

# Daniel RACOCEANU

BioMedical Image, Information & Data Computing  
Professional webpages: <https://daniraco.github.io/>

## SCIENTIFIC PUBLICATIONS / PUBLICATIONS SCIENTIFIQUES

Publications on line: <https://daniraco.github.io/publications.html>

### Journals with reviewing committee

1. Marin, L.E., Zavaleta-Guzman, D.I., Gutierrez-Garcia, J.I., Racoceanu, D., Casado, F.L. (2025) Prediction of biochemical prostate cancer recurrence from any Gleason score using robust tissue structure and clinically available information. *Discover Oncology*, 16(1), art. no. 128. <https://doi.org/10.1007/s12672-025-01896-7>.
2. Ounissi, M., Sarbout, I., Hugot, J.-P., Martinez-Vinson, C., Berrebi, D., Racoceanu, D. (2024) Scalable, Trustworthy Generative Model for Virtual Multi-Staining from H&E Whole Slide Image, Image and Video Processing, Computer Vision and Pattern Recognition (cs.CV), [arXiv:2407.00098](https://arxiv.org/abs/2407.00098) [eess.IV], <https://doi.org/10.48550/arXiv.2407.00098>.
3. Kumar, P., Lacroix, M., Dupré, P., Arslan, J., Fenou, L., Orsetti, B., Le Cam, L., Racoceanu, D., Radulescu, O. (2024). Deciphering oxygen distribution and hypoxia profiles in the tumor microenvironment: a data-driven mechanistic modeling approach. *Phys Med Biol*. 2024 Jun 14; 69(12). <https://doi.org/10.1088/1361-6560/ad524a>. PMID: 38815610.
4. Ingrassia, L., Boluda, S., Jimenez, G., Kar, A., Racoceanu, D., Delatour, B., Stimmer, L. (2024). Automated deep learning segmentation of neuritic plaques and neurofibrillary tangles in Alzheimer disease brain sections using a proprietary software, *Journal of Neuropathology and Experimental Neurology*. doi : [10.1093/jnen/nlae048](https://doi.org/10.1093/jnen/nlae048).
5. Ounissi, M., Latouche, M., Racoceanu, D. (2024). PhagoStat a scalable and interpretable end to end framework for efficient quantification of cell phagocytosis in neurodegenerative disease studies, *Scientific Reports*, <https://doi.org/10.1038/s41598-024-56081-7>, <https://www.nature.com/articles/s41598-024-56081-7>.
6. Liu, X., Hu, W., Diao, S., Abera, D. E., Racoceanu, D., Qin, W. (2024). Multi-scale feature fusion for prediction of IDH1 mutations in glioma histopathological images, *Computer Methods and Programs in Biomedicine*, Elsevier, vol. 248, pp. 108116, doi : <https://doi.org/10.1016/j.cmpb.2024.108116>
7. Diao S., Tian Y., Hu W., Hou J., Lambo R., Zhang Z., Xie Y., Nie X., Zhang F., Racoceanu D., Qin W. (2022). Weakly supervised framework for cancer region detection of hepatocellular carcinoma in whole-slide pathologic images based on multiscale attention convolutional neural network. *American Journal of Pathology*. 192(3):553-563. doi:[10.1016/j.ajpath.2021.11.009](https://doi.org/10.1016/j.ajpath.2021.11.009).
8. Fraggetta F, L'imperio V, Ameisen D, Carvalho R, Leh S, Kiehl TR, Serbanescu M, Racoceanu D, Della Mea V, Polonia A, Zerbe N, Eloy C. (2021). Best practice recommendations for the implementation of a digital pathology workflow in the anatomic pathology laboratory by the european society of digital and integrative pathology (ESDIP). *Diagnostics*, 11(11):2167. doi:[10.3390/diagnostics11112167](https://doi.org/10.3390/diagnostics11112167).
9. Jiménez, G., Racoceanu, D. (2019). Deep Learning for Semantic Segmentation versus Classification in Computational Pathology: Application to mitosis analysis in Breast Cancer grading, *Front. Bioeng. Biotechnol.*, 21 June 2019, doi: 10.3389/fbioe.2019.00145.
10. Marin, L., Casado, F., Racoceanu, D. (2019), Classification of prostate cancer based on clinical and omic data using neural networks techniques to improve prognostic power, *European Urology Supplements* 18(1):e1783; DOI: 10.1016/S1569-9056(19)31292-8.
11. Marin, L., Casado, F., Pinto, J.A., Racoceanu, D., (2019). Classification of prostate cancer based on clinical and omics data using neural networks techniques to improve prognostic power, *Journal of Clinical Oncology* 37(15\_suppl):e16569-e16569 ; DOI: 10.1200/JCO.2019.37.15\_suppl.e16569.

12. Zemouri, R., Zerhouni, N., Racoceanu, D. (2019). Deep Learning in the Biomedical Applications: Recent and Future Status, *Appl. Sci.*, 9(8), 1526; doi:10.3390/app9081526.
13. Saha, M., Chakraborty, C., Racoceanu, D. (2018) Efficient Deep Learning Model for Mitosis Detection using Breast Histopathology Images, *Computerized Medical Imaging and Graphics*, 2018 Mar;64:29-40. doi: 10.1016/j.compmedimag.2017.12.001. Epub 2017 Dec 16.
14. Ehteshami Bejnordi, B. et al. (2017). Diagnostic Assessment of Deep Learning Algorithms for Detection of Lymph Node Metastases in Women with Breast Cancer, *JAMA*, 2017; 318(22): 2199-2210. doi:10.1001/jama.2017.14585.
15. Clatici, V. G., Racoceanu, D., Dalle, C., Voicu, C., Thomas-Aragones, L., Servando E. Marron, S. E., Wollina, U., Fica, S. (2017). Perceived Age and Life Style. The specific Contributions of Seven Factors Involved in Health and Beauty. *Maedica - A Journal Of Clinical Medicine*, 12(3): 112-122. PMCID: PMC5706759 PMID: [29218067](#).
16. Traore, L., Kergosien, Y., & Racoceanu, D. (2017). Bridging the Semantic Gap Between Diagnostic Histopathology and Image Analysis. *Studies in health technology and informatics*, 235, 436–440. PMID: 28423830.
17. Marin, L., Ezziane, M., Comperat, E., Mozer, P., Cancel-Tassin, G., Coté, J.-F., Racoceanu, D., Boudghene, F., Lucidarme, O., Cussenot, O., Renard Penna, R. (2017). Comparison of semi-automated and manual methods to measure the volume of prostate cancer on magnetic resonance imaging. *Diagnostic and Interventional Imaging*, 98(5): 423-428; doi: 10.1016/j.diii.2017.02.004.
18. Sirinukunwattana, K., Pluim, J., Chen, H., Qi, X., Heng, P-A., Bo, Y., Wang, L.Y., Matuszewski, B., Bruni, E., Sanchez, U., Böhm, A., Ronneberger, O., Ben Cheikh, B., Racoceanu, D., Philipp Kainz, P., Pfeiffer, M., Urschler, M., Snead, D., & Rajpoot, N. (2017). Gland Segmentation in Colon Histology Images: The GlaS Challenge Contest. *Medical Image Analysis*, 35: 489-502. <https://doi.org/10.1016/j.media.2016.08.008>
19. Traore, L., Daniel, C, Jaulent, M-C., Schrader, T, Racoceanu, D., Kergosien, Y. (2016). Sustainable formal representation of breast cancer grading histopathological knowledge, *The Diagnostic Pathology Journal*, 2: 109.
20. Racoceanu, D., Ameisen, D., Veillard, A., Ben Cheikh, B. Attieh, E., Brezillon, P., Yunès, J.-B., Temerson, J.-M., Toubiana, L., Verger, V., Pomerol, J.-F., Klossa, J., Lallemand, F., Constant, P., Capron, F., Guettier, C., Phan, N., Bertheau P. (2016). Towards efficient collaborative digital pathology: a pioneer initiative of the FlexMlm project, *The Diagnostic Pathology Journal*, 8: 199.
21. Ben Cheikh, B., Bor-Angelier C., Racoceanu, D. (2016). Graph-Based approach for spatial heterogeneity analysis in tumour microenvironement. *The Diagnostic Pathology Journal*, 8: 228.
22. Venâncio, R., Ben Cheikh, B., Coron, A. Saegusa-Beecroft, E., Machi, J., Bridal, L., Racoceanu, D., Mamou, J. (2016). Micrometastasis detection guidance by whole-slide image texture analysis in colorectal lymph nodes. *The Journal of Diagnostic Pathology*, 8: 224.
23. Basu, S., Ooi, W.T., & Racoceanu, D. (2016). Neurite tracing with object process. *IEEE Transactions on Medical Imaging*, 35(6): 1443-1451.
24. Racoceanu D, & Capron F, (2016). Semantic Integrative Digital Pathology: Insights into Microsemiological Semantics and Image Analysis Scalability. *Pathobiology*, 83: 148-155.
25. Racoceanu, D., & Capron, F., (2015). Towards Semantic-Driven High-Content Image Analysis. An Operational Instantiation for Mitosis Detection in Digital Histopathology. *Computerized Medical Imaging and Graphics*, 2: 2-15. DOI: 10.1016/j.compmedimag.2014.09.004.
26. Irshad, H., Guaillard, A., Roux, L., Racoceanu, D. (2014). Multispectral Band Selection and Spatial Characterization: Application to Mitosis Detection in Breast Cancer Histopathology. *Computerized Medical Imaging and Graphics*, 38(5):390-402. DOI: 10.1010/j.compmedimag.2014.04.003.

