

Paul HONEINE

Full Professor

Université de Rouen Normandie

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France

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Employment History

2015

Full Professor, Université de Rouen Normandie (Normandie Université)

Laboratoire d'Informatique, du Traitement de l'Information et des Systèmes (LITIS)

2008-2015

Associate Professor, Université de technologie de Troyes, Institut Charles Delaunay (CNRS), group LM2S

2007-2008

Post-doctoral research associate, Institut Charles Delaunay (CNRS)

2003-2007

R&D engineer, at Sonalyse s.a.s. (startup), Alès (Gard), France
(Acoustic and vibration solutions for quality control)

University Education

2013

Habilitation à Diriger des Recherches, machine learning and signal processing

Université de technologie de Compiègne, France

2003-2007

Ph.D. in "Systems Optimisation and Security", machine learning and signal processing

Université de technologie de Troyes, France

2002-2003

M.Sc. in "Industrial Control"

Lebanese University, Lebanon, with 6 months at Université de technologie de Troyes, France

1997-2002

Eng. degree in "Mechanics"

Lebanese University, Lebanon

Honors and distinctions

2019-2023

Top 2% scientist worldwide for career-long impact, 2019, 2020, 2021 and 2022.

Rankings obtained by Stanford University researchers in 2020, 2021, 2022 and Oct. 2022 [↗](#)

2019-2023

Top 2% scientist worldwide for single-year impact, 2019, 2020, 2021 and 2022.

Rankings obtained by Stanford University researchers in 2020, 2021, 2022 and Oct. 2022 [↗](#)

2015-2023

Achievement Grant in Research (PEDR), 2015-2019 then 2019-2023, with the highest rank

2018

Nominated for the price of **Best Paper** at the 6th CMMNO, for the paper [C33] (first author)

2017

Sentinel of Science Awards "publons.com": ranked 2rd in France in all disciplines,

Top 1% of peer reviewers in Computer Science and Top 1% in Engineering (as well as in 2018)

2010-2014

Recipient of the **Scientific Excellence Grant** (Prime d'Excellence Scientifique), 2010-2014

2009

Best Paper Award at the 19th IEEE MLSP workshop, for the paper [C116] (first author)

2008

Finalist in the **Ph.D. Prize** from the Rectorate of Reims Academy, France

Entrepreneurship

2019

Highly involved in the "Deep Tech" **Startup TELLUX** from Université de Rouen

tellux.fr [↗](#)

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Summary of publications

- Chapters** 8 chapters in books
- Journals** 59 papers in international refereed journals
3 papers in french refereed journals, invited papers (Traitement du Signal)
- Conferences** 97 papers in international refereed conferences with proceedings
32 papers in french refereed conferences with proceedings
13 papers in workshops (with proc.) and thematic presentations (CNRS GdR and international)
- Patent** 2 patents, published in 2010 & 2022 (with international expansion)
- Award** 1 nominated for the price of best paper at 6th CMMNO 2018 [C33] (first author)
1 best paper award at 19th IEEE MLSP workshop 2009 [C116] (first author)
- Metrics** h-index = 34 (26 since 2018)
i10-index = 82 (58 since 2018)
g-index = 58
Citations \approx 4400 (\approx 2500 since 2018)
Citations/year \approx 240
Citations/paper \approx 17
Most cited paper \approx 500 citations
Authors/paper \approx 3.45

IdHAL 679546

HAL <https://cv.archives-ouvertes.fr/paul-honeine>

ORCID <https://orcid.org/0000-0002-3042-183X>

IDREF <https://idref.fr/13564609X>

ResearcherID <https://publons.com/researcher/M-3230-2019/>

Twitter <https://twitter.com/paulhoneine>

ResearchGate https://www.researchgate.net/profile/Paul_Honeine

Google Scholar <https://scholar.google.com/citations?user=yxk7n1kAAAAJ>

DBLP <https://dblp.org/pid/53/7011>

Semantic Scholar <https://www.semanticscholar.org/author/1703806>

LinkedIn <https://www.linkedin.com/in/paulhoneine/>

Main International Activities

International Visits (Long-stay)

juin 2015

Invited researcher, 1 month

Institute of Artificial Intelligence and Robotics, Xi'an Jiaotong University, China

2010-2015

Invited researcher and lecturer, 10 days per year for 5 consecutive years
Lebanese University, Lebanon.

Main International Collaborations

2021-2022

Veronika Cheplygina, Eindhoven University of Technology, Netherlands
[J11, C12, R1]

2019-2022

Fahed Abdallah, Université Libanaise, Libanon
[J11, J10, J13, C12, C16, C24]

2015-2017

Badong Chen & Nanning Zheng, Xi'an Jiaotong University, China
[J22, J26, J27, C40]

2015-2017

Steve McLaughlin, Heriot-Watt University, Edinburgh, UK
[J28, C38, C39, C50]

2007-2015

José C. M. Bermudez, Federal University of Santa Catarina, Brazil
[J41, J47, J63, J67, J69, C67, C70, C93, C101, C108, C118, C122, C128, C127]

2010-2016

Clovis Francis, Université Libanaise, Lebanon
[J34, J51, J52, C49, C59, C60, C63, C68, C75]

2010-2013

Hassan Amoud, Centre AZM en biotechnologie, Lebanon
[J51, J52, J61, J65, C88, C89, C90, C94, C95, C98, C99, C102, C104, C107, C109]

2012-2016

Roger Achkar, American University of Science and Technology, Lebanon
[J39, J54, C69, C80]

2013-2016

Joumana Farah, Université Saint-Esprit de Kaslik, Lebanon
[J31, J34, J35, J42, J46, C46, C49, C55, C59, C60, C61, C62, C63, C66, C68, C73, C75, C76]

International Project Coordinator

2011-2012

CEDRE (Partenariats Hubert Curien), programme franco-libanais de Coopération pour l'Évaluation et le Développement de la Recherche, a collaborative effort to support PhD studies of M. Kallas
Project PI: P. Honeine, and co-advisor of M. Kallas, a Ph.D. student within this project.

International PhD co-advisor

2018-2021

Rosana El Jurdi, Prior-constrained Convolutional Neural Networks for Medical Image Segmentation, co-supervised with Caroline Petitjean (France) and Fahed Abdallah, Lebanese University, Lebanon
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Nisrine Ghadban, *Monitoring of physical phenomena by information fusion in sensor networks*, co-supervised with Clovis Francis, Lebanese University, Lebanon

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Maya Kallas, *Pattern recognition, prediction, and classification of biomedical signals*, co-supervised with Clovis Francis, Lebanese University, Lebanon

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International Expertise

Panel Member 2023-2025 : Member of the IEEE *Signal Processing Theory and Methods* Technical Committee
 2023-2025 : Member of the FWO Review College, Research Foundation Flanders (Fonds Wetenschappelijk Onderzoek – Vlaanderen), Belgium
 2019-2022 : Member of the FWO extended pool of panel members, Research Foundation Flanders (Fonds Wetenschappelijk Onderzoek – Vlaanderen), Belgium
 2018-2021 : Member of College of Expert Reviewers, European Science Foundation (www.esf.org)
 2018 : Member of the "Electrical engineering, electronic engineering, information engineering" panel at the "Stimulus of Scientific Employment – Individual Support" (CEECLnd, 2018 call), Fundação para a Ciência e a Tecnologia (FCT), Portugal

