Assistant Professor and Senior research scientist
Department of Computer Science
University of Luxembourg
6, avenue de la Fonte
L-4365 Esch-sur-Alzette, Luxembourg

luis.leiva@uni.lu
(+352) 466 644 5513
https://luis.leiva.name

Summary

Before joining the University of Luxembourg, I worked as a postdoctoral scholar at Aalto University and as a research fellow at the Technical University of Valencia (UPV), Spain. I have published 100+ peer-reviewed papers, usually as leading or corresponding author, including: 30 journal articles, 71 conference papers, and 5 book chapters. My current h-index is 20 (1510 citations). The ACM says that my papers have been downloaded over 12K+ times, including 2.5K+ times in the last 12 months. According to DBLP, I have collaborated with 110+ researchers from international research centers. I have participated in 18 research projects with competitive funding schemes, among which I have been PI in 10 projects, and in 9 industry projects, among which I have been PI in 3 projects. I have co-authored 2 granted patents and 15 tech transfer projects, most of them being exploited today by private companies and public institutions. I have been invited as visiting researcher and visiting professor in 4 institutions abroad. To date, I have received 2 scholarship grants and 20+ awards and recognitions from both academia and industry. I have secured academic funds worth of 7 M€ through competitive national and international programs. I am the co-founder and former CTO of Sciling, a machine learning company based in Spain. My research has been featured in the international press, including e.g. New Scientist, Communications of the ACM, Phys.org, and Science Daily. I am ranked among the top-10 Computational Interaction and Bio-signal processing researchers in Google Scholar. The course I created and taught in 2019-2020 (Advanced Topics in User Interfaces) was ranked among the top-10 best MSc courses at Aalto University. Currently I am the responsible teacher of 4 BSc and MSc courses at the University of Luxembourg, covering Human-Computer Interaction, Machine Learning, and Web Development. In 2023 I was appointed as the director of the Interdisciplinary Lab for Intelligent and Adaptive Systems (ILIAS) at the University of Luxembourg and as a member of the European Laboratory for Learning and Intelligent Systems (ELLIS).

Research Areas

I do multidisciplinary research at the intersection of Human-Computer Interaction and Machine Learning. My main research area is Computational Interaction, where I combine computational thinking – abstraction, automation, and analysis – with data-driven models and methods to enable, explain, and support user interaction. *My research vision is to make the most of computing systems using the least amount of information from the user.* I firmly believe that users are a scarce resource, so they have to be optimized. In pursuit of that goal, I have considered two ways to obtain valuable user feedback without burdening the user: (1) *implicit interaction*, where the user does not provide information on purpose, and (2) *synthetic data generation*, where the computer simulates human-like data on behalf of the user.

Education

PhD in Computer Science, UPV. With Highest Honors (Cum Laude) + International Mention + **Extraordinary Award**[1]	2012
MAS in Pattern Recognition and Artificial Intelligence, UPV. Highest Honor in Graduate Thesis Project	2008
MSc in Communications and Mobile Services Development, UPV. Highest Honor in Graduate Thesis Project	2007
BSc in Industrial Engineering, UPV. Highest Honor in Undergraduate Thesis Project	2005
BSc in Industrial Design, UPV. Highest Honor in Undergraduate Thesis Project + **Bancaja Award**[2]	2001

Professional Experience

Assistant Professor, University of Luxembourg	2021-present
Postdoctoral scholar, Aalto University	2019-2020
Chief Technology Officer, Sciling SL	2014-2018
Postdoctoral research fellow, UPV	2015
Postdoctoral researcher, UPV	2013-2014
Research assistant, UPV	2009-2012
Undergraduate specialized fellow, UPV	2008

---

[1] Top 10% among all the PhD theses defended at the UPV, usually only 1 thesis gets awarded per department each year.
[2] Awarded to the best final degree projects conducted in companies, under a cooperative educational program.

