoro**, Texture Segmentation: An Objective Comparison between Five Traditional Algorithms and a Deep-Learning U-Net Architecture, *Appl. Sci.* (2019), 9(18), 3900
12. C Karabağ, ML Jones, CJ Peddie, AE Weston, LM Collinson, **CC Reyes-Aldasoro**, Segmentation and Modelling the nuclear envelope of HeLa cells, *J Imaging* (2019), 5(9), 75
13. J Verhoeven, NR Miller, L Daems, **CC Reyes-Aldasoro**, Visualisation and Analysis of Speech Production with Electropalatography, *J Imaging* (2019) 5 (3), pp. 1-40
14. JN Kather, J Krisam, P Charoetong, T Luedde, E Herpel, C-A Weis, T Gaiser, A Marx, NA Valous, D Ferber, L Jansen, **CC Reyes-Aldasoro**, I Zornig, D Jäger, H Brenner, J Chang-Claude, M Hoffmeister, & N Halama, Predicting survival from colorectal cancer histology slides using deep learning: A retrospective multicenter study, *PLoS Medicine* (2019), vol. 16, Is. 1, pp e1002730
15. JA Solís-Lemus, B Stramer, G Slabaugh, **CC Reyes-Aldasoro**, Macrosight: A Novel Framework to Analyze the Shape and Movement of Interacting Macrophages Using Matlab®, *J Imaging* (2019), 5(1), pp. 1-17
16. JN Kather, AS Berghoff, D Ferber, M Suarez-Carmona, **CC Reyes-Aldasoro**, NA Valous, R Rojas-Moraleda, D Jäger & N Halama, Large-scale database mining reveals hidden trends and future directions for cancer immunotherapy, *Oncotmunology* (2018), DOI: 10.1080/2162402X.2018.1444412
17. S Leandrou, S Petroudi, PA, Kyriacou, **CC Reyes-Aldasoro** and CS Pattichis, Quantitative MRI Brain Studies in the Assessment of Dementia: A Review, *IEEE Trans Biomed Eng* (2018), vol. 11, no. 99, pp. 97-111 doi: 10.1109/RBME.2018.2796598
18. M Moazzam Jawaid, S Narejo, N Pirzada, J Baloch, **CC Reyes-Aldasoro**, G Slabaugh, Automated quantification of non-calcified coronary plaques in cardiac CT angiographic imagery, *Int J Adv Comp Sci Appl*, (2018) vol. 9(7), pp. 216-222
19. JA Solís-Lemus, B Stramer, G Slabaugh, **CC Reyes-Aldasoro**, Segmentation and Shape Analysis of Macrophages Using Anglegram Analysis, *Journal of Imaging*, 2017, 4 (1), pp. 2-20
20. V Ulman, M Maška, K Magnusson, O Ronneberger, C Haubold, P Matula, P Matula, D Svoboda, M Radojevic, I Smal, N Harder, O Dzyubachyk, P Xiao, Y Li, A Dufour, JA Solís-Lemus, **CC Reyes-Aldasoro**, R Bensh, J Stegmaier, TJA Esteves, Ö Demirel, E Meijering, A Muñoz-Barrutia, M Kozubek, C Ortiz-de-Solorzano, An objective comparison of cell tracking algorithms, *Nature Methods*, 30 Oct 2017 volume 14, pages 1141–1152 (2017) doi:10.1038/nmeth.4473