Project Refereeing Research Foundation Flanders (FWO, 5× in 2023, 2× in 2022, 2× in 2021, 4× in 2019)
 Research Funding Programs in KAUST (Saudi Arabia, 1× in 2023)
 Dutch Research Council (NWO Netherlands, 1× in 2021)
 Research Grants Council (Hong Kong, 1× in 2021)
 AXA Fellowships Research Projects (Europe, 1× in 2019)
 Marsden Fund Council (Royal Society Te Apārangi - New Zealand, 1× in 2017)
 European Science Foundation (www.esf.org, 3× in 2020, 3× in 2019, 1× in 2017)
 BELSPO (Belgian Federal Science Policy Office, 1× in 2017)
 ECOS Nord (1× in 2015)
Others :
 Science Fund of the Republic of Serbia (1× in 2023 / European Science Foundation)
 Modernizing Uzbekistan National Innovation System (1× in 2022 / European Science Foundation)
 Banff International Research Station (BIRS) proposals (USA, 1× in 2017)

Thesis expertise (international) Reva*** T. (2022, Anna University (India))
 Mahdi Khoder (2021, Politecnico de Torino (Italy) & Lebanese University, Lebanon)
 Fei Hua, (2020, Northwestern Polytechnical University (China) & Univ. Côte d'Azur (France))
 Rishi Raj Sharma (2018, Indian Institute of Technology Indore (India))
 Wei Gao, (2015, Northwestern Polytechnical University (China) & Univ. Nice (France))

Teaching Abroad and International

Committee Member of the Steering committee of the MSc "Agricultural and Food Data Management" (International MSc at Institut Polytechnique UniLaSalle)

Machine Learning Methods for Agricultural and Food Data Management

- Master of Science "Agricultural and Food Data Management", an international Master
- Lectures (30 h per year), since Spring 2019

- Students: more than half international, from Erasmus Mundus program.
- Language: lecture in English.

2010-2015

Estimation and prediction (advanced statistics)

- M.Sc. for double diploma Université de technologie de Compiègne and Lebanese University
- Lectures (20 h per year), since 2010

Research Grants

→ Since 2008, I have attracted about **2.5 M€ for my team** as a coordinator, principal investigator (PI) or co-investigator (Co-PI) of research projects (this figure does not include funds received by partners in other labs thanks to my projects). Roughly speaking, half of the funding came from the French national research agency ANR (including as principal coordinator); The other half came from the industrial contracts (SNECMA, Tellux, DataHertz, CETIM), Abondement Carnot, the Region, and international projects Franco-Lebanese PHC “CEDRE” and Franco-Brazilian “Funceme”.

Main Current Research Grants (2022-...)

2024-2028

ODD (ANR Grant), “*Online Deep anomaly Detection*”, involving researchers from the Machine Learning group of the LITIS, ANR funding : 600 k€ for LITIS
Project PI: P. Honeine

2023-2026

FAMOUS (ANR Grant), “*Fair Multimodal Learning*”, collaboration between Laboratoire d’Informatique et Systèmes (Univ. Aix-Marseille) (C. Capponi (PI)), Laboratoire Hubert Curien (Univ. Jean Monnet), Institut des Neurosciences de la Timone (Univ. Aix-Marseille), LITIS (B. Gaüzère, P. Honeine) and company Euranova), ANR funding : 166 k€ for LITIS

2023-2026

SHARP (ANR Grant), “*Machine Learning for Safe Vehicle Charging Points*”, collaboration between LITIS, GREYC and Citeos Solutions Digitales (VINCI Energies), ANR funding : 260 k€ for LITIS

2023-2026

Industrial Project CIFRE (ANRT Grant), “*Hyperspectral characterization of soil matrix effects by coupling physical models and machine learning*”, this project involves S. Jacquemoud (Institut de Physique du Globe de Paris), P. Honeine (LITIS) and an industrial collaboration with the “Startup” Tellux (18 k€)
Project co-PI: P. Honeine, and co-advisor of the Ph.D. student Corentin Feray.

2021-2024

Franco-Brazilian project IRAACEMAS (funding FUNCAP), “*Innovation for the Remote Analysis of Açudes, Surface Estimation and Monitoring using Artificial Intelligence and Satellite (IRAACEMAS)*”, International collaboration between, from the French side, LITIS Lab (coordinator P. Honeine, with G. Gasso, R. Hérault and S. Bernard) and Observatoire Midi-Pyrénées in Toulouse / CNES-CNRS-IRD (coordinator M. Gosset, with J.-F. Creteaux, M. Grippa and S. Calmant) and, from the Brazilian side, Ceará Meteorology and Water Resources Foundation (Funceme) and Federal University of Ceará (coordinator Eduardo Sávio Passos Rodrigues Martins, with R. R. A. Oliveira, A. G. Ferreira, T. Macel and R. V. de Oliveira Paiva) and Federal University of Pernambuco (A. R. Neto and J. F. S. de Souza).

2021-2025

CoDeGNN (ANR Grant), “*Convolution and Decimation for Graph Neural Networks*”, collaboration between GREYC Lab in Caen (L. Brun (PI), S. Bougleux, B. Cuissart), LITIS Lab in Rouen (S. Adam, P. Héroux, B. Gaüzère, P. Honeine) and LIFAT Lab in Tours (J.-Y. Ramel, D. Conte)

2022-2025

MEDISEG (ANR Grant), “*New challenges in deep medical image segmentation*”, collaboration between AI and Math labs, including LITIS in Rouen (C. Petitjean (PI), G. Gasso, P. Honeine, S. Ruan), LMI in Rouen (C. Le Guyader, N. Forcadel, C. Gout) and ImVIA in Burgundy (Mériaudeau, A. Lalande)

2021-2024

Industrial Project CIFRE (ANRT Grant), *“Robust dictionary learning by transfer applied to hyperspectral data for the analysis of polluted soils”*, industrial collaboration with the “Startup” Tellux (15 000 €)

Project PI: P. Honeine, and co-advisor of the Ph.D. student Mohamad Dhaini.

2021-2024

Industrial Project CIFRE (ANRT Grant), *“Real-time indoor localization by embedded vision and deep learning”*, industrial collaboration with the “Startup” DataHertz (30 000 €)

Project PI: P. Honeine, and co-advisor of the Ph.D. student Andrea Daou.

2020-2023

DIPORGA (ADEME Grant), *“In-situ detection of volatile halogenated organic pollutants by hyperspectral and deep learning”*, collaboration between startup TELLUX, ARCADIS, ESTIMAGES and LITIS, (7 000 € for LITIS)

Project PI: Antonin Van Exem (TELLUX, Rouen)

2019-2023

APi (ANR Grant, funded under the plan for AI), *“Apprivoiser la Pré-image (Taming the Beast of the Preimage in Machine Learning for Structured Data: Signal, Image and Graph)”*, collaboration between LITIS Lab (Paul Honeine, coordinator), LTCl -Télécom ParisTech (local coord. Florence d’Alché-Buc), LIG - Université Grenoble Alpes (local coord. Ahlame Douzal), 527 444 € funded by ANR, including 207 360 € for LITIS

Project PI: P. Honeine

Main Past Research Grants

2020-2022

PHC Van Gogh the French-Dutch collaboration programme, *“Weakly Supervised Medical Image Segmentation” (WeSMILE)*, a collaborative effort that has supported the cooperation between the LITIS Lab (France) and the Medical Image Analysis group, Eindhoven University of Technology (Netherlands), 6 280 €

Project directly related to the PhD thesis of Rosana El Jurdi that I co-supervise.