Web developer, freelance	2007-2008
Undergraduate fellow, UPV	2000

Academic Projects as Principal Investigator

12. SYMBIOTIK-SOK — 2022
HORIZON-WIDERA-2022-ACCESS-07, HORIZON EUROPE. Budget: 500 000 EUR. Team: 2 partners.

11. Semantic Pruning of ConvNets — 2022
Strategic partnership ULHPC-Amazon AWS. Team: 2 people.

10. SYMBIOTIK — 2022
EIC Pathfinder (Awareness Inside), HORIZON EUROPE. Budget: 4 000 000 EUR. Team: 4 partners.

9. SCRIPTOR: Efficient and Understandable Models of Human Handwriting — 2022
FNR AFR-Bilateral. Budget: 150 000 EUR. Team: 3 people.

8. Spresso: Restoration and Super-resolution of Historical Images — 2022
Budget: 10 000 EUR. Team: 3 people.

7. BANANA: Brainsourcing for Affective Attention Estimation — 2021
CHIST-ERA, HORIZON EUROPE (FET). Budget: 1 800 000 EUR. Team: 4 partners.

6. Individual grant support for EU projects — 2021
HORIZON EUROPE Rapid Incentive Scheme (UL-RISE). Budget: 7 000 EUR.

5. The Teaching Wizard — 2020
A!Ole Education: Aalto Online Learning. Budget: 10 000 EUR. Team: 4 people.

4. Attentive Sequence-to-Sequence Modeling of Stroke Gestures Articulation Performance — 2019
FCAI via HIIT, grant FCAI-2019-3. Budget: 10 000 EUR. Team: 2 people.

3. JITL: Just In Time Localization of Graphical User Interfaces — 2015
Spanish MECD via VLC/CAMPUS, grants SP20140775 and SP20140841. Budget: 8 000 EUR. Team: 6 people.

2. CORAL: Cost ORiented Agile Localization — 2015
European Commission, H2020, grant 684035. Budget: 50 000 EUR. Team: 4 people.

1. μcaptcha: Math-based handwritten captchas — 2014
VLC/CAMPUS, grant SP20141428. Budget: 30 000 EUR. Team: 5 people.

Academic Projects as Research Member

9. HumaneAI — 2020
European Commission ICT-48-2020, grant 761758.

8. COMPUTED: Computational User Interface Design — 2020
European Research Council, grant 637991.

7. BAD: Bayesian Artefact Design — 2019
Academy of Finland, grant 318559.

6. ALMAMATER: Adaptive Learning and MultimodAlity in MAchine Translation and tExt tRanscription — 2015
GVA, grant PROMETEOII/2014/030.

5. ALMPR: Adaptive Learning in Multimodality and Pattern Recognition — 2014
GVA, grant PROMETEO/2009/014.

4. STraDa: Search in Transcribed Manuscripts and Document Augmentation — 2014-2015
Spanish MINECO, grant TIN2012-37475-C02-01.

3. tranScriptorium — 2013-2014
European Commission, grant FP7-ICT-2011-7-287774.

2. CasMaCat: Cognitive Analysis and Statistical Methods for Advanced Computer Aided Translation — 2012-2013
European Commission, grant FP7-ICT-2011-7-287774.

1. MIPRCV: Multimodal Interaction in Pattern Recognition and Computer Vision — 2009-2012
Consolider program, Spanish MICINN, grant CSD2007-00018.

Industry Projects as Principal Investigator

3. Customer churn prediction. Client: Churnly Technologies Limited. Budget: 30 000 EUR. Team: 4 people. — 2018

2. Predicting Clinician Expertise based on Visual Perception. <small>Client: Université de Montréal. Budget: 10 000 EUR. Team: 2 people.</small> 2017

1. SEGURA TMS Platform. <small>Client: Universitat Politècnica de València. Budget: 60 000 EUR. Team: 6 people.</small> 2016-2018