27. Irshad, H., Veillard, A., Roux, L., Racoceanu, D. (2014). Methods for Nuclei Detection, Segmentation, and Classification in Digital Histopathology: A Review — Current Status and Future Potential. *IEEE Reviews on Biomedical Engineering*, 7:97-114.\*  
**\* 1<sup>st</sup> Place Prize - 2019 IEEE Engineering in Medicine and Biology Prize Paper Award.**
28. Fagette, A., Courty, N., Racoceanu, D., Dufour, J. Y. (2014). Unsupervised Dense Crowd Detection by Multiscale Texture Analysis. *Pattern Recognition Letters*, 44:126–133. DOI: 10.1016/j.patrec.2013.09.020.
29. Roux, L., Racoceanu, D., Loménie, N., Kulikova, M., Irshad, H., Klossa, J., Capron, F., Genestie, C., Le Naour, G., Gurcan, G. (2013). Mitosis detection in breast cancer histological images: An ICPR 2012 contest. *Journal of Pathology Informatics*, 4(1): 2-8. ISSN: 2153-3539. DOI: 10.4103/2153-3539.112693.
30. Irshad, H., Jalali, S., Roux, L., Racoceanu, D., Lim, J. H., Le Naour, G., Capron, F. (2013). Automated mitosis detection using texture, SIFT features and HMAX biologically inspired approach. *Journal of Pathology Informatics*, 4(12). DOI: 10.4103/2153-3539.109870.
31. Huang, C. H., Sankaran, S., Racoceanu, D., Hariharan, S., Ahmed, S. (2012). On-line 3-D Tracking suspension living cells imaged with phase-contrast microscopy, *IEEE Trans. Biomedical Engineering*, 59(7):1924 – 1933. ISSN: 0018-9294. DOI: 10.1109/TBME.2012.2194487.
32. Mokhtari, M., Aloulou, H., Tiberghien, T., Biswas, J., Racoceanu, D., Yap, P. (2012). New Trends to Support Independence in Persons with Mild Dementia - A Mini-Review. *Gerontology*, 58:554–563. ISSN: 0304-324X. DOI: 10.1159/000337827.
33. Loménie, N., Racoceanu, D. (2012). Point set morphological filtering and semantic spatial configuration modeling: applications to microscopic image and bio-structure analysis. *Pattern Recognition*, 45(8): 2894-2911. ISSN: 0031-3203. DOI: 10.1016/j.patcog.2012.01.021.
34. Huang, C. H., Veillard, A., Roux, L., Loménie, N., Racoceanu, D. (2011). Time-efficient sparse analysis of histopathological Whole Slide Images, Whole Slide Image Process, Special Issue, CMIG - Computerized Medical Imaging and Graphics, ISSN: 0895-6111, 35(7): 579-591. DOI: 10.1016/j.compmedimag.2010.11.009.
35. Xiong, W., Ong, S. H., Lim, J. H., Foong, K., Liu, J., Racoceanu, D., Chong, A. G. L., Tan, K. S. W. (2010). Automatic Area Classification in Peripheral Blood Smears. *IEEE Trans. Biomed. Eng.*, 57(8): 1982-1990. ISSN: 0018-9294.
36. Depeursinge, A., Racoceanu, D., Iavindrasana, J., Cohen, G., Platon, A., Poletti, P. A., Müller, H. (2010). Fusing visual and clinical information for lung tissue classification in HRCT data. *Artificial Intelligence in Medicine*, Knowledge Discovery and Computer-Based Decision Support in Biomedicine, 50(1): 13-21. ISSN: 0933-3657.
37. Nakai, T., Bagarinao, E., Tanaka, Y., Matsuo, K., Racoceanu, D. (2008). Ontology for fMRI as a Biomedical Informatics Method. *Magn.Reson.Med.Sci*, 7(3): 141-155. ISSN: 1347-3182.
38. Teodorescu, R. O., Racoceanu, D., Leow, W. K., Cretu, V. I. (2008). Prospective Study for Semantic Inter-Media Fusion in Content-Based medical Image Retrieval. *Medical Imaging Technology*, 26(1): 1-11.
39. Brezillon, P., Racoceanu, D. (2007). A Context Model for Content Based Medical Image Retrieval. *Medical Imaging Technology*, Special Issue on Ontology and Context Related Medical Image Distributed Intelligent Access, 25(5): 327-332.
40. Su, M. J., Chen, H. S., Yang, C. Y., Chen, S. J., Chen, R., Lee, W. J., Cheng, P. H., Yip, P. K., Liu, H. M., Lai, F. P., Racoceanu, D. (2007). Diagnostic Decision Support by Intelligent Medical Image Retrieval with Electrical Medical Record Enhance Dementia Treatment, *Medical Imaging Technology*, Special Issue on Ontology and Context Related Medical Image Distributed Intelligent Access, 25(5): 350-355.
41. Palluat, N., Racoceanu, D., Zerhouni, N. (2006). A neuro-fuzzy monitoring system. Application to flexible production systems. *Computers in Industry*, Special Issue: E-maintenance, Ed. Elsevier Science, 57(6): 528-538.
42. Palluat, N., Racoceanu, D., Zerhouni, N. (2005). Utilisation des réseaux de neurones temporels pour le pronostic et la surveillance dynamique. Etude comparative de trois

- réseaux de neurones récurrents. *Revue des sciences et technologies de l'information*, série Revue d'intelligence artificielle, 19(6): 913-950.
43. Zemouri, R., Racoceanu, D., Zerhouni, N. (2003). Recurrent Radial Basis Function network for Time-Series Prediction, Engineering Applications of Artificial Intelligence. *The International Journal of Intelligent Real-Time Automation, journal IFAC - the International Federation of Automatic Control*, Ed. Elsevier Science, 16(5-6): 453-463.
  44. Zemouri, R., Racoceanu, D., Zerhouni, N. (2003). Réseaux de Neurones Récurrents à Fonctions de Base radiales. Application à la Surveillance Dynamique. *JESA – Journal Européen des Systèmes Automatisés*, ed. Hermès, 37(1): 49-81. ISBN: 2-7462-0834-2.
  45. Zemouri, R., Racoceanu, D., Zerhouni, N., Durand, S. (2003). Utilisation Conjointe des Techniques de Modélisation Analytique et de Simulation pour l'Evaluation des Performances en Optimisation de l'Organisation d'un Service de Maintenance. *International Journal of Mechanical Production System Engineering*, 7: II-3-II-14.
  46. Minca, E., Racoceanu, D., Zerhouni, N. (2002). Monitoring Systems Modeling and Analysis Using Fuzzy Petri Nets. *Studies in Informatics and Control Journal*, 11(4).
  47. Zemouri, R., Racoceanu, D., Zerhouni, N. (2002). Réseaux de Neurones Récurrents à Fonctions de Base radiales. Application au Pronostic. *Revue des sciences et technologies de l'information - RSTI*, série Revue d'intelligence artificielle- RIA, Ed. Hermès – Lavoisier, Paris, 16(3): 307-338. ISBN: 2-7462-0568-8.
  48. Racoceanu, D., El Moudni, A., Zerhouni, N., Ferney, M. (1995). On a new method of Markov chain reduction. *Journal of Mathematical Modelling of Systems*, 1(3).
  49. Racoceanu, D., El Moudni, A., Zerhouni, N., Ferney, M. (1994). A singular perturbation approach to modelling and resolution of Markov chains. *SAMS – System Analysis Modelling Simulation*, 15.