2018-2021

FishNet (Regional Grant), *“Deep Learning for Segmentation of Fish-eye Images with 6DoF”*, collaboration between Pascal Vasseur (group Intelligent Transport Systems of LITIS Lab) and Paul Honeine (group Machine Learning of LITIS Lab), as well as experts from the CEREMA (Center for Studies and Expertise on Risks, Environment, Mobility and Development), Project cost: \approx 110 000 €

Project co-PI: P. Honeine, and co-advisor of Ph.D. student Ahmed Rida Sekkat funded by this project

2018-2022

RiderNet (Regional Grant), *“Data sciences for the analysis of real-world driving situations of motorized two-wheelers”*, collaboration between CEREMA (Y. Dupuis, PI), CIREVE (Ph. Fleury), GREYC (Ch. Rosenberger) and LITIS (P. Vasseur & P. Honeine). The PI is the CEREMA (Center for Studies and Expertise on Risks, Environment, Mobility and Development), Project cost: \approx 376 000 €

Project directly related to the PhD thesis of Ahmed Rida Sekkat that I co-supervise.

2017-2020

Industrial Project CIFRE (ANRT Grant), *“Design of an Indoor Localization System with a Wearable Camera”*, industrial collaboration with the “Startup” DataHertz (30 000 €)

Project PI: P. Honeine, and co-advisor of the Ph.D. student Silvère Konlambigue

2017-2019

LASer (Lebanese Association for Scientific Research), *“Adaptive Anti-abuse Protection of Online Social Networks Using Machine Learning”*, grant funding a 36-month PhD Thesis in France

Project co-PI: P. Honeine, and co-advisor of N. EL Mawass (Ph.D. funded by this project)

2016-2019

CSC PhD grant, “*Machine Learning for Analysis and Classification in Medical Imagery*”, grant funding a 42-month PhD Thesis

Project co-PI: P. Honeine, and co-advisor of Y. Liu (Ph.D. funded by this project)

2014-2017

Industrial Project CIFRE (ANRT Grant), “*Detection and automated identification of shifts in heat-sensitive paint applied on parts of turbojet engines*”, industrial collaboration with SNECMA (Group SAFRAN)

Project PI: P. Honeine, and co-advisor of the Ph.D. student A. Kouvtanovitch

2013-2016

CSC PhD grant, “*Kernel Nonnegative Matrix Factorization: Application to Hyperspectral Imagery*”, grant funding a 42-month PhD Thesis at UTT

Project PI: P. Honeine, and advisor of F. Zhu (Ph.D. funded by this project)

2012-2016

HYPANEMA (ANR Grant), “*Hyperspectral data analysis with nonlinear unmixing algorithms*”, collaboration between Université de Nice Sophia-Antipolis (C. Richard), INP Toulouse (J.-Y. Tourneret), Gipsa-lab (J. Chanussot) and UTT (P. Honeine)

Project PI: C. Richard. UTT PI: P. Honeine

2013-2015

Grant franco-lebanese for PhD thesis, “*Monitoring of physical phenomena by information fusion in sensor networks*”, grant funding of a PhD Thesis for a 18-month at UTT and 18-month at Lebanese University, Lebanon

Project co-PI: P. Honeine, and co-advisor of N. Ghadban (Ph.D. funded by this project)

2012-2015

WiDiD “Wireless Diffusion Detection” (Regional Grant), “*Detection and monitoring of biochemical diffusion with wireless sensor networks*”, a collaborative effort to support PhD studies of S. Mahfouz, 110 000 €

Project PI: P. Honeine, and co-advisor of S. Mahfouz, a Ph.D. student within this project.

2012-2015

SCALA (ANR Grant), “*Permanent Activity Monitoring and Attack Localization*”, collaboration between Suez environnement, Diateam, Eurawasser (Fraunhofer Institute) and UTT, Project cost: 1 178 000 €

Project PI: F. Campan at Suez. P. Honeine is co-advisor of a PhD student within this project.

2011-2012

CEDRE (Partenariats Hubert Curien), *programme franco-libanais de Coopération pour l’Evaluation et le Développement de la Recherche*, a collaborative effort that has supported the cooperation between the UTT (France) and the Lebanese University (Lebanon), 6 000 €

Project PI: P. Honeine

2010-2012

Grant Franco-Lebanese for PhD thesis, “*Pattern recognition, prediction, and classification of biomedical signals*”, grant funding of a PhD Thesis for a 18-month at UTT and 18-month at Lebanese University, Lebanon

Project co-PI: P. Honeine, and co-advisor of M. Kallas (Ph.D. funded by this project)

2009-2012

CSC PhD grant, “*System identification under non-negativity constraints – Applications in adaptive filtering and hyperspectral image analysis*”, funding a 42-month PhD Thesis at UTT

Project co-PI: P. Honeine, and co-advisor of J. Chen (Ph.D. funded by this project)

2009-2012

Detection (Carnot Grant), *Change detection by information processing in collaborative sensor networks*, Collaborative effort between UTC and UTT, 36 000 € for UTT

Project PI: P. Honeine

2009-2012

Vigirés'eau (ANR Grant), *“Real-time monitoring with machine learning of water quality in water distribution systems”*, partnership with Suez, 1 124 000 €, 430 000 € for UTT
Three successive PI : C. Richard, L. Fillatre and P. Honeine

2007-2010

StaRAC (ANR Grant), *“Relative stationarity and connected approaches”*, collaboration between ENS Lyon (P. Flandrin, P. Borgnat), GIPSA-lab Grenoble (P.-O. Amblard), and UTT (C. Richard, P. Honeine), 225 000 €
Project PI: P. Flandrin at ENS Lyon. UTT PI: C. Richard

2006-2009

KernSig (ANR Grant), *“Kernel machines for signal processing”*, collaboration between INSA Rouen (S. Canu), Univ. Rouen (A. Rakotomamonjy), LAGIS Lille (M. Davy), ENST Paris (O. Cappé) and UTT (C. Richard), 193 000 €
Project PI: S. Canu at INSA Rouen. UTT PI: C. Richard

2007

Young project investigator (oséo Anvar Grant), *for the organization of the conference GRETSI 2007*, a 9 month project, PI: P. Honeine, within my PhD studies

2003-2006

R&D engineer at Sonalyse s.a.s., under the **CIFRE/ANRT** (Convention Industrielles de Formation par la Recherche)
PI: P. Honeine, for 3 years of PhD studies.