21. MM Jawaid, A Riaz, R Rajani, **CC Reyes-Aldasoro**, G Slabaugh, Framework for detection and localization of coronary non-calcified plaques in cardiac CTA using mean radial profiles, *Computers in Biology and Medicine*, (2017), v. 89, pp. 84-95
22. MM Jawaid, R Rajani, P Liatsis, **CC Reyes-Aldasoro**, G Slabaugh, A hybrid energy model for region based curve evolution—Application to CTA coronary segmentation, *Computer Methods and Programs in Biomedicine*, (2017), v.144, 189-202
23. **CC Reyes-Aldasoro**, The proportion of cancer-related entries in PubMed has increased considerably; is cancer truly “The Emperor of All Maladies”?, *PLOS ONE*, (2017) 12 (3), e0173671
24. Foote CA, Castorena-Gonzalez JA, Ramirez-Perez FI, Jia G, Hill MA, **Reyes-Aldasoro CC**, Sowers JR and Martinez-Lemus LA (2016) Arterial Stiffening in Western Diet-Fed Mice Is Associated with Increased Vascular Elastin, Transforming Growth Factor- β , and Plasma Neuraminidase *Front. Physiol.* 7:285. doi: 10.3389/fphys.2016.00285
25. Fonseca, J, Nadimi, S, **Reyes-Aldasoro, CC**, Coop, MR, Image-based Investigation into the primary fabric of stress-transmitting particles in sand, *Soils and Foundations* 2016
26. Pennington KA, Ramirez-Perez FI, Pollock KE, Talton OO, Foote CA, **Reyes-Aldasoro CC**, et al. (2016) Maternal Hyperleptinemia Is Associated with Male Offspring's Altered Vascular Function and Structure in Mice. *PLoS ONE* 11(5): e0155377. doi:10.1371/journal.pone.0155377
27. Bender, SB, Castorena-Gonzalez, JA, Garro, M, **Reyes-Aldasoro, CC**, Sowers, JR, DeMarco, VG, Martinez-Lemus, LA, Regional variation in arterial stiffening and dysfunction in western diet-induced obesity, *Am J Physiology*, June 2015, Aug 15; 309(4):H574-82, DOI: 10.1152/ajpheart.00155.2015.
28. Kather, JN, Marx, A, **Reyes-Aldasoro, CC**, Schad, LR, Zöllner, FG, Weis, CA, Continuous representation of tumor microvessel density and detection of angiogenic hotspots in histological whole- slide images, *Oncotarget*, (2015) Jun 8 Aug 7;6(22):19163-76.
29. Tengfei Y, Ali, FH, **Reyes-Aldasoro, CC**, A Robust and Artifact Resistant Algorithm of Ultrawideband Imaging System for Breast Cancer Detection, *IEEE Trans Biomed Eng* (2015) Vol.62, no.6, pp.1514-25, 2015.
30. Blazakis, KN, Madzvamuse, A, **Reyes-Aldasoro, CC**, Styles, V, Venkataraman, C, Whole cell tracking through the optimal control of geometric evolution laws, (2015), *J. Comp. Physics*, V 297, pp 495–514.