#### **Edited books, symposium proceedings, scientific journals special issues**

1. Special Issue MICCAI 2020, Purang Abolmaesumi, Anne Martel and **Daniel Racoceanu** (Eds), *Medical Image Analysis*, sept. 2021, ISSN: 1361-8415, <https://www.sciencedirect.com/journal/medical-image-analysis/special-issue/10BZVX3V2TL>.
2. Martel, A.L., Abolmaesumi, P., Stoyanov, D., Mateus, D., Zuluaga, M.A., Zhou, S.K., **Racoceanu, D.** and Joskowicz, L. (Eds.), *Medical Image Computing and Computer Assisted Intervention – MICCAI 2020*, 23<sup>rd</sup> International Conference, Lima, Peru, October 4–8, 2020, Proceedings (7 volumes / parts), Springer:
  - o Part I: <https://www.springer.com/gp/book/9783030597092>
  - o Part II: <https://www.springer.com/gp/book/9783030597122>
  - o Part III: <https://www.springer.com/gp/book/9783030597153>
  - o Part IV: <https://www.springer.com/gp/book/9783030597184>
  - o Part V: <https://www.springer.com/fr/book/9783030597214>
  - o Part VI: <https://www.springer.com/gp/book/9783030597245>
  - o Part VII: <https://www.springer.com/gp/book/9783030597276>
3. Racoceanu, D., Hufnagl, P. (Eds), Special Issue - "Scalable and Efficient Imaging Technologies for Digital Pathology", **CMIG - Computerized Medical Imaging and Graphics**, Elsevier, Volume 61, Pages 1-34 (November 2017)
4. Racoceanu, D., Belhomme, P., (Eds.), Special issue: "Breakthrough technologies in digital pathology", **CMIG - Computerized Medical Imaging and Graphics**, Elsevier, vol. 2, June 2015, pp.1, DOI: [http://dx.doi.org/10.1016/S0895-6111\(15\)00047-6](http://dx.doi.org/10.1016/S0895-6111(15)00047-6).
5. Roux, L., Racoceanu, D., (Eds.) Mitosis detection in breast cancer histological images: An ICPR 2012 contest, **Journal of Pathology Informatics**, special issue, vol. 4, issue 1, 30 May 2013, ISSN: 2153-3539.
6. Loménie, N., Racoceanu, D., Gouaillard, A., (Eds.), Advances in Bio-Imaging: From Physics to Signal Understanding Issues, State-of-the-Art and Challenges, **Springer Series: Advances in Intelligent and Soft Computing**, vol. 120, 2012, 2012, XXII, 246 p., ISBN 978-3-642-25546-5, January 9, 2012.

7. Leow, W. K., Feng, D., Li, H., Racoceanu, D. (Eds.), SinFra'09 - Singaporean-French IPAL Symposium, Proceedings of the symposium with the selected publications, **World Scientific**, ISBN: 978-981-4277-55-6(CD) / 981-4277-55-X(CD), 18–20 February 2009, Fusionopolis & Institute for Mathematical Sciences, Singapore.
8. Nakai, T., Racoceanu, D. (Eds.), Special Issue on ONtology and COntext related MEdical image Distributed Intelligent Access, International Symposium of the 26<sup>th</sup> Annual Meeting of **Japanese Society for Medical Imaging Technology (JAMIT)**, Tsukuba International Convention Center, 20 July 2007, Tsukuba, Japan, Medical Imaging Technology, vol.25 No.5, Nov. 2007.

## Book Chapters

1. Popovici, V., **Racoceanu, D.** (2025). From histopathology images to molecular characterisation of tumours: The artificial intelligence path, in Recent Advances in Histopathology, Vol 27 – Ed. Fred T Bosman and Dr. Ivan Damjanov. Jaypee Brothers Medical Publishers.
2. Jiménez, G., **Racoceanu, D.** (2023). Computational Pathology for Brain Disorders. In: Colliot, O. (eds) Machine Learning for Brain Disorders. Neuromethods, vol 197, pp. 533-572 (40 pages), Humana Press, New York, NY. [https://doi.org/10.1007/978-1-0716-3195-9\\_18](https://doi.org/10.1007/978-1-0716-3195-9_18).
3. **Racoceanu D**, Ounissi M, Kergosien Y. (2022) Explicabilité en Intelligence Artificielle ; vers une IA Responsable. Instanciation dans le domaine de la santé. Techniques de l'Ingénieur. Published online December 10, 2022. doi:10.51257/a-v1-h5030 – 22 pages.
4. Zemouri, R., **Racoceanu, D.** (2021). Innovative Deep Learning Approach for Biomedical Data Instantiation and Visualization, in Deep Learning for Biomedical Data Analysis: Techniques, Approaches/Application, Springer.
5. Lomenie, N., Racoceanu, D. (2012). Ontology-Enhanced Vision System for New Microscopy Imaging Challenges, Advances in Bio-Imaging: From Physics to Signal Understanding Issues, Vol.120, series Advances in Intelligent and Soft Computing, pp 157-172.
6. Loménie, N., Racoceanu, D., Stamon, G. (2011). Point Set Analysis: An Image Analysis Point of View for Rapid Prototyping Technologies, in Rapid Prototyping / Book 1", Ed. M. Hoque, ISBN 978-953-307-970-7, InTech, July 2011.
7. Teodorescu, R. O., Cretu, V. I., Racoceanu, D. (2013). Parkinson's Disease Diagnosis and Prognosis Using Diffusion Tensor Medical Imaging Features Fusion, "Biomedical Engineering, Trends in Electronics, Communications and Software, Ed. Anthony N. Laskovski, ISBN: 978-953-307-475-7, InTech, Jan. 2011 (**3000 downloads** @ 01/2013).
8. Su, M. J., Cheng, P. H., Chen, S. J., Yang, C. Y., Yip, P. K., Racoceanu, D., Chen, H. S. (2010). Medical Image Intelligent Access Integrated with Electronic Medical Records System for Brain Degenerative Disease, Data Storage, Book edited by: Florin Balasa, ISBN: 978-953-307-063-6, Publisher: InTech, Apr. 2010, pp. 201-211.
9. Lacoste, C., Chevallet, J. P., Lim, J. H., Hoang, D. L. T., Xiong, W., Racoceanu, D., Teodorescu, R. O., Vuillenemot, N. (2007). Inter-Media Concept-Based Medical Image Indexing and Retrieval with UMLS at IPAL, in Lecture Notes in Computer Science, Evaluation of Multilingual and Multi-modal Information Retrieval, vol. 4730, pp. 694-701.

## International Conferences Invited

1. Racoceanu D. (2025). Robust virtual staining using generative AI, Computer Vision for Drug Discovery (CVDD) workshop, IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), Nashville, TN, USA.
2. Racoceanu, D. (2024). Explainable, Hand in hand with AI on a medical imaging journey, Romanian AI days, Bucharest, Romania.
3. Racoceanu, D. (2024). Virtual staining using trustworthy and scalable pipeline, Invited Speaker, European Congress on Digital Pathology – ECDP 2024, Vilnius, Lithuania.

4. Racoceanu, D. (2024). What would Socrates say about AI? - Guest of Honor - Annual Conference of the National Academy of Medical Sciences (NAMS), hosted by Bombay Hospital Institute of Medical Sciences, Mumbai India.
5. Racoceanu, D. (2023). Tumor heterogeneity, tumor micro-environment analysis, modeling and simulation and sparse 3D data reconstruction in computational histopathology, Keynote speaker, MICCAI workshop on Computational Mathematics Modeling in Cancer Analysis (CMMCA2023), MICCAI - International Conference on Medical Image Computing and Computer-Assisted Intervention, Vancouver, Canada.
6. Racoceanu, D. (2021). Explainable IA: towards a Responsible AI, keynote speaker, SIPAIM 2021 - 17th International Symposium on Medical Information Processing and Analysis, Campinas, Brazil.
7. Racoceanu, D. (2019). Vessels detection for angiogenesis quantification deep learning & marked point process, **ECDP 2019 – 15<sup>th</sup> European Congress on Digital Pathology**, Warwick, UK, 10-13 April, 2019.
8. Racoceanu, D. (2018). Integrative Computational Histopathology with Latin America. Invited speaker, Computational Pathology Symposium, **ECP 2018 - 30th European Congress of Pathology**, Bilbao, Spain, 8-12 Sept. 2018.
9. Racoceanu, D. (2018). A Simulation Model for Computational Histopathology issued from the study of Tumour Microenvironment. An instantiation in Breast Carcinomas, Invited speaker, **14<sup>th</sup> European Congress on Digital Pathology**, Helsinki, Finland, May 29<sup>th</sup> – June 1<sup>st</sup>, 2018.
10. Racoceanu, D. (2017). Integrative Computational Pathology and beyond ..., Keynote speaker, **Digital Pathology and Image Analysis**, San Antonio, USA, November 15-16, 2017.
11. Racoceanu, D. (2016). Integrative digital pathology: semantics and scalable imaging methods, **DIGITALPath Europe 2016**, London, 18-19 May 2016.
12. Racoceanu, D. (2016). Are we ready to deal with traceability and massive data in Digital Pathology?, Special session on Biomarker Detection and Discovery in Histopathology Images, **2016 IEEE International Symposium on Biomedical Imaging (IEEE ISBI)**, Prague, Czech Republic, 13-16 April 2016.
13. Racoceanu, D. (2015). Semantics, micro-semiology and scalability in future Digital Pathology, **Digital Pathology Congress**, 21-22 September 2015, Kuala Lumpur, Malaysia.
14. Racoceanu, D. (2015). Insights about scalability and big data in Digital Pathology. Recent projects and outcomes, **Dublin Pathology 2015. 8<sup>th</sup> Joint Meeting of the British Division of the IAP and The Pathological Society**, June 23<sup>rd</sup>, 2015, Dublin, Ireland.
15. Racoceanu, D. (2015). Semantic-Driven Image Exploration for WSI. Scalability for big data, Information Technology in Digital Pathology, **AIDPATH EU**, May 26<sup>th</sup>, 2015, Madrid, Spain.
16. Racoceanu, D. (2014). Semantic-Driven Image Exploration for WSI. Scalability for big data, **Digital Pathology Congress**, 4-5 December 2014, London, UK.
17. Racoceanu, D. (2013). Symbolic cognitive approaches using prior knowledge and prior shapes for whole slide image understanding. Roadmap and perspectives inspired by a long-run french-singaporean collaboration, **3<sup>rd</sup> European Conference on Whole Slide Imaging and Analysis**, Heidelberg, Germany, 29-30 Nov. 2013.
18. Racoceanu, D. (2010). MICO: A COgnitive virtual Microscopy platform for histopathological Whole Slide Images Analysis. Application to Breast Cancer Grading, The 9<sup>th</sup> **Korea-Singapore Joint Workshop on Bioinformatics**, Conference Invitee, 23 February 2010, KAIST - Korea Advanced Institute of Science and Technology, Daejeon, South Korea.
19. Racoceanu, D. (2008). Translational Breast Cancer Grading System by Automatic Analysis of Histopathology Images in a Virtual Microscope Framework, “**Romanian Scientific Diaspora” Conference**, Exploratory Workshop: Bioinformatics, Conference Invitee, 17 – 19 Sept. 2008, Bucharest, Romania.

