Daniel RACOCEANU
Professor

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BIOGRAPHY

As a Professor of Biomedical Image Analysis, Pattern Recognition, Machine/Deep Learning, and Information/Data Analytics at Sorbonne University and Principal Investigator at the Paris Brain Institute within INRIA's "Aramis" team-project, my work focuses on computational histopathology, particularly integrative approaches that combine biomedical image analysis (notably microscopy), machine/deep learning, and pattern recognition. A key aspect of my research is the development of explainable artificial intelligence (XAI) technologies for enhanced interpretability in medical applications.

Before transitioning to academia, I worked as a Project Manager at General Electric Energy Products – Europe, where I managed [briefly specify role, e.g., R&D initiatives, AI applications, or imaging-related projects]. In 1999, I became an Associate Professor at the University of Franche-Comté and a Research Fellow at the FEMTO-ST Institute (CNRS UMR 6174).

From 2009 to 2015, I was a Professor at the National University of Singapore (NUS) and, from 2008 to 2014, I directed the CNRS International Joint Research Unit "IPAL"—a joint research venture created between CNRS, NUS, A*STAR, Univ. Joseph Fourier (Grenoble) and Univ. Pierre & Marie Curie (Paris).

Together with my team, I organized the first international digital pathology challenge (MITOS) at ICPR 2012, followed by the ATYPIA challenge at ICPR 2024.

As a co-founder of the European Society of Digital Integrative Pathology (ESDIP), I served as Vice-President (2016–2018), President (2018–2020), and have been an Advisory Board member since 2020. I also contributed to the organization of several European Conferences of Digital Pathology (ECDP), including the 2014 edition in Paris.

At Sorbonne University (formerly Pierre and Marie Curie University), I co-led a research team at the BioImaging Lab (LIB), co-directed the B.Sc. Minor in Innovation in Public Health, and was a founding member of the Executive Board of the University Institute of Health Engineering.

In addition, I held an Exceptional Professorship at the Pontifical Catholic University of Peru (2016–2018), where I successfully secured the bid to host MICCAI 2020. From 2018 to 2022, I served on the Board of Directors of the MICCAI Society (Medical Image Computing & Computer-Assisted Intervention), actively contributing to the organization of multiple MICCAI conferences, including as General Chair of MICCAI 2020 in Peru—the first time the conference was held in Latin America.

PROFESSIONAL & RESEARCH EXPERIENCE

Since May 2019 – **Sorbonne University, Paris Brain Institute (ICM)**, Paris, France

- **Principal Investigator, Paris Brain Institute (Institut du Cerveau – ICM)** - Inserm, CNRS, AP-HP
- **Principal Investigator, INRIA team-project Aramis** (National Institute for Research in Digital Science and Technology).
- **Full Professor** @ Faculty of Science & Engineering, Engineering & Computer Science Department
    - Courses & Labs:

- Artificial Intelligence, Machine / Deep Learning (master – Eng.) – coordinator
- Medical and Biomedical Image Analysis (master level – Eng.) – coordinator
- Biomedical Image Analysis (master level – Eng.) – coordinator
- Computer Graphics (master level – Computer Sciences) – coordinator
- Object Oriented Programming (Master level – Eng.)
- Programming (undergraduate level – all options)

- 2018-2022 – Member of the **Board of Directors** of the international **MICCAI Society** (Medical Image Computing and Computer Assisted Intervention)
- 2020 – general Chair MICCAI 2020[1] (Medical Image Computing and Computer Assisted Intervention)
- Since 2020 – **Advisory Board** member - **ESDIP**[2] (European Society of Digital Integrative Pathology)
- 2018-2020 – **President of ESDIP** – the European Society of Digital Integrative Pathology

2018 – 2019: Kitview, Orqual group, Lyon, France

- **Scientific Director**:
- Installing the R&D HQ @ Insavalor Lyon (INSA Lyon's industrial ecosystem).
- Building a local R&D team.
- Setting up a CIFRE PhD in collaboration with LIRMM CNRS lab, Montpellier, France.
- Initiating an R&D collaboration (Spin-Off) in Cluj-Napoca, Romania.