31. Williams, LJ, Mukherjee, D, Fisher, M, **Reyes-Aldasoro, CC**, Akerman, S, Kanthou, C, Tozer, GM, An in vivo role for Rho kinase activation in the tumour vascular disrupting activity of combretastatin A-4 3-O-phosphate, *Brit J Pharmacology*, (2014) Nov, Vol. 171(21), 4902-13
32. Kanthou, C, Dachs, GU, Lefley, DV, Steele, AJ, Coralli-Foxon, C, Harris, S, Greco, O, Dos Santos, SA, **Reyes-Aldasoro, CC**, English, WR, Tozer, GM, Tumour Cells Expressing Single VEGF Isoforms Display Distinct Growth, Survival and Migration Characteristics, *PLoS one*, (2014) 9, 8, e104015
33. **Reyes-Aldasoro, CC**, Three-dimensional Textures and Trace Transforms: a Tribute to Professor Maria Petrou, (2014) *Pattern Recognition Letters*, Vol. 48, 2-7
34. S de Oliveira, **CC Reyes-Aldasoro**, S Candel, SA Renshaw, V Mulero, Â Calado, Cxcl8 (IL-8) Mediates Neutrophil Recruitment and Behavior in the Zebrafish Inflammatory Response, *Journal of Immunology* (2014), Vol. 190 (8), 4349-4359
35. Akerman, S, Fisher, M, Daniel, R, Lefley, D, **Reyes-Aldasoro, CC**, Lunt, SJ, Harris, S, Björndahl, M, Williams, L, Evans, H, Barber, P, Prise, V, Vojnovic, B, Kanthou, C, Tozer, G, Influence of soluble or matrix-bound isoforms of vascular endothelial growth factor-A on tumour response to vascular-targeted strategies, *Int J Cancer* (2014), Vol. 133 (11), 2563-2576, 2013
36. Henry, KM, Pase, L, Ramos-Lopez, CF, Lieschke, GJ, Renshaw, SA, **Reyes-Aldasoro, CC**, PhagoSight: an open-source MATLAB® package for the analysis of fluorescent neutrophil and macrophage migration in a zebrafish model, *PLoS one*, 8, 8, e72636, 2013
37. **Reyes-Aldasoro, CC**, Björndahl, MA, Akerman, S, Ibrahim J, Tozer, GM, Online chromatic and scale-space microvessel-tracing analysis for transmitted light optical images, *Microvascular Research* (2011) Vol. 84(3), 330-339
38. Holmes GR, Anderson SR, Dixon G, Robertson AL, **Reyes-Aldasoro CC**, Billings SA, Renshaw SA, Kadirkamanathan V, "Repelled from the wound, or randomly dispersed? Reverse migration behaviour of neutrophils characterized by dynamic modelling", *J R Soc Interface* (2012), Vol. 9(77), 3229-39
39. L Pase, J.E Layton, C Wittmann, F Ellett, C.J Nowell, **CC Reyes-Aldasoro**, S Varma, KL Rogers, CJ Hall, MC Keightley, PS Crosier, C Grabher, JK Heath, SA Renshaw, GJ Lieschke, "Neutrophil-delivered myeloperoxidase dampens the hydrogen peroxide burst after tissue wounding in zebrafish", *Current Biology* (2012) Vol. 22(19), 1818-1824
40. G Holmes, G Dixon, S Anderson, **CC Reyes-Aldasoro**, P Elks, SA Billings, M Whyte, V Kadirkamanathan and SA Renshaw "Drift-diffusion analysis of neutrophil migration during inflammation resolution in a zebrafish model", *Adv Hematology* (2012) Vol. 2012, Article ID 792163, 8 pages, 2012.
41. V Kadirkamanathan, SR Anderson, SA Billings, X Zhang, G.R Holmes, **CC Reyes-Aldasoro**, PM Elks, SA Renshaw, "The Neutrophil's Eye-View: Inference and Visualisation of the Chemoattractant Field Driving Cell Chemotaxis In Vivo", *PLoS ONE* (2012), Vol. 7(4), e35182