20. Racoceanu, D. (2008). Image Based Reasoning using Medical Knowledge to improve Diagnosis Assistance. Showcases: Early Detection of Brain stroke from brain CT, Histopathology Imaging-based Automatic Breast Cancer Grading, First **International Symposium on ICT For Health - ICT4Health 2008, Keynote Lecture**, February 29<sup>th</sup> -1<sup>st</sup> March 2008, Ateneo de Manila University, Manila, Philippines.
21. Racoceanu, D. (2002). Réseaux de Neurones Temporels. Application à la Maintenance Préventive et à la Télémaintenance, Conference Invitee, **Conférence Internationale d'Ingénierie Intégrée** - C2I 2002, 25-26 April 2002, Timisoara, Romania.

### **Invited Lectures**

1. Racoceanu, D. (2024). Last advances in AI and eXplainable AI, invited speaker, Soirée de Recherche à ***l'Hôpital Fondation Adolphe de Rothschild***, Paris, France, 4<sup>th</sup> of Apr. 2024.
2. Racoceanu, D. (2024). Qvo vadis homine, AI ? invited speaker, **CEFIPRA Indian-French workshop on XAI for Brain pathologies**, Vijayawada, Inde, 19-21 Feb. 2023.
3. Racoceanu, D. (2023). Explicabilité en Intelligence Artificielle : challenges et opportunités en santé et en recherche biomédicale, invited speaker, Rencontres **DIM C-BRAINS -- Google**, « IA, cerveau et cloud computing : explorer les frontières de l'innovation », 13 septembre 2023, Paris, France.
4. Racoceanu, D. (2019). Tumor Heterogeneity Analysis, Indexing and Simulation in Computational Pathology, **Shenzhen Institute of Advanced Technology** (SIAT), Shenzhen, China, 17 Oct. 2019.
5. Racoceanu, D. (2019). Computational Pathology: A Path Ahead, Café de la Neuroinformatique, **Institut du Cerveau et de la Moelle épinière** (ICM), Paris, France, 19 Sept. 2019.
6. Racoceanu, D. (2019). Artificial intelligence for biomedical image analysis applications: lessons learned from personal projects, expertise and contributions, **Institut du Cerveau et de la Moelle épinière** (ICM), Paris, France, 10 May 2019.
7. Racoceanu, D. (2018). Artificial Intelligence Applied to Very Large Image Analysis in Medicine (Digital Pathology), Invited Speaker, Día Mundial de las Telecomunicaciones, la Sociedad de la Información, y el Internet, **Pontifical Catholic University of Peru**, 17 May 2018.
8. Racoceanu, D. (2017). Integrative Digital Pathology and beyond, Invited Speaker, **National University of Colombia**, Bogota, Colombia, 9<sup>th</sup> of May 2017.
9. Racoceanu, D., Rossi, F. (2016). Terres d'innovation Singapour, une plate-forme d'innovation et de R&D unique en Asie, Invited Speaker, **Congrès C.U.R.I.E.**, 6-9 June 2016, Deauville, France.
10. Racoceanu, D. (2014). Big data in microscopy, Invited Speaker, French National Center for Scientific Research (CNRS) Research Group - Technologies for Healthcare - **GdR STIC-Santé**, Lyon, France, 23-25 Sept. 2014.
11. Racoceanu, D. (2014). Towards the future of Digital Pathology, Invited Talk, **Massachusetts General Hospital - MGH, Boston**, MA, USA, 17 Sept. 2014.
12. Racoceanu, D. (2014). Digital Pathology: a semantic driven protocol for WSI exploration, Invited Speaker, **Harvard Medical School**, Beth Israel Deaconess Medical Center (BIDMC), Pathology Department, Boston, MA, USA, 15 Sept. 2014.
13. Racoceanu, D. (2014). Major research results in cognitive multi-scale exploration of high content images at IPAL/BMIU, Invited Speaker, **Bioinformatics Institute BII - A\*STAR**, Singapore, 7<sup>th</sup> of February 2014.
14. Racoceanu, D. (2013). Exploration cognitive symbolique des images biomédicales haut contenu. Application à la gradation des cancers en histopathologie et au suivi de cellules souches par recalage dynamique entre l'analyse 2D et la synthèse 3D, Invited Speaker, **LIRMM UMR CNRS – University of Montpellier II**, 24 Sept. 2013, Montpellier, France.
15. Racoceanu, D. (2013). Cognitive virtual microscopy for breast cancer grading in histopathology Whole Slide Image exploration using a symbolic cognitive vision

approach, Invited Speaker, **Centre de Recherche des Cordeliers, UMR INSERM**, 8 Apr. 2013, Paris, France.

16. Racoceanu, D. (2013). Symbolic visual approaches using prior knowledge and shapes for high content microscopic images exploration. Roadmap and perspectives inspired by a long-run french-singaporean collaboration, Invited Speaker, **INRIA/CNRS-Sophia Antipolis**, Ayin (INRIA) and Morpheme (INRIA/CNRS) research teams, invited talk, 18 Feb, 2013, Sophia-Antipolis, France.
17. Racoceanu, D. (2013). Approches cognitives symboliques et connaissances/formes a priori pour l'imagerie microscopique haut contenu. Perspectives à travers des projets franco-singapouriens, Invited Speaker, LTSI, **French National Institute of Health and Medical Research, INSERM UMR, University Rennes 1**, 14 Feb. 2013, Rennes, France.
18. Racoceanu, D. (2013). Approches visuelles sémantiques en histopathologie, Invited Speaker, Unité BioTICLA - Equipe IMAGIN' Biologie et Thérapies Innovantes des Cancers Localement Agressifs EA 4656 de **l'Université de Caen Basse-Normandie**, IFR 146 ICORE **Centre de Lutte Contre le Cancer François Baclesse**, 12 Feb 2013, Caen, France.
19. Racoceanu, D. (2012). Imagerie microscopique haut débit / haut contenu et ses perspectives à travers deux applications développées dans des projets franco-singapouriens, Invited Speaker, Research center of the Brain and Spine Institute (**CRICM - Centre de Recherche de l'Institut du Cerveau et de la Moelle épinière**), 17 Oct 2012, Paris, France.
20. Racoceanu, D. (2011). Exploration d'une lame virtuelle en utilisant une approche in vitro - in silico – in cognito: Application à la gradation du cancer du sein en histopathologie, Invited Speaker, Functional Imaging Laboratory (LIF), **French National Institute of Health and Medical Research (INSERM)**, **Faculty of Medicine Pierre and Marie Curie - Site Pitié-Salpêtrière**, Dec 1st, 2011, Paris, France.
21. Racoceanu, D. (2010). Presentation of the International French-Singaporean Collaboration IPAL – Image & Pervasive Access Lab – UMI CNRS, French-Singaporean Entrepreneurships R&D Committee Opening Meeting, Invited speaker, Organized by the **French Chamber of Commerce in Singapore** (FCCS) & French Embassy in Singapore, 14 January 2010, Singapore.
22. Racoceanu, D. (2009). IPAL researches in ontology driven virtual microscopy for breast cancer grading, **European COST Action IC0604 Euro-Telepath**, Management Committee and 6/7th Working Groups Meetings, **Conference Invited Expert**, 03-04 Dec. 2009, Lausanne, Switzerland.
23. Racoceanu, D. (2008). Image Based Reasoning Systems using Medical Knowledge for Diagnosis Assistance, Invited Speaker, **Institute of Molecular and Cell Biology** (IMCB), Biopolis, **Agency for Science, Technology and Research** (A\*STAR), Singapore, 27 February 2008.
24. Racoceanu, D. (2005). Monitoring Approach Using Recurrent Radial Basis Function Neural Networks and Neuro-Fuzzy Systems, Invited Speaker, Department of Computer Science, School of Computing, **National University of Singapore**, 7 Dec. 2005.
25. Racoceanu, D., Zerhouni, N. (2005). Dynamic Monitoring Systems using Recurrent Neural Networks and Neuro-Fuzzy Systems. Nemosys Project, Invited Speaker, Artificial Intelligence Department, **Tsinghua University, Beijing**, China, 17 October 2005.