2016 – 2018: **Pontifical Catholic University of Peru** (PUCP), San Miguel, Lima, Peru

- **Full Professor** @ Faculty of Science and Engineering, Department of Engineering;
- Master and PhD students' supervision @ the Medical Imaging Lab;
- European & international initiatives around Computational and Integrative Pathology;
- Succeeding to the **MICCAI 2020** bid - Medical Image Computing & Computer Assisted Intervention (MICCAI 2020 conference was hosted for the first time by Latin America);
- 2018 – Member of **MICCAI Society Board of Directors** (Medical Image Computing and Computer Assisted Intervention)
- 2016-2018 - **ESDIP Vice-President** (Eur. Society of Digital Integrative Pathology).

2011- 2016: **University Pierre and Marie Curie**, Paris, France

- **Full Professor** @ Engineering Department.
- 2014-2016 - **Research Director** - cancer diagnosis and therapies team, **Biomedical Image Lab** (LIB[3] - CNRS UMR 7371, Inserm U1146);
- 2008-2014 – **Director** of the **CNRS** research lab **IPAL** (UMI CNRS 2955) **Singapore**
- **Executive Board**, **University Institute of Health Engineering (IUIS) of Sorbonne University**
- Co-Director of a new Bachelor of Sciences minor: "Innovation in Public Health"
- 2016 – co-creation of the **ESDIP** (European Society of Digital Integrative Pathology)
- 2016-2018 **ESDIP Vice-President.**

2013 – 2015**: National University of Singapore** (**NUS**), Singapore

- **Full Professor** (adjunct) @ School of Computing, Computer Science Dpt.
- 2008-2014 – **Director** of the **CNRS** research lab **IPAL - UMI CNRS 2955 Singapore**
- NUS SoC PhD co-supervision; NUS SoC PhD reviews and jury member.

2011 – 2014**: French National Center for Scientific Research (CNRS)**

- **CNRS Research Director in Biomedical Engineering and Imaging**
- Second mandate as **IPAL UMI CNRS 2955 Director**.

2008 – 2014: **Director**, **International Joint Research Lab IPAL UMI CNRS**, Singapore

- Restructuration around two impactful areas: biomedical image understanding and ambient assisted living; successful CNRS et al. evaluations in 2009 and 2014; growth of the lab by bringing in the University Pierre and Marie Curie and Mines-Télécom Institute.

2009 – 2013**: National University of Singapore (NUS)**, Singapore

- **Associate Professor** (adjunct) @ **School of Computing**, Computer Science Dpt.

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[1] *MICCAI 2020: https://www.miccai2020.org/en/ORGANIZING-COMMITTEE.html*
[2] *ESDIP (European Society of Digital Integrative Pathology) : https://www.esdipath.org/*
[3] *Lab. Imagerie Biomédicale, LIB - UMR CNRS UMR7371, INSERM U1146: https://www.lib.upmc.fr/about-lib/?lang=en*

- NUS SoC PhD students' co-supervision, PhD reviews and PhD jurys
- Co-PI of the A*STAR SERC project "MMedWeb"
- Collaborator in a 2011 Singapore - MIT Alliance (SMA3)

2005 – 2011: **French National Center for Scientific Research (CNRS)**

- **CNRS Research Fellow (Chargé de Recherche CNRS),** creation and management of the Medical Image Indexing team at the International Research Unit PAL (UMI CNRS).
- Research focusing on Medical Image Analysis, Content Based Image Retrieval, Medical Ontologies, Medical Multimedia Fusion, Cognitive Vision.
- Participation @ CLEF international benchmark, Medical Image Indexing-Retrieval track.

1999 – 2008: **University of Franche-Comté**, Besançon, France

- **Associate Professor,** Faculty of Sciences & Technologies, Sciences & Technologies Dpt.
- Courses at Sciences and Techniques Dpt. in artificial intelligence, computer vision, diagnosis, prognosis, control sciences, fault detection, real-time, non-linear, and discrete event systems.
- Involved in the creation of the new LMD (Licence-Master-Doctorat) program.
- Research Fellow at **FEMTO-ST Institute**[4] (UMR CNRS 6174), Besançon, France, in AI applied to dynamic monitoring, diagnosis, and prognosis, in the e-maintenance framework.