Industry Projects as Research Member

6. User Interface Style Transfer. <small>Client: Huawei Technologies Co., Ltd.</small> 2020

5. CLEO Digital Assistant for IoT. <small>Client: Cleo AI Ltd.</small> 2018

4. COR: Fast and efficient technical translation management. <small>Client: Pangeanic, SL.</small> 2017-2018

3. CORAL for Magento. <small>Client: Vinopremier, SL.</small> 2017

2. Backend Symfony Microservice. <small>Client: PC Componentes y Multimedia, SL.</small> 2016

1. Assisted Interactive Transcription of Ancient Books. <small>Client: Biblioteca Nacional de España.</small> 2015

Research Visits

4. User Interfaces group, Aalto University, Finland 2018

3. HICUP Lab, University of Primorska, Slovenia 2018

2. Institute for Visualization and Interactive Systems (VIS), Stuttgart University, Germany 2013

1. German Research Center for Artificial Intelligence (DFKI), Saarland University, Germany 2011-2012

Scholarship Activities

Editorial Boards

4. Associate Editor of Machine Learning with Applications, <small>Elsevier</small> 2022-2023

3. Associate Editor of International Journal of Human-Computer Studies, <small>Elsevier</small> 2020-2023

2. Associate Editor of Interacción (SIGCHI Spain journal), <small>AIPO</small> 2022-2023

1. Guest Editor of Mobile Information Systems, <small>Hindawi</small> 2021

Program Chair

3. Intl. Conf. on Human-Computer Interaction with Mobile Devices and Services (MobileHCI) 2016, 2023

2. Intl. Conf. on Intelligent User Interfaces (IUI) 2022-2023

1. Benelux Conf. on Artificial Intelligence (BNAIC/BeneLearn) 2021

Associate Chair

4. SIGCHI Conf. on Human Factors in Computing Systems (CHI) 2016, 2022-2024

3. Intl. Conf. on Intelligent User Interfaces (IUI) 2022-2024

2. Mensch und Computer (MuC) 2021-2023

1. Intl. Conf. on Human-Computer Interaction with Mobile Devices and Services (MobileHCI) 2020

Session Chair

2. SIGCHI Conf. on Human Factors in Computing Systems (CHI) 2015-2019, 2023

1. Intl. Conf. on Human-Computer Interaction with Mobile Devices and Services (MobileHCI) 2016

Program Committee Member

12. SIGCHI Conf. on Human Factors in Computing Systems (CHI) 2016, 2022-2024

11. Intl. ACM SIGIR Conf. on Research and Development in Information Retrieval (SIGIR) 2018-2023

10. Intl. Conf. on Intelligent User Interfaces (IUI) 2013-2015, 2019-2024

9. ACM Conf. on Information and Knowledge Management (CIKM) 2015, 2017, 2019-2020, 2023

8. Intl. Conf. on Multimodal Interfaces (ICMI) 2014-2015, 2020-2023

7. ACM Intl. Conf. on Web Search and Data Mining (WSDM) 2021

6. Intl. Conf. on Human-Computer Interaction with Mobile Devices and Services (MobileHCI) 2016, 2023

5. Intl. Conf. on Web Engineering (ICWE) 2014

4. ACM SIGCHI Workshop on Computational UI	2022-2023
3. Hybrid Human-Artificial Intelligence (HHAI)	2022-2023
2. Benelux Conf. on Artificial Intelligence (BNAIC/BeneLearn)	2021-2023
1. Mensch und Computer (MuC)	2021-2023