### **Invited articles in international scientific journals**

1. Arslan, J., Racoceanu, D., Benke, K. K. (2023). Deep Learning Using Images of the Retina for Assessment of Severity of Neurological Dysfunction in Parkinson Disease, *JAMA Ophthalmol*. Published February 9, 2023. doi:10.1001/jamaophthalmol.2022.6036.

### **International Communications with Proceedings**

1. G. Jimenez, L. Hebert-Stevens, S. Boluda, B. Delatour, L. Stimmer, **D. Racoceanu** (2025) Unravelling the Topographical Organization of Brain Lesions in Variants of Alzheimer's Disease Progression, SPIE Medical Imaging, USA.

2. Sarbout, I., Ounissi, M., Racoceanu, D., Milea, D., (2024). AI-Powered Autonomous Mobility System Assisting Blind Digital Twin, European Neuro-Ophthalmology Society – EUNOS 2024, Rotterdam, Netherlands.
3. Gungor, A., Sarbout, I., Hage, R., Gohier, P., Lebranchu, P., Dumitrascu, O., Vignal-Clermont, C., Chen, J.J., Rattanathamsakul, N., Lagreze, A., Feltgen, N., Obadia, M., Racoceanu, D., Milea, D., (2024). Early Detection of Central Retinal Artery Occlusion within 4.5 Hours of Visual Loss: Deep Learning Method Applied on Fundus Photographs, **Congress of the European Neuro-ophthalmology Society** – EUNOS 2024, Rotterdam, Netherlands.
  - o **Best Poster award** – EUNOS 2024
4. Milea, D., Gungor, A., Sarbout, I., Hage, R., Gohier, P., Lebranchu, P., Dumitrascu, O., Vignal-Clermont, C., Chen, J.J., Rattanathamsakul, N., Obadia, M., Racoceanu, D. (2024). Diagnosis of Central Retinal Artery Occlusion within 4.5 hours after Visual Loss, using a Deep Learning Method Applied on Fundus Images, North American Neuro-Ophthalmology Society 50<sup>th</sup> Annual Meeting – NANOS 2024, March 2<sup>nd</sup> -7<sup>th</sup>, 2024, USA.
5. Arslan, J., Ounissi, M., Luo, H., Lacroix, M., Dupré, P., Kumar, P., Hodgkinson, A., Dandou, S., Larive, R., Pignodel, C., Le Cam, L., Radulescu, O., Racoceanu, D. (2023). 3D reconstruction of H&E whole slide images in melanoma, SPIE Medical Imaging, San Diego, USA.
6. Jimenez Garay, G., Mas, P., Kar, A., Ingrassia, L., Boluda, S., Benoit Delatour, B., Lev Stimmer, Daniel Racoceanu (2023). A meta-graph approach for analyzing whole slide histopathological images of human brain tissue with Alzheimer disease biomarkers, SPIE Medical Imaging, San Diego, USA.
7. Arslan, J., Kumar, P., Hodgkinson, A., Luo, H., Dandou, S., Lacroix, M., Dupré, P., Pignodel, C., Larive, R., Le Cam, L., Radulescu, O., Racoceanu, D. (2022). 3D reconstruction and mathematical modelling of whole slide images to elucidate resistance to the targeted therapy in melanoma, *ICSB 2022 - The 21st International Conference on Systems Biology*, Berlin, Germany.
8. Jimenez G., Kar A., Ounissi M., Ingrassia L., Boluda S., Delatour B., Stimmer L., Racoceanu D. (2022). Visual Deep Learning-Based Explanation for Neuritic Plaques Segmentation in Alzheimer's Disease Using Weakly Annotated Whole Slide Histopathological Images. In: Wang, L., Dou, Q., Fletcher, P.T., Speidel, S., Li, S. (eds) *Medical Image Computing and Computer Assisted Intervention – MICCAI 2022*. Lecture Notes in Computer Science, vol 13432. Springer, Cham. [https://doi.org/10.1007/978-3-031-16434-7\\_33](https://doi.org/10.1007/978-3-031-16434-7_33)
9. Ingrassia, L., Boluda, S., Racoceanu, D., Delatour, B., Stimmer, L. (2022). Machine-learning histopathological segmentation and quantification of tauopathies in classic vs rapidly progressive forms of Alzheimer's Disease, Forum of the Federation of European Neuroscience Societies - **FENS 2022**, Paris.
10. Jimenez Garay G., Kar A., Ounissi M., Stimmer L., Delatour B., Racoceanu D. (2022). Interpretable Deep Learning in Computational Histopathology for refined identification of Alzheimer's Disease biomarkers, Alzheimer's Association Int. Conference - **AAIC'22**, San Diego, USA.
11. Kar A., Jimenez Garay G., Ounissi M., Stimmer L., Delatour B., Racoceanu D. (2022). A deep learning framework for stratification of Alzheimer's disease patients using whole slide histopathological brain tissue images, European Conference on Digital Pathology - **ECDP 2022**, Berlin, Germany.
12. K. Maňoušková, V. Abadie, M. Ounissi, G. Jimenez, L. Stimmer, B. Delatour, S. Durleman, D. Racoceanu. (2022). "Tau protein discrete aggregates in Alzheimer's disease: neuritic plaques and tangles detection and segmentation using computational histopathology," Proc. **SPIE 12039, Medical Imaging 2022: Digital and Computational Pathology**, 1203908 (4 April 2022); <https://doi.org/10.1117/12.2613154>
13. Trujillano F., Gonzalez, J., Saito, C., Flores, A., Racoceanu, D. (2021). Corn Crops Identification using Multispectral Images from Unmanned Aircraft Systems, IEEE IGARSS, International Geoscience and Remote Sensing Symposium, Brussels, Belgium.