42. Elks PM, van Eeden FJ, Dixon G, Wang X, **Reyes-Aldasoro CC**, Ingham PW, Whyte MK, Walmsley SR, Renshaw SA, "Activation of Hif-1 α delays inflammation resolution by reducing neutrophil apoptosis and reverse migration in a zebrafish inflammation model", *Blood*, (2011) Vol. 118(3), 712-722.
43. Lunt, SJ, S Akerman, SA Hill, V J Wright, **CC Reyes-Aldasoro**, GM Tozer and C Kanthou, "Vascular effects dominate solid tumor response to treatment with combretastatin A- 4-phosphate", *Int J Cancer* (2011) Vol. 129(8) 1979-1989.
44. **Reyes-Aldasoro, CC**, LJ Williams, S Akerman, C Kanthou, GM Tozer, "An automatic segmentation algorithm for the morphological analysis of microvessels in immunostained histological tumour sections" *J Microscopy* (2011), Vol. 242(3), 262-278.
45. Akerman, S, **Reyes-Aldasoro, CC**, Fisher, M, Pettyjohn, KJ, Björndahl, MA, Evans, H, Tozer, GM, "Microflow of fluorescently labelled red blood cells in tumours expressing single isoforms of VEGF and their response to VEGF-R tyrosine kinase inhibition", *Med Eng Physics* (2011) 33(7), 805-9
46. **Reyes-Aldasoro, CC**, MK Griffiths, D Savas and GM Tozer, "CAIMAN: An online algorithm repository for Cancer Image Analysis", *Comp Meth Program Biomedicine* (2011) Vol. 103(2), 97-103.
47. Lunt, S.J, Gray, C, **Reyes-Aldasoro, CC**, Matchar, S Tozer, GM, "The Application of Intravital Microscopy in Studies of Tumour Microcirculation", *J Biomedical Optics* (2010) Vol. 15(1), Jan/Feb.
48. **Reyes-Aldasoro, CC**, "Retrospective shading correction algorithm based on signal envelope estimation", *Electronics Letters* (2009), 23 April 2009 – Vol. 45(9), 454-456.
49. **Reyes-Aldasoro, CC**, Biram, D, Tozer, GM, and Kanthou, K, "Measuring cellular migration with image processing", *Electronics Letters*, (2008) 19 June 2008 – Vol. 44(13), 791-793.
50. GM Tozer, Akerman, S, PR Barber, MA Björndahl, S Harris, SA Hill, DJ Honess, CR Ireson, C Kanthou, KL Pettyjohn, VE Prise, **CC Reyes-Aldasoro**, C Ruhrberg, D Shima, "Blood vessel maturation and response to vascular-disrupting therapy in single VEGF-A isoform-producing tumours", *Cancer Res* 2008 68(7), 2301-2311.
51. **Reyes-Aldasoro, CC**, S Akerman and GM Tozer, "Measuring the Velocity of Fluorescently Labelled Red Blood Cells with a Keyhole Tracking Algorithm", *J Microsc* (2008) Vol. 229(1), 162-173
52. **Reyes-Aldasoro, CC**, I Wilson, VE Prise, PR Barber, SM Ameer-Beg, B Vojnovic, VJ Cunningham and GM Tozer, "Estimation of Apparent Tumour Vascular Permeability from Multiphoton Fluorescence Microscopic Images of P22 Rat Sarcomas in vivo", *Microcirc* (2008) Vol. 15(1), 65-79
53. **Reyes-Aldasoro, CC**, and A Bhalerao, "Volumetric Texture Segmentation by Discriminant Feature Selection and Multiresolution Classification" *IEEE Trans Med Imaging* (2007) Vol. 25(1), 1-14.