1998 – 1999: **General Electric Power Generation**[5], Belfort, France (€1,2 B; 2000 pers.)

- **Project Manager**, General Electric Gas turbine department
- Design, technical, production, logistics, financial management gas turbines projects
- Reengineering, reorganization for General Electric group integration teams.
- Optimization of the management flow.
- Detection of financial niches and consolidation actions in the financial flow.
- Design of common project management and client management protocols between Alstom (old owner of the company) and General Electric (new owner of the company)

1997 – 1998: **Gaussin Manugistique**[6]**,** Héricourt, France, (M€10 /100 persons)

- Design & manufacturing of special trailers for industry, airports, and seaports.
- **Logistics & Planning Manager** - Logistics management, supply chain management
- Reengineering and management of a distributed subsidiary structure.

1993 – 1996: **University of Franche-Comté**, Univ. Institute Technology Belfort, France

- **Lecturer** (ATER - Attaché Temporaire d'Enseignement et de Recherche)
- Dpt. Production System Management, University Institute of Technology of Belfort, University of Franche-Comté, Belfort, France
- Logistic management, supply chain management courses and laboratory
- Flexible production system labs (RFID, PLC programming, production flow management); I created a set of hands-on laboratories on a state-of-the-art flexible industrial production system.

1992: **Research Institute for Welding and Material Testing**[7] (ISIM), Timisoara, Romania

- **Research Fellow** in welding robotics.

PROFESSIONAL ORGANIZATIONS

Medical Image Computing and Computer Assisted Intervention (MICCAI Society)

- 2018-2022: member of the Board of Directors and General Chair of MICCAI 20204

European Society of Digital and Integrative Pathology (ESDIP3)

- Since 2020 - ESDIP Advisory Board
- 2018 to 2020 - President & Member of the Executive Committee
- 2016 to 2018 - Vice-President & Member of the Executive Committee

French Chamber of commerce from Singapore (FCCS)

- 2011 to 2014 – co-President & Funding Member of the R&D Committee of the FCCS.

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[4] *FEMTO-ST Institute (UMR CNRS 6174), Besançon, France: https://www.femto-st.fr/en*
[5] *General Electric Power Generation: https://www.gevernova.com/regions/europe*
[6] *Gaussin Manugistique: http://www.gaussin.com*
[7] *National R&D Institute for Welding and Material Testing (ISIM), Timisoara, Romania: https://www.isim.ro/en/*

MOBILITY ACROSS THEMATIC AREAS

2016- Integrative Digital Pathology & XAI - Prof. @ Sorbonne University and @ PUCP
2012-2016 Computational Pathology – Prof. @ UPMC & Prof. @ NUS & DR @ CNRS
2008-2012 BioMedical Imaging, Cognitive BioMedical Image, Stochastic Prior shape and Simplicial models – Prof. @ UPMC, Prof. @ NUS, DR & CR @ CNRS
2005-2008 Content-Based Medical Image Indexing and Retrieval reinforced by Semantic Approaches - A/Prof. @ UFC, A/Prof. @ NUS, CR @ CNRS
1999-2005 Dynamic Pattern Recognition for Diagnosis/Prognosis using dynamic recurrent neural networks - A/Prof. @ University of Franche-Comté
1992-1997 Stochastic Models Simplification and Control using Principal Component Analysis, PhD candidate @ UFC, Lecturer @ Univ. Inst. Techn. Belfort, M.Sc. @ UTBM
1987-1992 Mechatronics - M.Eng. @ Politehnica University of Timisoara (UPT)