Conference Reviewer

23. SIGCHI Conf. on Human Factors in Computing Systems (CHI)	2011-2024
22. Intl. Conf. on Human-Computer Interaction with Mobile Devices and Services (MobileHCI)	2011-2023
21. Intl. Conf. on Intelligent User Interfaces (IUI)	2012-2023
20. SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)	2023
19. ACM Intl. Conf. on Web Search and Data Mining (WSDM)	2021
18. Benelux Conf. on Artificial Intelligence (BNAIC/BeneLearn)	2021-2023
17. ACM Symposium on User Interface Software and Technology (UIST)	2012, 2020, 2022
16. Intl. ACM SIGIR Conf. on Research and Development in Information Retrieval (SIGIR)	2018-2023
15. ACM Conf. on Information and Knowledge Management (CIKM)	2017, 2019-2020, 2023
14. ACM SIGCHI Symposium on Engineering Interactive Computing Systems (EICS)	2012, 2014, 2020-2021
13. Intl. Symposium on Mixed and Augmented Reality (ISMAR)	2019-2020, 2022-2023
12. IFIP TC.13 Intl. Conf. on Human-Computer Interaction (INTERACT)	2019-2023
11. Intl. Conf. on Multimodal Interfaces (ICMI)	2011-2015, 2020-2023
10. Intl. Conf. on Interactive Surfaces and Spaces (ISS)	2019
9. Intl. Conf. on Tangible, Embedded, and Embodied Interaction (TEI)	2019
8. Intl. Conf. on Pattern Recognition and Artificial Intelligence (ICPRAI)	2018
7. The Web Conf. (WWW)	2015
6. EAI Intl. Conf. on Pervasive Computing Technologies for Healthcare (PervasiveHealth)	2015
5. ACM Conf. on Designing Interactive Systems (DIS)	2012, 2014, 2021
4. Intl. Conf.s On Web Engineering (ICWE)	2014
3. Intl. Conf. on Mobile and Ubiquitous Multimedia (MUM)	2013
2. Intl. Joint Conf. on Pervasive and Ubiquitous Computing (Ubicomp)	2013
1. Intl. IEEE InfoVis Conf.	2011

Journal Reviewer

20. Journal of Artificial Intelligence Research, AI Access Foundation	2023
19. Behaviour & Information Technology, Taylor & Francis	2022
18. Applied Artificial Intelligence, Taylor & Francis	2021
17. IEEE Access, IEEE Computer Society Press	2021
16. IEEE Transactions on Multimedia, IEEE Computer Society Press	2020
15. Knowledge-Based Systems, Elsevier	2020
14. ACM Transactions on Interactive Intelligent Systems, ACM Press	2021-2022
13. ACM Transactions on Computer-Human Interaction, ACM Press	2020-2023
12. Mobile Information Systems, Hindawi	2020
11. International Journal of Human-Computer Studies, Elsevier	2016, 2019-2022
10. International Journal of Human-Computer Interaction, Taylor & Francis	2019-2022
9. Interacting with Computers, Oxford University Press	2015-2016, 2018-2020
8. Interactive, Mobile, Wearable and Ubiquitous Technologies, ACM Press	2013, 2016-2018, 2020
7. Expert Systems with Applications, Elsevier	2018-2022

6. IEEE Transactions on Human-Machine Systems, IEEE Computer Society Press	2015, 2019-2021
5. IEEE Computer Graphics & Applications, IEEE Computer Society Press	2019
4. Pattern Recognition, Elsevier	2017, 2022
3. ACM Transactions on the Web, ACM Press	2015-2016
2. Electronic Commerce Research and Applications, Elsevier	2015
1. Human Technology, Open Science Center, University of Jyväskylä	2012

Advisory Boards in Academia

3. Representative of the Computer Science Department to the Faculty Council, Luxembourg	2022-2023
2. Fellowship Evaluation Committee (FEC) of the Danish Data Science Academy (DDSA), Denmark	2022-2023
1. Computer, Communication and Information Sciences (CCIS) program, Aalto University	2019

Advisory Boards in Industry

2. Design AI, Finland	2023
1. Sciling, Spain	2018-2020

Advisory Boards in Government

1. Ministry of Economic Affairs and Digital Transformation (MINECO), Spain	2021

Other Service

4. Director of the Interdisciplinary Lab for Intelligent and Adaptive Systems (ILIAS) at the University of Luxembourg	2023
3. Member of the 6th University of Luxembourg Leadership Academy (ULLA) Steering Committee	2022
2. Head of lab management of the Computer Science Department at the University of Luxembourg	2022-2023
1. Creator and maintainer of the former SIGCHI Extended Abstracts LaTeX template	2011-2015

Supervision

Postdoctoral Researchers

3. Saravana Kumar, University of Luxembourg	2022
2. Bereket Yilma, University of Luxembourg	2022
1. Mateusz Dubiel, University of Luxembourg	2021

PhD Students

6. Inês Cardoso, University of Luxembourg	2023
5. Léopold Hillah, University of Luxembourg	2023
4. Fan Xu, University of Luxembourg	2023
3. Parvin Emami, University of Luxembourg	2023
2. Kayhan Latifzadeh, University of Luxembourg	2022
1. Nina Hosseini, Guest PhD, University of Luxembourg	2021