Service and Scientific Outreach

Responsibilities and involvement in research councils

2020

Head of the Machine Learning group, LITIS Lab, since January 2020
(19 permanent researchers at INSA and Univ. Rouen)

2020

Member of the LITIS board, since 2020
(107 permanent members, 55 PhD students and 20 post-doc fellows and research engineers)

2018

Member of the Advisory Commission of the Specialists in Normandy University, *section 61*

2015-2020

Taking part in the LITIS Lab Board, *at least half of the meetings per year*

2019

Member of the interviewing board for candidates on doctoral grants at the LITIS

2012-2015

Member at the Council of the UMR CNRS 6281, (*gathering all the researchers of UTT*)

2012-2015

Representative of the GdR ISIS, *at the Institut Charles Delaunay (CNRS)*
(ISIS: Information, Signal, Image & ViSion)

Responsibilities and involvement in teaching councils

2022

Head of first year studies in Bachelor in Networks & Telecom, IUT of Rouen
(about 60 students and 16 students in work-study program)

2019

Board/Council of the IUT of Rouen, Université de Rouen
(about 1500 students and 120 permanent teachers on three campuses)

2019

Board/Council of the department Networks & Telecom, 2 terms, IUT of Rouen

2019

Member of the Steering committee, International MSc "Agricultural and Food Data Management", Institut Polytechnique UniLaSalle

2017

Improvement Council of the department Networks & Telecom, IUT of Rouen

2017

Teaching Council at the Professional Degree (Bachelor) ASUR, IUT of Rouen

2015

Teaching Council of the department Networks & Telecom, IUT of Rouen

2017

Involvement at the national meeting of the Chefs of Department Networks & Telecom

2017

Involvement at the jurys of Bacculaureate and jurys of professional experience validation

2013-2015

Working groups, including inter-UT cooperation (UTC-UTBM-UTT) and project UTT 2030

Institution Evaluation Committees

2022

Member of an expert committee Selection Committee of the Hcéres (lab evaluation)

Selection Committees

2023

Member of a Selection Committee for a position of Assistant Professor, *Ecole Navale ENSAM*

2023

Member of a Selection Committee for a position of Assistant Professor, *Univ. Côte d'Azur, Nice*

2023

Member of a Selection Committee for a position of permanent Assistant Professor, *Centrale-Supélec, Paris-Saclay*

2022

Member of a Selection Committee for a position of Full Professor, *Univ. Paris-Saclay*

2022

Member of a Selection Committee for a position of Assistant Professor, *Univ. Rouen*

2021

Member of a Selection Committee for a position of Assistant Professor, *Univ. Côte d'Azur, Nice*

- 2020 President of Selection Committee for a position of Associate Professor, *Univ. of Rouen*
- 2020 Vice-president of a Selection Committee for a position of Full Professor, *Univ. of Rouen*
- 2020 Member of a Selection Committee for a position of Assistant Professor, *Polytech Nice*
- 2019 Member of Selection Committees for 2 positions of Associate Professor, *Univ. of Rouen*

Organization of Conferences and Program Committees

- 2023 Member of Programme Committee of Conference GRETSI, *in Grenoble*
- 2023 Member of Programme Committee of Conference ORASIS, *in Carqueiranne*
- 2022 Member of Programme Committee of Conference GRETSI, *in Nancy*
- 2021 Member of Programme Committee of Conference ORASIS, *in Lac de Saint-Ferréol*
- 2018 Member of Organization Committee of CAP, *at LITIS in Rouen*
- 2007 Member of Organization Committee of Conference GRETSI, *at UTT in Troyes*

Other Conferences:

- 2023 Member of the Scientific Committee of Symposium on Telehealth and Biomedical Devices (JetSan 2023), *in Paris Saint Denis*
- 2021 Member of the Scientific Committee of Symposium on Telehealth and Biomedical Devices (JetSan 2021), *in Toulouse*

Thesis Committees and Professorial Evaluations

- HDR committees** Redouane Khemmar (Nov.'22, ESIGELEC, IRSEEM)
Fouzi Harrou (pre-report'21, Université de Bourgogne Franche-Comté)
Farah Chehadé (Dec.'17, Université de Technologie de Troyes)
- Prof. evaluation** **Evaluation for promotions to the professorial rank:**
Université de Picardie Jules Verne (2022)
Université de Poitiers (2022)
Université de Technologie de Belfort Montbéliard (2022)
- Thesis committees** **Rapporteur:**
Pierre Le Jeune, Oct.'23, Université Sorbonne Paris Nord (L2TI)
Renaud Poncelet, Dec.'22, Université Pierre et Marie Curie - Sorbonne University (INRIA)
Rita Meziati Sabour, Feb.'22, Burgundy University (ImViA)
Yacouba Kaloga, Dec.'21, ENS Lyon (Laboratoire de Physique)
Bruno Muller, Nov.'21, Université de technologie de Troyes
Mahdi Khoder, Mar.'21, Politecnico de Torino (Italy) & Université Libanaise (Liban)
Danny Schmitt, Dec.'20, Univ. Côte d'Azur (I3S, Sophia Antipolis)
Fei Hua, Jul.'20, Northwestern Polytechnical University (Xi'an, China) & Univ. Côte d'Azur
Moussab Djerrab, Dec.'19, Univ. Paris-Saclay (Télécom ParisTech)
Fernando José Garrido Carpio, Dec.'18, Mines ParisTech, INRIA
Anastasia Pampouchidou, Nov.'18, Burgundy University
Olivier Hotel, Dec.'17, UPMC & CEA LIST (Paris-Saclay)
Romain Brault, June'17, Univ. Paris-Saclay (Univ. d'Évry-Val-d'Essonne & Télécom ParisTech)
Saeid Soheily-Khah, Oct.'16, Université de Grenoble Alpes (LIG)
Wei Gao, Dec.'15, Northwestern Polytechnical University (Xi'an, China) & Univ. Nice
Maxime Sangnier, Jan.'15, CEA - Univ. Rouen (LITIS)

Examiner:

Zuokun Ouyang, July'23, Université d'Orléans - President of the committee
Haodi Zhang, Jun.'23, INSA Rouen
Florent Fériol, Apr.'23, ISAE-SUPAERO
Paul de Nailly, Jan.'23, Université Gustave Eiffel - President of the committee
Mohamed Diop, Dec.'22, Université Gustave Eiffel
Mohamed Mroueh, Mar.'21, UTT & Université Libanaise - President of the committee
Farouk Ghallabi, Jun'20, Université de recherche Paris Sciences et Lettres PSL (INRIA Paris)
Ramzi Ben Mhenni, May'20, École Centrale de Nantes
Abraham Traoré, Nov.'19, Univ. Rouen - President of the committee
Riham Ginzarly, Sept.'19, ESIGELEC, IRSEEM - President of the committee
Guillaume Révillon, April'19, CentraleSupélec, L2S
Aline Taoum, Jan'19, UTT
Xiaoyi Chen, Mars'18, UTT
Nassara Elhadji Ille Gado, Dec.'17, UTT
Rita Ammanouil, Oct.'16, Univ. Nice
Soufien Kammoun, June'16, Telecom Paristech
Arnaud Le Bris, Dec.'15, IGN - Univ. Paris-Est - President of the committee
Xiaowei Lv, March'15, UTT
Tian Wang, May'14, UTT
Nguyen Hoang Nguyen, Dec.'13, Univ. Nice
Jihan Khoder, Oct.'13, Univ. Versailles
Chafic Saïdé, Sept.'13, UTT

International Rapporteur:

Reva*** T. (2022, Anna University (India))
Rishi Raj Sharma (2018, Indian Institute of Technology Indore (India))
Wei Gao (2015, Northwestern Polytechnical University (Xi'an, China))