GEOGRAPHIC MOBILITY

2019- Paris, France - Prof. @ Sorbonne University, PI @ Paris Brain Institute (ICM)
2018-2019 Lyon, France - Scientific Director @ Kitview, Orqual Group
2016-2018 San Miguel, Lima, Peru - Prof. @ Pontifical Catholic University of Peru (PUCP)
2014-2016 Paris, France - Prof. @ University Pierre and Marie Curie (UPMC Univ Paris 6)
2005-2014 Singapore - CNRS Senior Research Fellow & UMI CNRS Lab Director
1999-2005 Besançon, France - A/Prof. @ Univerity of Franche-Comté
1998-1999 Belfort, France - Project Manager @ GE Energy Europe Technol. Center
1997-1998 Héricourt, France - Logistic & Planning Manager @ Gaussin S.A.
1993-1997 Belfort, France – PhD candidate @ University of Franche-Comté & Lecturer (ATER) @ Belfort-Montbéliard University Institute of Technology (IUT)
1992-1993 Belfort, France - Master of Sciences @ Univ. of Technology Belfort-Montbéliard (UTBM)
1987-1992 Timisoara, Romania - Master of Engineering @ Politehnica Univ. Timisoara (UPT)

EDUCATION

2006 **HDR (Accreditation to Supervise Research / Habilitation à Diriger des Recherches)**
- Control and Computer Science
University of Franche-Comté, Besançon, France
- Dynamic Monitoring using Artificial Intelligence Techniques
- *Keywords:* Dynamic Monitoring, Artificial Intelligence, Dynamic Neural Networks, Neuro-Fuzzy Systems, Fuzzy Petri Nets, Diagnosis, Prognosis.

1997 **Ph.D. Control and Computer Sciences, University of Franche-Comté, Besançon, France**
- Stochastic model reduction. Quasi-optimal management solution of an EDF (Electricity of France) Hydropower System (a system with 7 centrals).
- *Keywords:* Stochastic Modelling, Markov Chains, Control, Reduction Methods, Singular Perturbations - Principal Component Analysis.
(Highest distinction - jury's congratulations – très honorable avec felicitations du jury).

1993 **M.Sc. (Master of Science) Control Sciences**
University of Technology of Belfort-Montbéliard, France
(Major & with Distinction – Très Bien).

1992 **Dipl. Ing. (Master of Engineering) - Mechanical Manufacturing Engineering Technology**
Politehnica University of Timisoara, Romania
(Highest Distinction in Romanian academic system – 10/10).

CURRENT SCIENTIFIC ACTIVITY

General interest: Responsible Artificial Intelligence, High-content Biomedical Image analysis
Responsible Artificial Intelligence, Explainable AI, Computer science for biomedical data, information and knowledge analysis / management. Integrative biomedical image analysis.

Specific area of expertise: Explainable Artificial Intelligence / Deep Learning, Integrative approaches for biomedical data analysis, Semantic-driven high-content image exploration

Explainable Artificial Intelligence / Deep Learning, Integrating heterogeneous models for omics and high-content imaging data understanding, with initial (not exclusive) focus on digital pathology. Semantic-driven, traceable deep-learning and scalable image analysis.

Keywords: High-content biomedical image analysis, integrative digital pathology, semantic- driven high-content biomedical image analysis, explainable and responsible deep learning / artificial intelligence, stochastic modelling and prior shapes, mathematical morphology on sparse-sets, content-based image retrieval.

SCIENTIFIC PUBLICATIONS

Exhaustive publication list: https://daniraco.github.io/publications.html

Google Scholar: https://scholar.google.com/citations?user=2eBRLj0AAAAJ&hl=fr
Research Gate: https://www.researchgate.net/profile/Daniel_Racoceanu
ORCHID: http://orcid.org/0000-0002-9416-1803
Web of Science Researcher-ID : F-4576-2011
DBLP profile: https://dblp.org/pid/63/4416.html
Semantic Scholar ID: https://www.semanticscholar.org/author/Daniel-Racoceanu/1742773