54. **Reyes-Aldasoro, CC**, and A Bhalerao, "The Bhattacharyya space for feature selection and its application to texture segmentation", *Patt Recognition* (2006) Vol. 39(5), May 2006, 812-826.
55. **Reyes-Aldasoro, CC**, Algorri ME, "A combined algorithm for image segmentation using neural networks and 3D surface reconstruction using dynamic meshes", *Rev Mex Ing Biomed* 2000 21(3), 73-81.
56. **Reyes-Aldasoro, CC**, A Ganguly, G Lemus, A Gupta, "A Hybrid Model Based on Dynamic Programming, Neural Networks and Surrogate Value for Inventory Optimisation Applications", *J Operational Res Soc* (1999) Vol. 50(1), 85-94.

Selected Conference Proceedings

- 1 N Olliverre, G Yang, G Slabaugh, **CC Reyes-Aldasoro**, E Alonso, Generating Magnetic Resonance Spectroscopy Imaging Data of Brain Tumours from Linear, Non-Linear and Deep Learning Models, in *MICCAI Sashimi 2018*, Granada, Spain.
- 2 C Karabag, ML Jones, CJ Peddie, AE Weston, LM Collinson, **CC Reyes-Aldasoro**, Segmentation and Modelling of Hela Nuclear Envelope, in *IEEE ISBI 2018*, Venice, Italy.
- 3 **CC Reyes-Aldasoro**, M Barri, M Hafezparast, Automatic Segmentation of Focal Adhesions From Migrating Mouse Embryonic Fibroblasts, in *IEEE ISBI 2015*, Brooklyn
- 4 A Bhalerao, L Pase, GJ Lieschke, SA Renshaw, **CC Reyes-Aldasoro**, Local affine texture tracking for serial registration of zebrafish images, *IEEE ISBI 2012*, Barcelona, 434-437
- 5 **Reyes-Aldasoro, CC**, S. Akerman and GM Tozer, "Measuring Red Blood Cell Velocity with a Keyhole Tracking Algorithm", in *MEDICON 2007*, IFMBE Proceedings, Vol. 16, Part 22, 810-813
- 6 **Reyes-Aldasoro, CC** and A. Bhalerao, "Volumetric Texture Description and Discriminant Feature Selection for MRI", in *IPMI 2003 LNCS* Vol. 2732/2003, 282-293.

Invited Presentations

- 1 Processing and analysing microscopy images with MATLAB, *Medical Image Understanding and Analysis 2017*, 9 July 2017, Edinburgh UK.
- 2 Immuno-histo-what??? The crossroads of medicine, physics, biology, chemistry and computer programming, *Pint of Science Festival*, 17 May 2017, London, UK
- 3 Biomedical Image Analysis with Matlab, (1 Week Course), *Universidad Nacional Autónoma de México*, 16-20 May 2016, Mexico.
- 4 BACR educational workshop: Tools for image analysis in cancer research, *National Cancer Research Institute Conference*, Liverpool, UK 2-5 November 2015
- 5 Image Processing and Pattern Recognition in the Microcirculation, *Angiogenesis Network satellite meeting, 58th Meeting of the British Microcirculation Society* 1-2 April 2008, KCL, UK.

Student Supervision

PhD Completed, City, University of London

1. Jose Alonso Solis-Lemus, *Kinematic analysis of migrating cells*
2. Muhammad Moazzam Jawaid, *Detection, Localization and Quantification of Non-Calcified Coronary Plaques in Contrast Enhanced CTA*
3. Cefa Karabag, *Volumetric Analysis of HeLa cells observed with Electron Microscopy*

PhD Completed, University of Sussex

4. Konstantinos Blazakis, *Computational methods of cell motility with applications to neutrophil migration*
5. Tengfei Yin, *A robust and artifact resistant algorithm of ultrawideband imaging system for breast cancer detection*

PhD Current, City University London

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| 1. Mauricio Ortega, | <i>Analysis of Histopathological Images</i> |
| 2. Nathan Olliverre, | <i>Multi-Voxel MR Spectroscopy Analysis of Brain Tumour Patients</i> |
| 3. Stephanos Leandrou, | <i>Quantitative texture analysis on MRI in the assessment of Alzheimer's disease</i> |
| 4. Ananda Ananda, | <i>Analysis of Colles-type wrist fractures from X-ray images.</i> |
| 5. Riad Ibadulla | <i>High-resolution kernels for optical deep learning in face identification</i> |

PhD External Examinations

Kingston	PhD	17/10/2014	Spyridon BAKAS
Kings College London	PhD	15/12/2014	Simao Pedro PEREIRA COELHO
Swansea	PhD	29/10/2015	Jonathan Lee JONES
Buckingham	PhD	24/02/2016	Shan KHAZENDAR
Birmingham	PhD	25/02/2016	Ting Yue YU
Aberystwyth	PhD	8/07/2016	Andrik RAMPUN
Heriot-Watt	PhD	11/11/2016	Rhodri WILSON