Expert

- ANR Panel** 2023: Member of the ANR Panel CE48 "Foundations of digital technology: computer science, automation, signal processing", France
2022: Member of the ANR Panel CE48 "Foundations of digital technology: computer science, automation, signal processing", France
- Panel Member** 2023-2025 : Member of the IEEE *Signal Processing Theory and Methods* Technical Committee
2023-2025 : Member of the FWO Review College, Research Foundation Flanders (Fonds Wetenschappelijk Onderzoek – Vlaanderen), Belgium
2019-2022 : Member of the FWO extended pool of panel members, Research Foundation Flanders (Fonds Wetenschappelijk Onderzoek – Vlaanderen), Belgium
2018-2021 : Member of College of Expert Reviewers, European Science Foundation (www.esf.org)
2018 : Member of the "Electrical engineering, electronic engineering, information engineering" panel at the "Stimulus of Scientific Employment – Individual Support" (CEECInd, 2018 call), Fundação para a Ciência e a Tecnologia (FCT), Portugal

¹Among the functions of the SPTM committee are: sponsorship of workshops, symposia, special issues of the IEEE Transactions on Signal Processing and special sessions at ICASSP, review of ICASSP paper submissions, nomination of papers for the IEEE SP Society Paper Awards, and nomination of individuals for IEEE SP Society Major Awards

- Project Refereeing** Research Foundation Flanders (FWO, 5× in 2023, 2× in 2022, 2× in 2021, 4× in 2019)
 Research Funding Programs in KAUST (Saudi Arabia, 1× in 2023)
 Dutch Research Council (NWO Netherlands, 1× in 2021)
 Research Grants Council (Hong Kong, 1× in 2021)
 AXA Fellowships Research Projects (Europe, 1× in 2019)
 Marsden Fund Council (Royal Society Te Apārangi - New Zealand, 1× in 2017)
 European Science Foundation (www.esf.org, 3× in 2020, 3× in 2019, 1× in 2017)
 BELSPO (Belgian Federal Science Policy Office, 1× in 2017)
 ECOS Nord (1× in 2015)
Others :
 Science Fund of the Republic of Serbia (1× in 2023 / European Science Foundation)
 Modernizing Uzbekistan National Innovation System (1× in 2022 / European Science Foundation)
 Banff International Research Station (BIRS) proposals (USA, 1× in 2017)
- National** ANR (5 full projects since 2012)
 ANRT-CIFRE (3× since 2012)
 ADEME (1× in 2020)
 AAP IDEX Recherche (Toulouse, 2015)

Review Statistics

Statistics from publons.com (part of Clarivate Analytics, previously Thomson Reuters)

- Annual awards 2018** *Top 1% of peer reviewers in the field Engineering*
- Annual awards 2017** *Top 1% of peer reviewers in the field Computer Science*
Top 1% of peer reviewers in the field Engineering
Top 1% of peer reviewers in all fields in France (2nd in France)
- Annual awards 2016** *Top 10% reviewers for Sentinels of Science Awards, in the field Computer Science*
Top 10% reviewers for Sentinels of Science Awards, in all fields in France (3rd in France)
- 63 Distinct journals
 - 69 Reviewed papers in the last 12 months (47 papers per year on average)
 - 209 Reviewed papers since January 2014
 - 18% Acceptance rate (rate of papers I reviewed and were accepted in the same journal)
 - 11% Journals with impact factor >5 (compared to 6.9% in computer science and 6.1% in engineering)
 - 1.5% Journals with impact factor >9 (compared to 0.3% in computer science and 0% in engineering)

International Journals

- Advisory Board** International Journal of Distributed Sensor Networks (Sage, since 2017)
 (founder member of the Advisory Board, for a 155-person Editor Board)
 Impact factor 1.8 in 2019

Editorial Board Frontiers in Artificial Intelligence (Frontiers in, since 2022)
Geomatics, (MDPI, new journal, since 2020)
Remote Sensing Image Processing, Section for Remote Sensing (MDPI, since 2019)
Applied Intelligence (Springer, since 2017 - Review Board)
Mathematical Problems in Engineering (Hindawi, since 2017)
International Journal of Distributed Sensor Networks (Hindawi, since 2014)
Wireless Communications and Mobile Computing (Hindawi, 2016–2022)
SpringerPlus (Springer, 2014–2016)

Reviewer **Signal and Image Processing:**

(journals) Trans. on Signal Processing (IEEE, ≈ 80 articles since 2008), Trans. on Image Processing (IEEE, $\approx 10\times$), Trans. on Information Theory (IEEE), Signal Processing (Elsevier, $\approx 20\times$), Traitement du Signal (Gretsi), Digital Signal Processing (Elsevier), Journal of Signal Processing Systems (Springer), EURASIP Journal on Advances in Signal Processing (Springer) ...

Machine Learning & Statistics:

Pattern Recognition (Elsevier, $\approx 50\times$), Trans. on Neural Networks and Learning Systems (IEEE, $\approx 15\times$), Applied Intelligence (Springer $\approx 12\times$), Trans. on Pattern Analysis and Machine Intelligence (IEEE, $\approx 10\times$), Neurocomputing (Elsevier), Trans. on Cybernetics (IEEE), Intelligent Systems (IEEE), Lecture Notes in Artificial Intelligence (Springer), Journal of Machine Learning Research (JMLR), Engineering Applications of Artificial Intelligence (Elsevier), Statistical Analysis and Data Mining (Wiley), Journal of the American Statistical Association (Taylor & Francis), Neural Processing Letters (Springer), Pattern Recognition Letters (Elsevier), Machine Learning (Springer), Journal of Applied Statistics (Taylor & Francis), Applied Soft Computing (Elsevier), Journal of King Saud University - Computer and Information Sciences (Elsevier) ...

Remote Sensing and Spatial Science:

Trans. on Geoscience and Remote Sensing (IEEE, ≈ 20 articles), Geoscience and Remote Sensing Letters (IEEE, $\approx 10\times$), Journal of Spatial Science (Taylor & Francis)

Sensors:

Sensors Journal (IEEE), Sensors (MDPI AG, Basel) ...

Communications:

International Journal of Communication Systems (Wiley), Trans. on Wireless Communications (IEEE), Sensors Journal (IEEE) ...

Other:

Trans. on Intelligent Vehicles (IEEE), Scientific Reports (Nature), Automatica (Elsevier), IEEE Access (IEEE), Electronic Letters (IET), Inverse Problems (IOP), Computer Networks (Elsevier), Journal of Parallel and Distributed Computing (Elsevier), Shock and Vibration (Hindawi), Frontiers Neuroscience (Frontiers), ...

Conferences

Area Chair EUSIPCO 2015

Chairman Sessions at 5th IEEE WHISPERS (2013), 19th ICT (2012), 18th IEEE SSP workshop (2011)

Member of prog. & technical committee AAAI'20, '21, '22 & '23, ACML'17, '18 & '19, AISTats'17 (Florida), APPEEC'18, CISP'12, '14 & '15 (IEEE), CISP-BMEI'15, '16, '17 (IEEE tech sp.), DISP'19, ECML/PKDD'18, '19, '20, '21 & '22, EUSIPCO'17,'18 & '20, GlobalSIP'19, ICEED'18 & '19, ICACCI'18, ICACCP'19, ICCISN'18, ICMLA'21-23, ICPRAM'23-'24, IEACon'17, IJCAI'19, '21 '22 & '23, INAIT'19, ISTA'17, '18 & '19, NCWMC'18, IEEE PECON'14, '16 & '18, IEEE SCORed'15, '16 & '17, SIPP'17 (Switzerland), SIRS'17, '18 & '19, SSP'20, '21 & '23, UAI'21 & '22, VisionNet'15, '16, '17, '18, '19, '20 & '22,