SCIENTIFIC SUPERVISION

- **Co-guarantor Dr. Habil – habilitation to manage scientific research (HDR)**
  - Dr Nicolas LOMENIE, A/Prof, Univ Paris Descartes, IPAL Res. Fellow Jan.2009-Sep.2012
- **Post-docs supervised**
  - Dr Anuradha KAR (ICM, 2021- 2023), Alzheimer's disease patients' stratification
  - Dr Janan ARSLAN (ICM, 2021-2023), model. metabolic plasticity heterogeneity in melanoma
  - Dr Antoine VEILLARD (UPMC, 2013-2016), collaborative digital pathology
  - Dr Ludovic ROUX (UJF, 2008-2014), semantic cognitive approaches
  - Dr HUANG Chao-Hui (NUS and A*STAR, 2008-2014), cells tracking and WSI analysis.
  - Dr Maria KULIKOVA (CNRS/UPMC 2010-2013) marked point process, nuclei detection.
  - Dr Caroline LACOSTE (CNRS, 2005-2006) – marked point process angiography analysis
- **On-going and graduated PhDs:**
- *On-going PhDs supervision:*
  - Ms. Swann RUYTER (Oct. 2024, Sorbonne Univ., 100%) – spatial transcriptomics and generative IA.
  - Ms. Esther KOZLOWSKI (Oct. 2023, Sorbonne Université, 50%) – analysis of propagation pathways in Parkinson's disease using explainable AI.
  - Ms. Ayse GUNGOR (Aug. 2023, Sorbonne Université, 50%) – eye and brain.
  - M. Ilias SARBOUT (Oct. 2023, Sorbonne Université, 50%) – artificial vision.
- *Graduated PhDs supervised / first position after PhD:* http://www.theses.fr/fr/?q=racoceanu
  - M. Mehdi OUNISSI, (Oct. 2024, Sorbonne Univ., Paris) - Explainable Artificial Intelligence, post-doc researcher at the Rothschild Foundation.
  - M. Gabriel JIMENEZ, (Sept. 2024, Sorbonne Univ., Paris) - Interpretable Deep Learning in Computational Histopathology for Alzheimer Disease Patients' Stratification Refinement, Research engineer at Paris Brain Institute.
  - Ms. Oumeima LAIFA, (Sept. 2019, Sorbonne Univ., Paris) - A Joint Discriminative-Generative Approach for Tumor Angiogenesis Assessment in Comput. Pathology.
  - M. Lamine TRAORE, (Dec. 2017, UPMC, Paris) - Semantic Modelling of a Histopathology Image Exploration & Analysis Tool, CEO smart'GRAD – UPMC spin-off.
  - M. Bassem BEN CHEIKH (Sept. 26, 2017, UPMC, Paris) - Graph-based Mathematical Morphology for Characterizing the Spatial Organization of Histological Structures in High-Content Images: Appl. Tumor Microenvironment in Breast Cancer.
  - M. Olivier MORERE (June 2016, UPMC, Paris) - Deep Learning Compact and Invariant Image Descriptors for Instance Retrieval.
  - Ms. Sreetama BASU (March 2015, NUS, Singapore) - Digital Reconstruction of Neuronal Structures from 3D Microscopy data / Research Fellow @ École Normale Supérieure (Ulm)

Paris, Institute of Biology, Bioinformatics & Comput. Biology group;
- M. Antoine FAGETTE (June 2014, UPMC, Paris) - Dense Crowd Analysis / Research Engineer THALES Singapore;
- M. Stéphane RIGAUD (March 2014, UPMC, Paris) - Analysis-Synthesis Approach for Neurosphere Modelisation Under Phase-Contrast Microscopy / 3 years Research Fellow @ Institut Curie, Paris;
- M. Humayun IRSHAD (Jan. 2014, UJF, Grenoble) - Automated Mitosis Detection in Color and Multispectral High-Content Images in Histopathology: Appl. to Breast Cancer Grading in Digital Pathology / Res. Fellow (3 years contract) @ Harvard Medical School, Boston, US
- M. Antoine VEILLARD (Dec. 2012, NUS, Singapore) - Kernel Methods for the Incorporation of Prior-Knowledge into Support Vector Machines. Application to whole slide image analysis for breast cancer grading / Research Fellow (3 years) @ Univ. Pierre & Marie Curie, Paris;
- Ms. Roxana TEODORESCU (Apr. 2011, Univ. Besançon) - Parkinson's Disease Prognosis using Diffusion Tensor Imaging Features Fusion / Research Fellow (3 years) @ Mount Sinai Hospital, New York, USA.
- Ms. Adina TUTAC (Oct. 2010, Univ. Besançon) - Formal Representation and Reasoning for Microscopic Medical Image-Based Prognosis. Application to Breast Cancer Grading / R&D Manager @ Sionic SRL, Timisoara, Romania.
- M. Nicolas PALLUAT (Jan. 2006, Univ. Besançon) - Dynamic monitoring using temporal neuro-fuzzy syst. / Res. Fellow (3 years contract) @ Univ. Federal Santa Catarina, Brazil;
- Ms. Eugenia MICA (Sept. 2004, Univ. Besançon) - Discrete events systems monitoring using fuzzy Petri nets / A/Prof @ Univ. Valahia, Târgoviste, Romania.
- M. Ryad ZEMOURI (Nov. 2003, Univ. Besançon) - Monitoring using dynamic neural networks A/Prof. CNAM, Paris, France.

