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
Email:	reyes@city.ac.uk
Website:	http://staff.city.ac.uk/~sbbk034/
Github:	http://github.com/reyesaldasoro
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	*Member*
IEEE	Institution of Electrical and Electronic Engineers	*Senior Member*
IET	The IET Vision and Imaging Network	*Committee Member*
MIUA	Medical Image Understanding and Analysis	*Steering Committee (Chair 2015-17)*
BACR	British Association for Cancer Research	*Member* (*ExCo Member 2013-16)*
EACR	European Association for Cancer Research	*Member*
SNI	Sistema Nacional de Investigadores CONACYT	*Investigador Nivel I*
HEA	Higher Education Academy	*Fellow*

Education

2011-2012	*Postgraduate Certificate in Learning and Teaching in Higher Educatio*n **University of Sussex**
2001-2004	*PhD in Computer Science* **The University of Warwick, UK.**
1993-1994	*MSc in Communications and Signal Processing* **Imperial College of Science, Technology and Medicine, UK**
1987-1993	*BS in Mechanical and Electrical Engineering* **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. *PI G Lieschke (Monash), Co-I CCRA*	AU$ 389k
2018	Co-I	**Innovate UK**, Raven: to Locate and Identify Online Extremist Multimedia. *PI: T Chen, City, University of London*	£97k
2018	PI	**Royal Devon And Exeter Healthcare Trust**, Prediction of Failure of Emergency Department Closed Manipulation of Colles' Distal Radial Fractures, *Co-I Dr. K Knapp, Exeter U.*	£1,805
2016	Co-I	**Leverhulme Trust**, Measuring articulation asymmetry of English speech sounds, *PI: J. Verhoeven, City, University of London*	£238k
2016	Co-I	**Australian Research Council,** Nuclear plasticity during neutrophil migration and function, *PI: G. Lieschke, Monash U.*	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**,** *PI: G. Lieschke, Monash University*	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. *RA: Carlos Ramos-López*	£3,000
2008	Co-I	**Engineering and Medicine devolved budget, University of Sheffield.** Modelling of in vivo Neutrophil Chemotaxis and activation in Zebrafish *PI: V. Kadirkamanathan, Sheffield.*	£2,761

Research and Academic Experience

2015 – Senior Lecturer in Biomedical Image Analysis
City, University of London School of Math, Computer Science & Engineering

2013 – 2015 Lecturer in Biomedical Image Analysis
City University London School of Engineering and Mathematical Sciences,

2011 –2013 Lecturer in Biomedical Engineering
University of Sussex School of Engineering and Informatics,

2009 –2011 Research Fellow
The University of Sheffield, Cancer Research UK Tumour Microcirculation Group

2005 –2008 Postdoctoral Research Associate
The University of Sheffield, Cancer Research UK Tumour Microcirculation Group

2001 –2004 Graduate Teaching Assistant
The University of Warwick, UK

1998 –2000 Associate Professor
Instituto Tecnológico Autónomo de México, Digital Systems Department

1996 –1997 Assistant Professor
Instituto Tecnológico y de Estudios Superiores de Monterrey

1995 Researcher
Instituto de Investigaciones Eléctricas, Cuernavaca Morelos
Telecommunications in Electrical Power Industry

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, *i10*-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 Solis-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, *OncoImmunology* (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 Solis-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-transmiting 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.015537
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, Bjorndahl, 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-1α 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,** Matcher, 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

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

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
Academic Editor: PLoS ONE
Academic Editor: Journal of Imaging
Associate Editor: ImmunoInformatics
Assistant Editor: Oncology News

Guest Editor:
Medical Image Analysis 2020
IET Computer Vision 2018
Annals of the British Machine Vision Association 2015,
Comp Meth Biomechanics Biomedical Eng: Imaging & Visualization 2015

Grant Reviewer *BBSRC, EPSRC, MRC, CRUK, NIHR, Agence nationale de la recherche*

Journal Reviewer

American Journal of Pathology	*Annals of the BMVA*
Computational and Mathematical Methods in Medicine	
Computer Methods in Biomechanics and Biomedical Engineering	
IEEE Trans Image Processing	*IEEE Trans Medical Imaging*
IEEE Trans Neural Networks	*IEEE Trans Systems, Man, Cybernetics*
IET Computer Vision	*Journal of Imaging*
Machine Vision and Applications	*Pattern Analysis and Applications*
Pattern Recognition	*Pattern Recognition Letters*
PLOS ONE	*Signal, Image and Video Processing*
Scientific Reports	*Statistical Analysis and Data Mining.*

Conference Chair
BMVA One-day meeting Computer Vision in Cancer 2017, City, University of London (with Greg Slabaugh, City, University of London)
Medical Image Understanding and Analysis (MIUA) 2014, City University London (with Greg Slabaugh, City University London)
ANGIONET Angiogenesis Network, January 2007, Sheffield University (with Markus Owen, University of Nottingham).

Publicity Chair *IWSSIP International Conference on Systems, Signals and Image Processing, London September 2015*

Conference Area /Session Chair
ECDP 2019, BMVC 2007,
MIUA 2010, 2011, 2012, 2013, 2014, 2015, 2017, 2018, 2019

Conference Technical Program Committee
MIUA 2010, 2011, 2012, 2013, 2015, 2016, 2017, 2018, 2019
MICCAI 2010, 2011, 2012, 2013, 2018, 2019
IEEE ISCC 2006, 2007, 2008, 2009, IEEE ISBI 2015, 2016, 2018
CompIMAGE'2010, 2011, 2012, IMAGAPP 2008, 2009, 2010, 2011,

Science Ambassador *National Science and Engineering Week* 2007, 2009, 2010, 2011, 2018.