14. Huang, C.-H, Racoceanu, D. (2020), Enhanced Methods for Lymphocyte Detection and Segmentation on H&E-Stained Images using eXclusive Autoencoders, Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'20), Montréal, Québec, Canada.
15. Marin, L., Casado, F., Racoceanu, D. (2018), An integrative computational pathology approach to classify prostate cancer. Combining phenotypical, genomic and tumor microenvironment figures using deep learning, **European Congress on Digital Pathology**, Helsinki, Finland, May 29th – June 1st, 2018.
16. Trujillano, F., Flores, A., Saito, C., Balcazar, M., Racoceanu, D. (2018) Corn classification using Deep Learning with UAV imagery. An operational proof of concept, IEEE Colombian Conference on Applications in Computational Intelligence, Medellín, Colombia.
17. Kergosien. L. Y., Racoceanu, D. (2017), Semantic knowledge for histopathologic image analysis: from ontologies to processing portals and deep learning, **Invited Paper**, Proc. **SPIE** 10572, 13th International Conference on Medical Information Processing and Analysis, 105721F (17 November 2017); <https://doi.org/10.1117/12.2285916>
18. Laifa, O., Le Guillou-Buffello, D., Racoceanu, D., (2017), Tumor angiogenesis assessment using multi-fluorescent scans on murine slices by Markov Random Field framework, Proc. **SPIE** 10572, 13th International Conference on Medical Information Processing and Analysis; 1057208 (2017); <https://doi.org/10.1117/12.2285924>
19. Marin, L., Racoceanu, D., Renard Penna, R., Ezziane, M. (2017), Prostate Cancer: Computer Aided-Diagnosis on Multiparametric MRI, Proc. **SPIE** 10572, 13th International Conference on Medical Information Processing and Analysis, 1057213 (17 November 2017); <https://doi.org/10.1117/12.2283404>
20. Venâncio, R., Ben Cheikh, B., Coron, A., Saegusa-Beecroft, E., Machi, J., Racoceanu, D., Bridal, L., Mamou, J. (2017), Relating Quantitative Ultrasound Parameters to Histologic Texture Parameters in Cancerous Human Lymph Nodes, 2017 **IEEE International Ultrasonics Symposium**, Washington D.C., USA. <https://doi.org/10.1109/ULTSYM.2017.8092764>
21. Ben Cheikh, B., Elie, N., Plancoulaine, B., Bor-Angelier, C., Racoceanu, D. (2017), Spatial interaction analysis with graph based mathematical morphology for histopathology, **Int. Symp. on Biomedical Imaging – IEEE ISBI**, Melbourne, Australia,
22. Laifa, O., Le Guillou-Buffello, D., Griffon, J., Bridal, L., Racoceanu, D. (2017), Tumour Angiogenesis Assessment using Multi-Fluorescent Scans of Murine Tumor Slices, RITS, France
23. Huang, C-H., Racoceanu, D. (2017). Automated high-grade prostate cancer detection and ranking on whole slide images, **SPIE Medical Imaging**, Orlando, Florida, United States.
24. Ben Cheikh, B., Bor-Angelier C., Racoceanu, D. (2017). A Model of Tumor Architecture and Spatial Interactions with the Microenvironement in Breast Carcinoma, **SPIE Medical Imaging**, Orlando, Florida, United States, <https://doi.org/10.1117/12.2254452>
25. Salas, D., Gustedt, J., Racoceanu, D., Perseil, I. (2016). Resource-Centered Distributed Processing of Large Histopathology Images. 19th **IEEE International Conference on Computational Science and Engineering**, Paris, France.
26. Ben Cheikh, B., Bor-Angelier, C., Racoceanu, D., (2016). Nuclei classification in Immunohistochemical stainings for tumour microenvironement analysis in Digital Pathology, **2016 International Symposium on Biomedical Imaging – IEEE ISBI**, April 13-16, Prague, Czech Republic.
27. Racoceanu D., Bertheau, P., Veillard, A., Ameisen, D., Ben Cheikh, B., Phan, N., Capron, F., Guettier, C., Brezillon, P., Yunes, J.B., Pomerol, J.F., Verger, V., Constant, P., Lallemand, F., Girard, B., Toubiana, L., Temerson, J.M. (2016), Bridging the gap towards efficient Collaborative Digital Pathology: a pioneer initiative of the FlexMlm project, Med-e-Tel 2016, The International eHealth Telemedecine and Health ICT Forum, 6-8 April 2016, Luxembourg.

28. Ben Cheikh, B., Bertheau, P., Racoceanu D. (2016). A structure-based approach for colon gland segmentation in digital pathology, **SPIE Medical Imaging**, San Diego, 27 Feb. – 3 Mar.
29. Ben Cheikh, B., Racoceanu, D. (2015). Cell spatial positioning analysis for gland segmentation in Digital Pathilogy, GlaS: Gland Segmentation in Colon Histology Images, **Int. Conf. on Medical Image Computing and Computer Assisted Intervention - MICCAI**, Munich, Germany, 5-9 Oct.
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31. Racoceanu, D., Towards semantic integrative microscopy for high-content imaging in Digital Pathology, 22<sup>nd</sup> Int. Molecular Medicine Tri-Conference - **Molecular Med TRI-CON** 2015, St. Francisco, USA, 15-20 Feb. 2015.
32. Jamet, P., Chew, S. C. K., Fagette, A., Dufour, J. - Y., **Racoceanu, D.** (2015). Statistically Representative Cloud of Particles for Crowd Flow Tracking, In A. Fred, M. De Marsico, A. Tabbone (Eds.), **ICPRAM 2014** (selected papers): Pattern Recognition Applications and Methods (Vol. 9443, p. 237–251) Cham: Springer Internat. Publishing, DOI: 10.1007/978-3-319-25530-9\_16.
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34. Racoceanu, D., Capron, F. (2014), Towards Semantic-Driven High-Content Image Analysis. An Operational Instantiation for Mitosis Detection in Digital Histopathology, **European Conf. on Digital Pathology**, Paris, France.
35. Calvo, J., Mitri, R., Attieh, E., Le Naour, G., Roux, L., Genestie, C., Racoceanu, D., Brézillon, P., Looten, V., Elisabeth Da Maia, E., Capron, F., (2014). Mitotic score in breast cancer: digital counting versus usual microscopic, **European Congress on Digital Pathology**, Paris, France.
36. Basu, S., Racoceanu, D., Ooi, W. T. (2014). Improved Marked Point Process Priors for Single Neurite Tracing, Pattern Recognition in Neuroimaging - PRNI, Tübingen, Germany.
37. Irshad, H., Gouaillard, A., Roux, L., Racoceanu, D. (2014). Spectral Band Selection for Mitosis Detection in Histopathology, **Int. Symp. on Biomedical Imaging - ISBI**, Beijing, China.
38. Fagette, A., Jamet, P., Racoceanu, D., Dufour, J. Y. (2014). Particle Video for Crowd Flow Tracking. Entry-Exit Area and Dynamic Occlusion Detection, Int. Conf. on Pattern Recognition Application and Methods - ICPRAM, Angers, France.
39. Basu S., Kulikova M., Zhizhina E., Ooi, W. T., Racoceanu D. (2013). A Stochastic Model for Automatic Extraction of 3D Neuronal Morphology, **Int. Conf. on Medical Image Computing and Computer Assisted Intervention - MICCAI**, Osaka, Japan.
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41. Rigaud, S. U., Huang, C. H., Ahmed, S., Lim, J. H., Racoceanu, D. (2013). An Analysis-Synthesis Approach for Neurosphere Modelisation Under Phase-Contrast Microscopy, **Int. Conf. of the IEEE Engineering in Medicine and Biology Society - EMBC**, Osaka, Japan.
42. Irsahd, H., Roux, L., Morere, O., Racoceanu, D., Le Naour, G., Capron, F. (2013). Détection automatique et calcul du compte de mitoses sur lames H&E, RITS 2013 colloque biennal pour la Recherche en Imagerie et Technologies pour la Santé, Bordeaux, France.
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51. Veillard A., Racoceanu D., Bressan S., Incorporating Prior-Knowledge in Support Vector Machines by Kernel Adaptation, **IEEE Int. Conf. on Tools with Artificial Intelligence – ICTAI**, Nov. 7-9, 2011, Boca Raton, Florida, USA.
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47. Zemouri, R., Racoceanu, D. et Zerhouni, N. (2021) Evaluation des performances d'un atelier de maintenance de PEUGEOT CITROEN AUTOMOBILES, SITE DE Sochaux - France, Proc. of the Symposium International sur la Maintenance Industrielle, SIMI'2001.

## Other production

- ✓ **Editorial activities**
  - **ISTE-WILEY** Editorial Organization, Computer Science and Information Technology
  - **ISTE-WILEY** Editorial Organization, Bioengineering and Health Science
- ✓ **International Journal Reviewing**
  - **Medical Image Analysis**
  - **IEEE TIP** – IEEE Transactions on Image Processing
  - **IEEE TMI** – Transactions on Medical Image
  - **IEEE TBME** – IEEE Transactions on Biomedical Engineering
  - **CMIG** (Elsevier) - Computerized Medical Imaging and Graphics
  - **JDP** - Journal of Diagnostic Pathology
  - **ACM** (Association for Computing Machinery) - Computing Reviews
  - **IMIA Yearbook** – Medical Informatics (since 2008)
- ✓ **Patents and copyrights**
  1. Filled International Patent - **PCT/EP2025/053151**, filed on February 6, 2025, applicant : Institut du Cerveau et de la Moelle Épinière – ICM ; Assistance Publique Hôpitaux de Paris – APHP ; Centre National de la Recherche Scientifique – CNRS ; Institut National de la Santé et de la Recherche Médicale - INSERM ; Sorbonne Université ; Université Paris Cité, authors: Ounissi, M., Racoceanu, D., Berrebi, D., title of the application: device and method for generating n virtual immunohistochemical (IHC) stain images from one hematoxylin and eosin (H&E) stain image (virtual staining - paired images).
  2. Filled International Patent - **PCT/EP2025/053153**, filed on February 6, 2025, applicant : Institut du Cerveau et de la Moelle Épinière – ICM ; Assistance Publique Hôpitaux de Paris – APHP ; Centre National de la Recherche Scientifique – CNRS ; Institut National de la Santé et de la Recherche Médicale - INSERM ; Sorbonne Université ; Université Paris Cité, authors: Ounissi, M., Racoceanu, D., Berrebi, D., title of the application: device and method for generating n virtual immunohistochemical (IHC) stain images from one hematoxylin and eosin (H&E) stain image (virtual staining - unpaired images).
  3. Filled European patent - **EP 24 305 221.4**, region: Europe, filed on: February 9, 2024, applicant: Institut du Cerveau et de la Moelle Épinière – ICM ; Assistance Publique Hôpitaux de Paris – APHP ; Centre National de la Recherche Scientifique – CNRS ; Institut National de la Santé et de la Recherche Médicale - INSERM ; Sorbonne Université ; Université Paris Cité, authors: Ounissi, M., Racoceanu, D., Berrebi, D., title of the application: device and method for generating n virtual immunohistochemical (IHC) stain images from one hematoxylin and eosin (H&E) stain image (virtual staining - paired images).