Reviewer (conferences) **Signal and Image Processing:** IEEE GlobalSIP'17, IEEE **ICASSP**'12-'23, ACM VisionNet'16, IEEE SAM'16, IEEE **SSP** '11, '16, '18, '20, '21 & '23, **EUSIPCO**'12, '15-'20, MALSIP'15, **GETSI**'11-'23, IEEE WHISPERS'13

Machine Learning: **NeurIPS & NIPS**'16-'23, **ICML**'18-'23, **ICLR**'18-'23, **AISTats**'17-23, **ACML**'17-'23, **UAI**'21-'23, **AAAI**'20-'23, **AALTD@ECML**'18-'23, ECML/PKDD'15 & '18, **IJCAI**'20-'23, ICMLA'21-'23, S+SSPR'22,

Biomedical and Health Informatics: IEEE **EMBC** '12-'16, '18-'23, IEEE BHI'16-'18, IEEE CISP-BMEI'12

Other Conferences: ORASIS'21, IEEE IEACon '16, IEEE ISGT'14, IEEE Globecom'12 & '08, ICT'12, IEEE ISSPA'12

Subsidiary: ISTA'18, SIRS'18, ICACCI'18, I4CT'18, ISTA'17, SIRS'17

Supervised Theses

Ongoing Theses (5)

oct'23-... **Romain Mussard**

Advisors Paul Honeine (main advisor), Gilles Gasso (co-advisor) and Fannia Pacheco (co-advisor)

Title Label Shift Matching for Anomaly Detection and Classification in Time Series

mai'23-... **Corentin Feray**

Advisors Stéphane Jacquemoud (main advisor) and Paul Honeine (co-advisor)

Title Hyperspectral characterization of soil matrix effects by coupling physical models and Machine Learning

Partnership Tellux s.a.s. (www.tellux.fr)

Publications [C2] [W1]

oct'21-... **Herbert Rakotonirina**

Advisors Paul Honeine (main advisor) and Olivier Atteia (co-advisor, Univ. Bordeaux)

Title Deep learning for uncertainty reduction in geostatistics: application to soil remediation

Grant ADEME: Agency for ecological transition

Partnership Tellux s.a.s. (www.tellux.fr)

Publications [C5]

avr'21-... **Mohamad Dhaini**

Advisors Paul Honeine (main advisor) and Maxime Berar (co-advisor)

Title Robust dictionary learning by transfer applied to hyperspectral data for the analysis of polluted soils

Grant CIFRE

Partnership Tellux s.a.s. (www.tellux.fr)

Publications [J3, J5] [C4, C8] [W2]

jan'21-... **Andrea Daou**

Advisors Paul Honeine (main advisor) and Abdelaziz Bensrhair (co-advisor, from INSA-Rouen)

Title Real-time indoor localization by embedded vision and deep learning

Grant CIFRE

Partnership DataHertz s.a. (www.datahertz.fr)

Publications [J2] [C9, W3]

Defended PhD Theses (17 defended, since 2012)

sep'20
oct'23

Clément Glédel

Advisors Paul Honeine (main advisor) and Benoît Gaüzère (co-advisor, from INSA-Rouen)
Title Preimage Problem for Graph Data
Grant ANR, project APi
Publications [C3] [C6, C10]
Defense October 13, 2023

oct'18
dec'22

Ahmed Rida Sekkat

Advisors Paul Honeine (co-advisor) and Pascal Vasseur (co-advisor)
Title Segmentation of Road Scene Omnidirectional Images
Grant Projet financé par la Région Normandie
PhD Internship PhD internship at VinAI (Vietnam) for 3 months — mid-Mars to mid-June 2021
Collaboration CEREMA
Publications [J6, J7] [C7, C20] [C19, C23]
Defense December 8, 2022
PhD Thesis <https://www.theses.fr/s210270>
Future Researcher at IAV GmbH, Volkswagen Group (Germany), before the end of his PhD

déc'18
oct'21

Rosana El Jurdi

Advisors Caroline Petitjean (co-advisor), Paul Honeine (co-advisor), Fahed Abdallah (co-advisor, Lebanese University)
Title Prior-constrained Convolutional Neural Networks for Medical Image Segmentation
Grant Thèse en cotutelle — Projet financé par AUF, CNRS-Liban et Université Libanaise
Publications [J11, J10, J13] [C12, C16] [C24]
Defense October 7, 2021 (for a 36-month international funding)
PhD Thesis <https://www.theses.fr/2021NORMR049> <https://tel.archives-ouvertes.fr/tel-03422230>
Future Post-doc fellow in LITIS Lab, then post-doc fellow in Paris Brain Institute since March 2022

oct'17
juil'21

Linlin Jia

Advisors Paul Honeine (main advisor) and Benoit Gaüzère (co-advisor, from INSA-Rouen)
Title Bridging Graph and Kernel Spaces: A Pre-image Perspective
Grant China Scholarship Council
Publications [J4, J8, J12] [C14, C15]
Defense July 9, 2021 (for a 42-month CSC funding)
PhD Thesis <https://www.theses.fr/s194164>
Future Post-doc fellow in COBRA Lab

jan'17
oct'20

Nour El Mawass

Advisors Paul Honeine (main advisor) and Laurent Vercouter (co-advisor, from INSA-Rouen)
Title Anti-abuse Protection of Online Social Networks Using Machine Learning
Grant Lebanese Association for Scientific Research (LASeR)
PhD Internship PhD internship at Google (Munich) for 3 months — July to Sept. 2019
Publications [J15] [C31]
Defense October 14, 2020 (delayed PhD Defense due to COVID-19)
PhD Thesis <https://www.theses.fr/2020NORMR094> <https://tel.archives-ouvertes.fr/tel-03188653>
Future Post-doc fellow in UTT, then data scientist/engineer at Tweag since 2021

sep'16
sep'20

Thi Phuong Thao (Thao) Tran

Advisors Ahlame Douzal (main advisor, Université Grenoble Alpes) and Paul Honeine (co-advisor, Univ. Rouen) and Saeed Varasteh Yazdi (co-advisor)
Title Interpretable time series kernel analytics by pre-image estimation
Publications [J14]
Defense Sept. 18, 2020 (delayed PhD Defense due to COVID-19)
PhD Thesis <http://www.theses.fr/2020GRALM035> <https://tel.archives-ouvertes.fr/tel-03036775>
Future Data Scientist at CEA, Marseille

jan'17
mai'20

Silvère Konlambigue

Advisors Paul Honeine (main advisor) and Abdelaziz Bensrhair (co-advisor, from INSA-Rouen)
Title Design of an Indoor Localization System with a Wearable Camera
Grant CIFRE
Partnership DataHertz s.a. (www.datahertz.fr)
Publications [C22, C29]
Defense Mai 15, 2020 (industrial funding)
PhD Thesis <https://www.theses.fr/2020NORMR022> <https://www.sudoc.fr/255250053>
Future R&D engineer at DataHertz

fév'16
nov'19

Yuan (Flavie) Liu

Advisors Paul Honeine (main advisor) and Stéphane Canu (co-advisor, from INSA-Rouen)
Title ℓ_0 Based Sparse Representation
Grant China Scholarship Council
Publications [J17, J20] [C27] [C25, C36]
Defense November 25, 2019 (for a 42-month CSC funding)
PhD Thesis <https://www.theses.fr/2019NORMIR22> <https://tel.archives-ouvertes.fr/tel-02925022>
Future R&D engineer in LITIS, Rouen

oct'15
nov'18

Daniel AlShamaa

Advisors Paul Honeine (co-advisor) and Farah Mourad-Chehade (co-advisor, from UTT)
Title Indoor Localization of Dependent Elderly People