Birmingham	PhD	13/12/2016	Rachel FLIGHT
Durham	PhD	27/05/2017	Carl NELSON
Warwick	PhD	25/09/2017	Tzu-Hsi SONG
Buckingham	PhD	14/12/2017	Omar AL-OKASHI
Bharia University, Pakistan	PhD	23/02/2018	Tehmina KHALIL
Edinburgh	PhD	29/10/2018	Yolanda SOURGIA-KOUTRAKI
Durham	PhD	30/10/2018	Cigdem SASAK
Univ. Politècnica València	PhD	01/03/2019	Rafael ORTIZ RAMON
Warwick	PhD	01/09/2020	Muhamad SHABAN

Awards

2018	MATLAB Online Live Editor Challenge 2018 , Third Place Staff Category https://uk.mathworks.com/academia/student-challenge/matlab-online-live-editor-challenge.html
2017	Journal of Imaging Outstanding Reviewer Award
2007	Best Oral Presentation at the Data Modelling Symposium, Sheffield UK
2005	BACR Hamilton-Fairley Young Investigator Award at the NCRI Cancer Conference, Birmingham UK
2005	Moors Instruments Award at Microcirculation 2005, Durham USA.

Professional/Outreach Activities

ResearchGate	RG Score = 38.56, (Feb 2021)
Journal Editor	<i>Academic Editor: PLoS ONE</i> <i>Academic Editor: Journal of Imaging</i> <i>Associate Editor: Immunoinformatics</i> <i>Assistant Editor: Oncology News</i>
Guest Editor:	<i>Medical Image Analysis 2020</i> <i>IET Computer Vision 2018</i> <i>Annals of the British Machine Vision Association 2015,</i> <i>Comp Meth Biomechanics Biomedical Eng: Imaging & Visualization 2015</i>
Grant Reviewer	BBSRC, EPSRC, MRC, CRUK, NIHR, Agence nationale de la recherche
Journal Reviewer	<i>American Journal of Pathology</i> <i>Annals of the BMVA</i> <i>Computational and Mathematical Methods in Medicine</i> <i>Computer Methods in Biomechanics and Biomedical Engineering</i> <i>IEEE Trans Image Processing</i> <i>IEEE Trans Medical Imaging</i> <i>IEEE Trans Neural Networks</i> <i>IEEE Trans Systems, Man, Cybernetics</i> <i>IET Computer Vision</i> <i>Journal of Imaging</i> <i>Machine Vision and Applications</i> <i>Pattern Analysis and Applications</i> <i>Pattern Recognition</i> <i>Pattern Recognition Letters</i> <i>PLOS ONE</i> <i>Signal, Image and Video Processing</i> <i>Scientific Reports</i> <i>Statistical Analysis and Data Mining.</i>
Conference Chair	<i>BMVA One-day meeting Computer Vision in Cancer 2017</i> , City, University of London (with Greg Slabaugh, City, University of London) <i>Medical Image Understanding and Analysis (MIUA) 2014</i> , City University London (with Greg Slabaugh, City University London) <i>ANGIONET Angiogenesis Network</i> , January 2007, Sheffield University (with Markus Owen, University of Nottingham).
Publicity Chair	<i>IWSSIP International Conference on Systems, Signals and Image Processing</i> , London September 2015
Conference Area /Session Chair	<i>ECDP 2019, BMVC 2007,</i> <i>MIUA 2010, 2011, 2012, 2013, 2014, 2015, 2017, 2018, 2019</i>
Conference Technical Program Committee	<i>MIUA 2010, 2011, 2012, 2013, 2015, 2016, 2017, 2018, 2019</i> <i>MICCAI 2010, 2011, 2012, 2013, 2018, 2019</i> <i>IEEE ISCC 2006, 2007, 2008, 2009, IEEE ISBI 2015, 2016, 2018</i> <i>CompIMAGE'2010, 2011, 2012, IMAGAPP 2008, 2009, 2010, 2011,</i>
Science Ambassador	<i>National Science and Engineering Week 2007, 2009, 2010, 2011, 2018.</i>