4. Filled European patent - **EP 24 305 224.8**, region: Europe, filed on: February 9, 2024, applicant: Institut du Cerveau et de la Moelle Épinrière – ICM ; Assistance Publique Hôpitaux de Paris – APHP ; Centre National de la Recherche Scientifique – CNRS ; Institut National de la Santé et de la Recherche Médicale - INSERM ; Sorbonne Université ; Université Paris Cité, authors: Ounissi, M., Racoceanu, D., Berrebi, D., title of the application: device and method for generating n virtual immunohistochemical (IHC) stain images from one hematoxylin and eosin (H&E) stain image (virtual staining - unpaired images).
5. Mitosis Detector – DéTECTeur de mitoses pour l'histopathologie, Déclaration Logicielle CNRS n° DL 05963-01 pour l'UMI 2955 IPAL, 2013.
6. A 3 Dimensional Tracking Method for Time-lapse Suspension Cell and Cell sphere Image Acquisition using Phase Contrast Microscopy, US Patent Application filed on November 2012.
7. A 3 Dimensional Tracking Method for Time-lapse Suspension Cell and Cell sphere Image Acquisition using Phase Contrast Microscopy, SG Patent Application filed on the 12 August 2011, ETPL ref: BII/P/06731/00/SG.
8. PDFibAtl@s - System for detection and prognosis of the Parkinson's Disease using MRI DTI information fusion - CNRS copyright (declaration logicielle) DL 04137-01 CNRS UMI2955, submitted on the 16<sup>th</sup> of December 2010, approved on the 13<sup>th</sup> of May 2011.
9. HISTOGRAD - Virtual microscope for breast cancer grading / CNRS copyright (declaration logicielle) DL 2944-01 for the international research unit UMI CNRS 2955, Copyright granted in June 2009 (Dépôt APP - N° d'enregistrement : IDDN.fr.001.190019.000.S.P.2010.000.20900 en date du 14 Mai 2010).
10. Dynamic real-time monitoring system, patent filled with Em@systec France, submitted in December 2008 (Brevet déposé à l'I.N.P.I. – France – en date du 10 décembre 2008 sous le numéro de demande 0858450, n° 1000043030, réf. 8 E50 BT FR 1 - Em@systec).

✓ **PhD supervision**

1. Ms. **Oumeima LAIFA**, A joint Discriminative-Generative approach for tumour angiogenesis assessment in Computational Pathology, thèse Sorbonne Université, en co-encadrement SU - BII/A\*STAR, soutenue septembre 2019.
2. M. **Lamine TRAORE**, Semantic Modelling of a Histopathology Image Exploration and Analysis Tool, PhD of the University Pierre and Marie Curie, ED393 Doctoral School - Public Health: epidemiology and biomedical informatics, PhD oral defense: 8 Dec. 2017, Paris, Jury: Prof. Patrick Brezillon (president), Prof. Jacques Demongeot (reviewer), Dr Bernard Gibaud (reviewer), Dr Charlotte Gardair, MD (examiner), Prof. Yannick Kergosien (supervisor), Prof. Daniel Racoceanu (supervisor).
3. M. **Bassem BEN CHEIKH**, Graph-based Mathematical Morphology for the Characterization of the Spatial Organization of Histological Structures in High-Content Images: Application to Tumor Microenvironment in Breast Cancer, PhD of the University Pierre and Marie Curie, EDITE, ED130 Doctoral School - Computer Science, Telecommunication and Electronics, PhD oral defense: 26 Sept 2017, Paris, Jury: Prof. Yannick Kergosien (president), Prof. Olivier Lezoray (reviewer), Prof. Peter Hufnagl (reviewer), Prof. William Puech (examiner), Prof. Daniel Racoceanu (supervisor).
4. M. **Olivier MORERE**, Deep Learning Compact and Invariant Image Descriptors for Instance Retrieval, PhD of the University Pierre and Marie Curie (EDITE, ED130 Doctoral School - Computer Science, Telecommunication and Electronics), Paris, 8 June 2016, Jury: reviewers Bloch, G. (Univ. Lorraine), Muller, H. (Univ. Univ. of Applied Sc. Western Switzerland); examiners: Tome, N. (UPMC), Demongeot, J. (Univ. Joseph Fourier), supervisor: Racoceanu, D. (UPMC), co-sup.: A. Veillard (UPMC) and Chandrasekhar, V. (A\*STAR Singapore).
5. Ms. **Sreetama BASU**, Automatic Analysis of Neuronal Morphology: Detection, Modeling and Reconstruction, NUS PhD of the National University of Singapore, Singapore, 24 March 2015, Jury: reviewers: Descombes, X. (DR CNRS Sophia Antipolis), Tan, C. L. (NUS), examiners: Brown, M. (NUS), Hsu, W. (NUS), co-supervisor: Racoceanu, D. (UPMC), supervisor: Ooi, W. T. (NUS).

6. M. **Antoine FAGETTE**, Dense Crowd Analysis, PhD of the University Pierre and Marie Curie (EDITE, ED130 Doctoral School - Computer Science, Telecommunication and Electronics), Paris, 13 June 2014, Jury: Reviewers: Wong, L. (NUS, FOE) and Laptev, I., Members: Moutarde, F. (Mines ParisTech (Ecole Nationale Supérieure des Mines, Paris), Cord, M. (UPMC), Courty, N. (Univ. Bretagne Sud), Supervisor: Racoceanu, D. (UPMC), co-supervisor: Dufour, J. Y. (THALES).
7. M. **Stéphane RIGAUD**, Analysis-Synthesis Approach for Neurosphere Modelisation Under Phase-Contrast Microscopy, PhD of the University Pierre and Marie Curie (EDITE, ED130 Doctoral School - Computer Science, Telecommunication and Electronics), Paris, 10th of March 2014, Jury : reviewers: Descombes, X. (DR CNRS Sophia Antipolis) and Bouthemy, P. (DR INRIA Rennes), examiners: Demouly, V. (UPMC), Boudier, T. (UPMC), supervisor: Racoceanu, D. (UPMC), co-supervisor: Lim, J. H. (I2R/A\*STAR), advisor: Loménie, N. (UPD).
8. M. **Humayun IRSYAD**, Automated Mitosis Detection in Color and Multi-spectral High-Content Images in Histopathology: Application to Breast Cancer Grading in Digital Pathology, PhD of University Joseph Fourier – Grenoble 1, Grenoble, 20 Jan 2014, Jury: Reviewers: Prof. William PUECH, University Montpellier 2 Sciences et Techniques, Rajpoot, N., Warwick University UK, Examiners: Chassery, J. M., CNRS - UJF Grenoble, Gouaillard, A., Temasys Communications, Singapore, Capron, F., Hôpital de la Pitié Salpêtrière, Paris, Klossa, J., TRIBVN, Châtillon, Supervisors: Racoceanu, D., Sorbonne Universités, UPMC, Roux, L., UJF Grenoble.
9. M. **Antoine VEILLARD**, Kernel Methods for the Incorporation of Prior-Knowledge into Support Vector Machines, PhD of the National University of Singapore, Singapore 11 Dec. 2012, Jury: Bloch, G. (reviewer), Brown, M. (reviewer), Lee, M. L. (president), Bressan, S. (co-supervisor), Racoceanu, D. (co-supervisor).
10. Ms. **Roxana Oana TEODORESCU**, Parkinson's Disease Prognosis using Diffusion Tensor Imaging Features Fusion / Pronostic de la maladie de Parkinson basé sur la fusion des caractéristiques d'Images par Résonance Magnétique de Diffusion, joint PhD of the University of Franche-Comté and Politehnica University of Timisoara, 11 Apr. 2011, jury: Jannin, P. (reviewer), Ebrahimi, T. (reviewer), Müller, H. (president), Cretu, V. I. (co-supervisor), Racoceanu, D. (co-supervisor), Zerhouni, N.
11. Ms. **Adina Eunice TUTAC (ép. BRANICI)**, Formal Representation and Reasoning for Microscopic Medical Image-Based Prognosis. Application to Breast Cancer Grading / Représentation et Raisonnement Formels pour le Pronostic basé sur l'Imagerie Médicale Microscopique. Application à la Graduation du Cancer du Sein, joint PhD of the University of Franche-Comté and Politehnica University of Timisoara, Timisoara, 22 Oct. 2010, jury: Robu, N. (president), Roux, C. (reviewer), Müller, H. (reviewer), Cretu, V. I. (co-superv), Racoceanu, D. (co-superv), Loménie, N. Zerhouni, N., Mihalas Gh., Klossa, J.
12. Ms. **Eugenia MINCA**, Surveillance des systèmes de production en utilisant les réseaux de Petri flous. Application à la E-maintenance des systèmes flexibles de production, joint PhD of the University of Franche-Comté and Univ. Valahia Targoviste, 24 Sept. 2004, jury: I. Cucui (president), V. Manzu (reviewer), C. Sibertin-Blanc (reviewer), A. Dorin, Racoceanu, D. (co-supervisor), Zerhouni, N. (co-sup.), J. Cardoso.
13. M. **Nicolas PALLUAT**, Méthodologie de surveillance dynamique à l'aide des réseaux neuro-flous temporels, PhD of the Univeersity of Franche-Comté, 12 Jan. 2006, jury: C. Chu (president), P. Brézillon (reviewer), B. Ould-Bouamama (reviewer), Bourjault, A., J-M. Olive, Racoceanu, D. (co-supervisor), Zerhouni, N. (co-sup.), J-B Léger.
14. M. **Ryad ZEMOURI**, Contribution à la surveillance des systèmes à l'aide des réseaux de neurones dynamiques : Application à la e-maintenance, PhD University Franche-Comté, 28 Nov. 2003, jury: Bourjault, A. (pres), Hammad, D. (reviewer), Noyes, D. (reviewer), Faure, J. M., Racoceanu, D. (co-supervisor), Zerhouni, N. (co-sup.), Labourier, R.