Master's Students

12. Alexis Ciarrone, University of Luxembourg	2023
11. Michael Mbajwa, University of Luxembourg	2023
10. Max Sinner, University of Luxembourg & Circu Li-ion	2023
9. Cagri Ustundag, University of Luxembourg & Circu Li-ion	2023
8. Yasmine Barghouti, University of Luxembourg	2023
7. Meryem Atrache, University of Luxembourg & GoodYear	2022
6. Jérôme Bortuzzo, University of Luxembourg	2022
5. Désirée Lemarquis, University of Luxembourg	2022

4. Lukas Brückner, <small>Aalto University</small> — 2020

3. Richard Lengyel, <small>Aalto University & Space Systems Finland Oy</small> — 2020

2. Oleg Vlasovetc, <small>Aalto University & NAPA Oy</small> — 2020

1. Laura Ham, <small>Aalto University & Yle News</small> — 2020

Bachelor Students

26. Alexandre Tinouert, <small>University of Luxembourg</small> — 2023

25. Karyna Ouahrani, <small>University of Luxembourg</small> — 2023

24. Sena Kilinç, <small>University of Luxembourg</small> — 2023

23. Nour Charifh, <small>University of Luxembourg</small> — 2023

22. Luc Pereira, <small>University of Luxembourg</small> — 2023

21. Gregory Soetens, <small>University of Luxembourg</small> — 2023

20. Srinjoy Sanyal, <small>University of Luxembourg</small> — 2022

19. André Dussing, <small>University of Luxembourg</small> — 2022

18. Rui F. Giesta, <small>University of Luxembourg</small> — 2021-2022

17. Paulo R. Botelho, <small>University of Luxembourg</small> — 2022

16. Adel Dedic, <small>University of Luxembourg</small> — 2021-2022

15. Kevin Curado, <small>University of Luxembourg</small> — 2022

14. David Matos, <small>University of Luxembourg</small> — 2022

13. Fabio Di Biase, <small>University of Luxembourg</small> — 2022

12. Carlos V. Gonçalves, <small>University of Luxembourg</small> — 2022

11. Paul R. B. Houssel, <small>University of Luxembourg</small> — 2022

10. Kristina Kudryavtseva, <small>University of Luxembourg</small> — 2021, 2023

9. Dany M. Pais, <small>University of Luxembourg</small> — 2021-2022

8. Noé Jager, <small>University of Luxembourg</small> — 2021-2022

7. Daniel Duarte, <small>University of Luxembourg</small> — 2021-2022

6. Guillaume Tostes, <small>University of Luxembourg</small> — 2021-2022

5. Alya Bolowich, <small>University of Luxembourg</small> — 2021-2022

4. Nicholas Borges, <small>University of Luxembourg</small> — 2021

3. Samuel Rosas, <small>Aalto University</small> — 2020

2. Pin Tian, <small>Aalto University</small> — 2020

1. Oskari Ojala, <small>Aalto University</small> — 2020

Research Interns

6. Syrine Haddad, <small>University of Tunis El Manar</small> — 2023

5. Nuwan T. Attygalle, <small>University of Primorska</small> — 2022-2023

4. Moises Diaz, <small>University of Las Palmas de Gran Canaria</small> — 2022-2023

3. Pin Tian, <small>Aalto University</small> — 2020

2. Lokesh Kumar, <small>Indian Institute of Technology Madras</small> — 2019

1. Preetha Datta, <small>Ashoka University</small> — 2019

Research Assistants

8. Sena Kilinç, <small>University of Luxembourg</small> — 2023

7. Eliott Bonte, <small>University of Luxembourg</small> — 2023

6. Nima Gozalpour, <small>University of Luxembourg</small> — 2022-2023

5. Paul R. B. Houssel, <small>University of Luxembourg</small> — 2022

4. Daniel Duarte, University of Luxembourg	2022-2023
3. Dany M. Pais, University of Luxembourg	2022
2. Esada Licina, University of Luxembourg	2021
1. Asutosh Hota, Aalto University	2019