Grant Projet financé par la Région Champagne-Ardenne (Programme Essaimage)
Collaboration Nursing home care Louis Pasteur at Romilly-sur-Seine
Publications [J19, J23, J25] [C28, C30, C32, C34, C35, C41] [C37]
Defense November 13, 2018 (at the 37th month)
PhD Thesis <https://tel.archives-ouvertes.fr/tel-02568691>
Future R&D engineer in UTT since October 2018

fév'14
avr'18

Axel Kouvtanovitch

Advisors Paul Honeine (co-advisor) and Dominique Barchiesi (co-advisor, from UTT)
Title Detection and Automated Identification of Shifts in Heat-sensitive Paint Applied on Parts of Turbojet Engines
Grant CIFRE
Partnership SNECMA (group SAFRAN, at Villaroche, Paris)
Publications Confidential work – one pending patent
Defense April 12, 2018
PhD Thesis <https://www.theses.fr/2018TROY0009> <https://www.sudoc.fr/24993597X>
Future Engineering researcher at Safran Engineering Services

oct'13
sept'16

Fei Zhu

Advisor Paul Honeine (sole-advisor)
Title Kernel Nonnegative Matrix Factorization: Application to Hyperspectral Imagery
Grant China Scholarship Council
Publications [J26, J29, J32] [C40, C47, C52, C57] [C44]
Defense Sept. 19, 2016 (at the 36th month)
PhD Thesis <https://www.theses.fr/2016TROY0024> <https://tel.archives-ouvertes.fr/tel-03361933>
Future Assistant Professor in Tianjin University (China) since December 2016

jan'13
déc'15

Nisrine Ghaban

Advisors Paul Honeine (co-advisor) and Clovis Francis (co-advisor, from Lebanese University, Lebanon)
Title Monitoring of physical phenomena by information fusion in sensor networks
Collaboration Farah Mourad (UTT) and Joumana Farah (USEK and Lebanese Univ, Lebanon)
Grant Double doctoral degree (Cotutelle) with Lebanese University
Publications [J34] [C49, C59, C60, C63] [C68, C75]
Defense December 14, 2015 (at the 36th month)
PhD Thesis <https://www.theses.fr/2015TROY0037> <https://tel.archives-ouvertes.fr/tel-03361268>
Future Postdoc at UTT, then Assistant Professor at the Lebanese University, Lebanon

oct'12
oct'15

Sandy Mahfouz

Advisors Paul Honeine (co-advisor) and Farah Mourad-Chehade (co-advisor, from UTT)
Title Kernel-based Machine Learning for Tracking and Environmental Monitoring in WSN

Grant Projet WiDiD funded by a regional grant
Publications [J31, J35, J42, J46] [C55, C61, C66, C73] [C46, C76]
Defense October 14, 2015 (at the 36.5th month)
PhD Thesis <https://www.theses.fr/2015TROY0025> <https://tel.archives-ouvertes.fr/tel-03361199>
Future Assistant lecturer (ATER), then Assistant Professor at UTT since September 2016

oct'12
sept'15

Patric Nader

Advisors Paul Honeine (co-advisor) and Pierre Beuseroy (co-advisor, from UTT)
Title One-class Classification fo Cyber Intrusion in Industrial Systems
Grant Projet SCALA funded by the ANR
Publications [J36] [J24, J45] [C43, C48, C53, C56, C58, C65]
Defense September 24, 2015 (at the 36th month)
PhD Thesis <https://www.theses.fr/2015TROY0021> <https://tel.archives-ouvertes.fr/tel-03359642>
Future Teacher-researcher at American University of the Middle East (AUM), Kuwait

avr'10
nov'12

Maya Kallas

Advisors Paul Honeine (co-advisor) and Clovis Francis (co-advisor, from Lebanese University, Lebanon)
Title Pattern recognition, prediction, and classification of biomedical signals
Grant Region, Lebanese University and UTT, as well as the Franco-Lebanese CEDRE funding program
Collaborations Hassan Amoud (Center AZM, Lebanese University)
Publications [J51, J52] [C88, C89, C90, C94, C95, C102, C104, C107, C109] [C98, C99]
Defense November 23, 2012 (at the 31st month)
PhD Thesis <https://www.theses.fr/2012TROY0026> <https://tel.archives-ouvertes.fr/tel-01088936>
Future Assistant Professor at the University of Lorraine (CRAN) since September 2013

dec'09
dec'12

Zineb Noumir

Advisors Paul Honeine (co-advisor) and Cédric Richard (co-advisor, from Université de Nice)
Title Real-time monitoring of water quality in water distribution systems with machine learning
Grant ANR, Program CSOSG (Concepts, Systèmes et Outils pour la Sécurité Globale)
Partnership Industrial partnership with Suez Environnement
Publications [J48] [J55] [C77, C78, C79, C81, C82, C85, C105] [C97]
Defense December 11, 2012 (at the 36.5th month)
PhD Thesis <https://www.theses.fr/2012TROY0033> <https://www.sudoc.fr/172669405>
Future Assistant lecturer (ATER) at Univ. Paris-Sud in Sept. 2013, then Data Stream Analyst at CEA, and recently Data Scientist Plateau simulation et calculs ADAS for Renault

oct'09
jan'13

Jie Chen

Advisors Paul Honeine (co-advisor) and Cédric Richard (co-advisor, from Université de Nice)
Title System identification under non-negativity constraints – Applications in adaptive filtering and hyperspectral image analysis
Grant China Scholarship Council

- Collaborations** Université de Nice Sophia-Antipolis : Henri Lantéri and Céline Theys
- Publications** [J49, J58, J63, J67] [C74, C83, C86, C92, C93, C103, C106, C108, C110] [C70, C100, C101, C115]
- Defense** January 28, 2013 (at the 40th month for a 42-month funding)
- PhD Thesis** <https://www.theses.fr/2013TROY0001> <https://tel.archives-ouvertes.fr/tel-00953563>
- Future** Postdoc at Michigan University, then Professor at Northwestern Polytechnical University (Xi'an, China) since June 2015

Teaching Activities

2015-...

Full Professor at University of Rouen Normandy

Main Current Teaching Activities

2018-...

Machine Learning Methods for Agricultural and Food Data Management

- Master of Science “Agricultural and Food Data Management”, an international Master
- Lectures (30 h per year) at Institut Polytechnique UniLaSalle (Rouen), since Spring 2019
- Students: more than half international, from Erasmus Mundus program.
- Language: lecture in English.
- Syllabus: Python for Machine Learning (sci-kit learn), feature selection, Machine Learning algorithms for clustering, classification, and regression (Parzen windows, mean-shift, k -means, k -nn, neural networks, SVM, decision trees, random forests)

2017-...

Data Compression

- Faculty of Science and Technology, major “Data Science” (M.Sc. and Ph.D., year 5)
- Lecture (8 h per year) and practical sessions (8 h per year)
- Syllabus: Signal and image compression, local and global frameworks, sparse coding, dictionary learning, nonlinear dictionary learning

2018-...