✓ **Habilitation to Supervise Research (HDR – Habilitations à Diriger des Recherches)**

**Loménie, N.** Habilitation (Habilitation à Diriger des Recherches), Structural and Geometric Analysis of Radiometric Images by Visual Perception Modeling with application to digital pathology, 11th of June 2013, Paris. Jury: Stuart Russel (Univ. Berkeley), Catherine Garbay (CNRS, Univ. Grenoble), Isabelle Bloch (Telecom ParisTech), Laurent Najman (ESIEE & Univ. Marne-la-Vallée), Valérie Gouet-Brunet (Inst. Géographique National), Olivier Lézoray

(Univ. Caen), Racoceanu, D. (Univ. Pierre et Marie Curie - CNRS), Laurent Wendling (Univ. Paris Descartes), Georges Stamon (Univ. Paris Descartes).

✓ **International Conferences, Symposiums, Special Sessions and Workshops organization**

1. **MICCAI 2022**, Singapore, Organization Committee
2. **MICCAI 2021**, Strasbourg, France, Organization Committee
3. **MICCAI 2020**, Lima, Peru – Latin America, General Chair
4. **ECDP 2018**, European Conf. of Digital Pathology, Helsinki, Finland, Scientific committee.
5. **First University of Waterloo - Sorbonne University** seminar: " Crystalizing Transdisciplinary innovation in Health Engineering ", 9-11 May, 2016.
6. **MITOS & ATYPIA @ ICPR 2014**, International Medical Benchmark entitled: Mitosis Detection and Atypia assessment in Breast Cancer Histological Images, in the framework of **ICPR 2014, 22<sup>nd</sup> International Conf. Pattern Recognition**, 24-28 Aug 2014, Stockholm, Sweden.
7. **ECDP 2014**, European Conference of Digital Pathology, **Scientific and Organization Committees**, 18-20 June 2014, Paris.
8. **IJCNN 2013** Special Session: "Computational Intelligence in Bioimage Informatics" (IJCNN-CIBII2013), International Joint Conference on Neural Networks, Dallas, TX, USA, August 4-9, 2013
9. **SinFra 2012** - Singaporean-French IPAL Symposium, 15-16 October 2012, University Pierre and Marie Curie and Institut Mines-Telecom, Paris - Scientific invited Sessions, Racoceanu, D. and M. Mokhtari, General Chairs.
10. **MITOS @ ICPR 2012**, International Medical Benchmark entitled: Mitosis Detection in Breast Cancer Histological Images, initiative of IPAL in collaboration with the SME TRIBVN (Châtillon, France), Hôpital de la Pitié-Salpêtrière (Paris, France) and Ohio State University (US), in the framework of **ICPR 2012, 21<sup>st</sup> International Conference on Pattern Recognition**, 11-15 Nov., 2012, Tsukuba, Japan.
11. **IJCNN 2011** Special Session "Consciousness-driven vision: toward a breakthrough in bio-inspired computer vision", 31 July – 5 Aug 2011, US.
12. **SFBI 2011** – Singaporean - French Biolmaging Seminar 2011, 24-25 February. 2011, Biopolis, Singapore (Keynote – Mathias Fink, ESPC, Paris).
13. **ICT'2010**, EU-ASEAN Cooperation opportunities, Networking Session jointly organized by IPAL and SEACOOP, Bruxelles, Belgium, 27-29 Sept. 2010.
14. Image Understanding - an important step toward Visual Cognition, 2010 IEEE World Congress on Computational Intelligence (**WCCI 2010**), Special Session, Chairs: Racoceanu, D. and Huang, C. H., 18-23 July, 2010, Barcelona, Spain.
15. **SinFra'09**, Singaporean-French IPAL Symposium, 18–20 Feb. 2009, Singapore, - Tutorials & Scientific Sessions, Racoceanu, D., Lim, J. H., Leow, W. K., General Chairs (Keynote Joseph Sifakis, 2007 ACM Turing award winner)
16. "Ontology and Context Related Medical Image Distributed Intelligent Access" - ONCOMEDIA special session at the **JAMIT (Japanese Society of Medical Imaging Technology) Annual Meeting**, 20th of July 2007, Tsukuba, Japan, chairs: Nakai, T. & Racoceanu, D.
17. Special Session - Medical Image Retrieval - **AIRS 2006 – Asian Information Retrieval Symposium**, 18 Oct. 2006, Singapore, organizers – Racoceanu, D., publications issued in Lecture Notes for Computer Science (LNCS)
18. **SFBI'06**, 1st Singaporean-French Biomedical Imaging workshop, 12-13 October 2006, Biopolis, Singapore, Organizing Committee Chairs: Racoceanu, D., Benoît-Cattin, H., organized with SBIC (Singapore Biolmaging Consortium) and CREATIS/INSA Lyon.

✓ **Regional, National and International Disseminations**

1. Ilias Sarbout, Dan Milea, Daniel Racoceanu - Deep Learning for Navigation of the Visually Impaired using Synthetic Data from Blind Digital Twins, Journées Scientifiques Inria "Handicap, perte d'autonomie & numérique", 19-20 Nov. 2024, Paris ; France.

2. Groupe de travail (GT) composé des membres de la Commission d'Évaluation (CE) suivants : Soraya Arias, Michel Bergmann, Fabien Campillo, Marie-Agnes Enard, Christian Fabre, Frédéric Garcia, Benjamin Guedj, Emmanuel Jeannot (rédacteur), Giovanni Neglia, Diane Peurichard, Daniel Racoceanu, Benoît Sagot (rédacteur) et Gaëlle Tworkowski, Réflexions sur l'usage de l'IA générative pour les métiers de la recherche, document validé par la **Commission d'Évaluation Inria** en juillet 2024.
3. Racoceanu, D., Singapore: Asia's Leading Location for Biomedical and Cosmetic Industries, **Guest Editor's Note - FCCS Focus Magazine, French Chamber of Commerce, Singapore**, January 2014, pp. 3.
4. IPAL: Four more years for the French-Singaporean lab IPAL, **CNRS international magazine**, No.22, July 2011.
5. Le laboratoire franco-singapourien poursuit son essor, **Journal CNRS**, no 256, May 2011.
6. IPAL: A Decade-Long Success Story, **FCCS Focus Magazine, French Chamber of Commerce, Singapore**, a Living Lab, summer 2010, pp. 22,23.
7. Singapore, New Research Hub, Around the world, Horizons, **CNRS International Magazine** n° 18 July 2010, pp. 34

✓ **Miscelaneous**

1. IPAL – success stories showcase (2011) of the **SECAS EU project funded by the European Commission** under the FP7 ICT program; Eutema, a research consultancy from Austria, coordinates SECAS. Other partners include Optimat (UK), National ICT Australia (NICTA) and Singapore Management University (SMU).