SUCCESSFUL FUNDRAISING

Major competitive projects:

- **Big Brain Theory (BBT3), Paris Brain Institute - STRATIFIAD: Refining Alzheimer Disease Patients' stratification using effective, traceable and explicable artificial intelligence approaches in computational histopathology.**
  - Leader of the project. Personal contribution: WSI analysis and XAI / DL approaches
  - Partners: INRIA team Aramis lab, Alzheimer team, and Data analysis center, Paris Brain Institute
  - Duration: 2,5 years (July 2021 - December 2023). Budget 200 000 €.

- **AVIESAN (French Alliance for Life and Health Sciences) - ITMO Cancer - Mathematical Approaches to Modelling Metabolic Plasticity and Heterogeneity in Melanoma (MALMO)**
  - Partners: Paris Brain Institute (CNRS UMR7225 – Inserm U1127), University of Montpellier (LPHI - CNRS UMR5235, LIRMM - CNRS UMR5506) and IRCM – Inserm U1194
  - Role: PI. Personal contribution: traceable DL for tumor characterization and genesis modeling
  - Duration: 3 years (Nov. 2020 – Oct. 2023). Budget: 400 000 €

- **EU EIT Health: PAPHOS - Platform for advanced prescriptive health operational system**
  - Granted by the European Institute of Innovation & Technology (EIT) - EIT Health
  - Big data in healthcare (digital pathology, sleep apnea)
  - URL - PAPHOS project: https://www.eithealth.eu/paphos
  - URL - EIT Health: http://eit.europa.eu/eit-community/eit-health
  - Consortium: ATHOS Spain SAE, BULL SAS, CEA, Univ. Pierre et Marie Curie, Univ. Joseph Fourier (UJF), Univ. Politécnica de Madrid, GMV, Karolinska Institutet (KI), AVENTYN.
  - Role: PI. Personal contribution: Digital Pathology use-case with Pitié-Salpêtrière Hosp., Paris.
  - Duration: 2 years (Jan. 2016 - Dec. 2018). Budget: 1.400.000 €.

- **Medical Research Foundation (FRM, France)**; Bioengineering for health
  - **Multiparametric ultrasonic classification to evaluate tumor progression**
  - Partners: Sorbonne Université, Hôpital Pitié-Salpêtrière, Univ. Illinois Urbana-Champaign
  - Duration: 3 years (2014-2017). Role Collaborator. Personal contribution: WSI analysis using DL

- **NIH (Nat. Institute Health, US) - Advanced Ultrasonic Evaluation of Sentinel Lymph Nodes**
  - Consortium: Riverside Research, New York NY USA, Hawaii University, Honolulu, USA, Kuakini Medical Center, Honolulu, USA, Duration 5 years (2011-2016);
  - Role: collaborator. Personal contribution: WSI analysis for the classification of metastatic regions in

lymph nodes, in correlation with ultrasound modalities.