Pattern Recognition in Biology and Medicine

- Faculty of Science and Technology, major “Engineering for Biomedical” (M.Sc., year 5)
- Lecture (21 h per year)
- Syllabus: Introduction to pattern recognition, Bayesian decision theory, Parzen estimation and k -NN, linear regression, classification, variable selection, dimensionality reduction, medical testing (sensitivity and specificity), applications in biology and medical engineering

2017-...

Infrastructures for Telecommunications

- University Institute of Technology (Professional degree “Licence Pro”, year 3)
- Lecture (4 h) and practical sessions (6 h x 2 groups)
- Syllabus: signals (information coding, modulations, multiplexing), transmission media (cable, optical fiber, antenna ...).

2022-...

Directory Information Services

- Bachelor of Technology (Undergraduate technical degree, year 2)
- Lecture (6 h x 1 class), supervised sessions (6 h x 2 classes) and practical sessions (6 h x 3 classes), for students in classical cursus
Lecture (4.5 h), supervised sessions (4.5 h) and practical sessions (6 h), for students in apprenticeship
- Syllabus: Authentication, directory information services, conception, global catalog, Active Directory, LDAP, Central authentication services.

2022... **Local loop (The Last Mile)**

- Bachelor of Technology (Undergraduate technical degree, year 2)
- Lecture (9 h x 1 class), supervised sessions (6 h x 2 classes) and practical sessions (12 h x 3 classes), for students in classical cursus
Lecture (7.5 h), supervised sessions (4 h) and practical sessions (12 h), for students in apprenticeship

2022... **Internet Technologies**

- Bachelor of Technology (Undergraduate technical degree, year 1)
- Lecture (15 h x 1 class), supervised sessions (12 h x 2 classes) and practical sessions (30 h x 4 classes), for students in classical cursus
Lecture (12 h), supervised sessions (10 h) and practical sessions (24 h), for students in apprenticeship
- Syllabus: Protocols and addressing with IPv4 and IPv6, NAT and PAT address translation, Static and dynamic routing (RIP and OSPF), TCP and UDP, Access-control list filtering policies

Main Past Teaching Activities

2017-2019

Sensor Networks

- Faculty of Science and Technology, major “Mobile and Embedded Computing Engineering” (M.Sc., year 4)
- Lecture (8 h per year) and practical sessions (8 h per year)
- Syllabus: Introduction to wireless sensor networks (WSN), topology of WSN, communication between different sensors, communication protocols such as Zigbee, applications to ambient intelligence such as Internet of Things, smart home, sensor-based medical applications

2015-2022

Directory Information Services

- University Institute of Technology (Undergraduate technical degree, year 2)
- Lecture (6 h x 1 class), supervised sessions (6 h x 2 classes) and practical sessions (18 h x 3 classes), for students in classical cursus
Lecture (4.5 h), supervised sessions (4.5 h) and practical sessions (15 h), for students in apprenticeship
- Syllabus: Authentication, directory information services, conception, global catalog, ADDS, LDAP

2015-2022

Local loop (The Last Mile)

- University Institute of Technology (Undergraduate technical degree, year 2)
- Lecture (9 h x 1 class), supervised sessions (6 h x 2 classes) and practical sessions (15 h x 3 classes), for students in classical cursus
Lecture (7.5 h), supervised sessions (4 h) and practical sessions (12 h), for students in apprenticeship
- Syllabus: local loop topology, copper (ADSL, cable) and fiber optics (FFTH, FFTO), wireless local loop

2015-2021

Internet Technologies

- University Institute of Technology (Undergraduate technical degree, year 1)
- Lecture (15 h x 1 class), supervised sessions (12 h x 2 classes) and practical sessions (33 h x 4 classes), for students in classical cursus
Lecture (12 h), supervised sessions (10 h) and practical sessions (24 h), for students in apprenticeship
- Syllabus: Static routing, dynamic routing, RIP, OSPF, NAT, autonomous system, introduction to IPv6, TCP/IP

2008-2015

Assistant Professor at Université de Technologie de Troyes

2010-2015

Estimation and prediction (advanced statistics)

- M.Sc. for double diploma Université de technologie de Compiègne and Lebanese University
- Lecture (20 h) at the Lebanese University, Lebanon, from 2010 till 2015
- Estimation theory, binary decision theory, ROC curves, multiple measurement generalization, multiple hypotheses, elements of sequential detection

2008-2015

Pattern recognition

- Université de technologie de Troyes (M.Sc. and Ph.D.)
- Lecture (6 h x 1 class), supervised sessions (10 h x 1 class), from 2008 till 2015
- Syllabus: Elements of statistical learning theory, regularization, reproducing kernel Hilbert spaces, support vector machines for classification and regression, mini-projects in Matlab

2011-2015

Introduction to C language

- Université de technologie de Troyes (B.Sc. degree level, year 2)
- Lecture (34 h) and practical sessions (28 h x several groups), from 2011 till 2015
- Syllabus: Introduction to the C language, conventional data structures (tables, files, articles ...), from the algorithm to the program, code control and software quality, advanced C elements, files

2008-2015

Information theory and coding

- Université de technologie de Troyes (B.Sc. degree level, year 3/4)
- Lecture (34 h) and supervised sessions (34 h), from 2008 till 2015
- Syllabus: quantitative measurement of information, source characterization, source coding, discrete channel models, linear channel coding methods

2008-2015

Tools for decision-making strategy (game theory)

- Université de technologie de Troyes (B.Sc. degree level, year 4/5)
- Lecture (17 h) and supervised sessions (34 h), from 2008 till 2015
- Syllabus: Decision theory, information value, utility theory, zero-sum games and non-zero sum games, repetitive games, cooperative games

2008-2015

More Teaching

Pattern Recognition (year 5), Signal Processing (year 4/5), Statistics for Engineers (year 3)...

Refereed Journals and Book Chapters

— 2023 —

- [J1] Rosana El Jurdi, Ahmed Rida Sekkat, Yohan Dupuis, Pascal Vasseur, and Paul Honeine. **Fully residual unet-based semantic segmentation of automotive fisheye images: a comparison of rectangular and deformable convolutions.** *Multimedia Tools and Applications*, October 2023. [\[doi\]](#), [\[Paper\]](#), [\[Link\]](#).
- [J2] Andrea Daou, Jean-Baptiste Pothin, Paul Honeine, and Abdelaziz Bensrhair. **Indoor scene recognition mechanism based on direction-driven convolutional neural networks.** *Sensors*, 23(12):110439, 2023. [\[doi\]](#), [\[Paper\]](#), [\[Link\]](#).
- [J3] Mohamad Dhaini, Maxime Berar, Paul Honeine, and Antonin Van Exem. **Unsupervised domain adaptation for regression using dictionary learning.** *Knowledge-Based Systems*, 267:110439, 2023. [\[doi\]](#), [\[Link\]](#).

— 2022 —

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— 2021 —

- [W2] Mohamad Dhaini, François-Joseph Roudaut, Antonin Garret, Ronan Arzur, Audrey Chereau, Fanny Varenne, Paul Honeine, Mélanie Mignot, and Antonin Van Exem. **Hyperspectral imaging for the evaluation of lithology and the monitoring of hydrocarbons in environmental samples.** In *RemTech (International event on Remediation, Coasts, Floods, Climate, Seismic, Regeneration Industry)*, Ferrara, Italy, 20 - 24 September 2021. [\[Video\]](#).
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