- **IAMS: Integrated autonomous microscopy syst. for imaging anatomies complex 3D cell**
  - Granted by **A*STAR/JCO** Joint Council Office SERC-BMRC/A*STAR Singapore;
  - Involving IPAL and four A*STAR institutes (the Institute for Infocomm Research I2R/SERC, the Bioinformatic Institute BII/BMRC, the Institute of Molecular and Cell Biology IMCB/BMRC and the Institute of Medical Biology IMB/BMRC);
  - Duration: 3 years (2013 – 2016). Role: PI. Personal contribution: microscopic images analysis.
- **FlexMIm: Collaborative Digital Pathology**
  - Funded by the Consolidated Interministerial Fund, French Ministry of Industry (MINEFE);
  - Project involving Orange Heathcare, Tribvn (SME), Pertimm (SME), the University Pierre and Marie Curie, the Univ. Paris Diderot and the Assistance publique – Hôpitaux de Paris (AP-HP), the public hospital system of the city of Paris and its suburbs;
  - Duration: 3,5 years (2013-2016), Grant: 1.679.000 €, Pers. role: **Principal Investigator.**
- **MICO: COgnitive MIcroscope: Cognition-driven visual explorer in histopathology**
  - Granted by the Techn. for Health program (TecSan - Technologies pour la Santé) of the **French National Research Agency** (ANR - Agence Nationale de la Recherche);
  - Partners: LIP6 -UPMC, TRIBVN, THALES-TCF, Pitié-Salpêtrière Hospital, AGFA Healthcare;
  - Duration: 3,5 years (01/2011-07/2014). Grant: 1.160.000 €.
  - Personal role: **Project Director & Principal Investigator**
- **Intel. Vision Quantitative Microscopy Neural Stem Cells Progenitor Growth Differentiation**
  - Project funded by **A*STAR/JCO** (Joint Council Office SERC-BMRC/A*STAR) Singapore Involving three A*STAR institutes (Institute for Infocomm Research I2R/SERC, Bioinformatics Inst. BII/BMRC and the Inst. of Medical Biology IMB/BMRC);
  - Duration: 3,5 years (12/2009 – 05/2013). Grant: 741.000 S$. Personal role: PI.
- **C0604 - EURO-TELEPATH - "Telepathology Network in Europe"**
  - **COST (European Cooperation in Science and Technology)** Action.
  - Partners: Spain, France, Germany, Grece, Italy, Switzerland, Croatia, Finland, Lithuania, Nederland, Norway, Poland, Portugal, United Kingdom;
  - Duration: 4 years (2007-2011). Personal role: expert in semantic imaging
- **MMedWeb (Multimedia Medical Conceptual Web for Intelligent Information Access)**
  - **A*STAR – SERC** grant - Science & Engineering Research Council, Agency for Science, Technology and Research – Singapore.
  - Partners: CNRS, NUS, I2R/A*STAR, Nat. Univ. Hospital (NUH), National Healthcare Group, Singapore General Hospital (SGH);
  - Duration: 3 years (2007-2010). Grant: 530.840 S$. Personal role: **Principal Investigator.**
- **ONCO-MEDIA (Ontology and COntext related MEdical image Distributed Intel. Access)**
  - 6th **ICT-ASIA programme**
  - 11 International partners: Singapore (IPAL), France (CREATIS, LIRIS, LIP6, I3S), Switzerland (UNIGE), Taiwan (NTU), Philippine (ATENEO), Japan (CIGG);
  - Duration of the project: 2 years (2006-2007; 2009-2010);
  - Personal role: **Project Director & Principal Investigator**

AWARDS:

- 1st Prize – Poster contest – European Neuro-Ophtalmology Society EUNOS 2024, Rotterdam, Netherlands - Gungor, A., et al., Early Detection of Central Retinal Artery Occlusion within 4.5 Hours of Visual Loss: Deep Learning Method Applied on Fundus Photographs.
- 1st Place Prize - 2019 IEEE Eng. in Medicine and Biology Prize: Irshad, H. et al. (2014). Methods for Nuclei Detection, Segmentation, and Classification in Digital Histopathology: A Review - Current Status & Future Potential. *IEEE Reviews on Biomedical Engineering.*
- Best Paper Award finalist - Zemouri, R., Racoceanu, D., Zerhouni, N. (2001). A Petri nets graphic method of reduction using birth-death processes, *IEEE International Conference on Robotics & Automation - IEEE ICRA'2001, pp. 46-51, Seoul, Korea.*

CERTIFICATES:

- June 2014, Certif. in Advanced English (CAE), Cambridge English Language Assessment.