Teaching Assistants

11. Hugo Barthelemy, University of Luxembourg	2023
10. Alexandre Tinouert, University of Luxembourg	2023
9. Astley Gomes, University of Luxembourg	2022-2023
8. Hamza Dovutbekov, University of Luxembourg	2022
7. Sena Kilinç, University of Luxembourg	2022
6. Srinjoy Sanyal, University of Luxembourg	2022
5. Rui F. Giesta, University of Luxembourg	2022
4. Bereket Yilma, University of Luxembourg	2022
3. Mateusz Dubiel, University of Luxembourg	2021
2. Adiyta Damodaran, University of Luxembourg	2021
1. Oleg Vlasovetc, Aalto University	2019

Industry Mentoring

4. Enrique Pons, Sciling SL	2018
3. Efren Camarasa, Sciling SL	2018
2. Christian Verdú, Sciling SL	2017
1. Carlos Millán Sciling SL	2016

Teaching Experience

12. Main lecturer on 'Prototyping with Deep Learning' (MSc course) University of Luxembourg	2022-2023
11. Guest lecturer on 'Designing Interactive Systems' (MSc course) University of Luxembourg	2022-2023
10. Main lecturer on 'Web Dev 1: Front-end Development' (BSc course) University of Luxembourg	2021-2023
9. Main lecturer on 'Web Dev 2: Back-end Development' (BSc course) University of Luxembourg	2021-2023
8. Guest lecturer on 'Computational User Interface Design' (MSc course) Aalto University	2020
7. Guest lecturer on 'User Research' Aalto University (MSc course)	2020-2021
6. Main lecturer on 'Advanced Topics in User Interfaces' (MSc course) Aalto University	2019
5. Guest lecturer on 'Computational User Interface Design' (MSc course) Aalto University	2019
4. Guest lecturer on 'Selected Topics in HCI' (MSc course) University of Primorska	2018
3. Guest lecturer on 'Artificial Intelligence, Pattern Recognition and Digital Imaging' (MSc course) UPV	2014
2. Main lecturer on 'Communications and Mobile Services Development' (MSc course) UPV	2007-2010
1. Course instructor at System Training Center Valencia	2001-2002

Pedagogical Training

4. Fellow of the Higher Education Academy, UK Professional Standards Framework (UKPSF)	2023
3. Teachers' Multicultural Competence (5 ECTS), Aalto University	2020
2. Course Design (5 ECTS), Aalto University	2020
1. A!Peda Intro (5 ECTS), Aalto University	2019

Plenary Talks (Keynotes)

6. Temporal Saliency, Intl. Workshop on Pervasive Eye Tracking and Mobile Eye-Based Interaction (PETMEI)	2023
5. Computational modeling of handwriting movements, Inaugural lecture at University of Luxembourg	2023

4. Synthesizing Human-like Stroke Gestures with the Kinematic Theory, multiTOUCH Marie Skłodowska-Curie Innovative Training Network — 2021

3. It's not what you do, but how you do it: Information retrieval with implicit interaction, Elements of AI — 2021

2. Computational modeling of handwriting movements, RoCHI conference — 2020

1. Your brain in motion: Challenges and opportunities for data-driven implicit interaction, IGS conference — 2019

Invited Academic Talks (Selection)

6. Predicting user engagement on SERPs via implicit interaction, Aalto University — 2021

5. Introduction to Deep Learning, Aalto University — 2020

4. Synthetic generation of human-like data, Aalto University — 2019

3. Recent research adventures at Sciling, UP-FAMNIT — 2018

2. Interacción y aprendizaje, Universitat Jaume I — 2012

1. The role of implicit interaction between users and computers, DFKI Research Center — 2011

Invited Industry Talks (Selection)

6. Predicting user engagement with direct displays on SERPs, Silo.AI — 2020

5. Optimización para venta multi-dioma, eComm Beers — 2016

4. Human-Computer Interaction meets Machine Learning, Telefónica I+D — 2015

3. Detecting content changes, one word at a time: an API for web-based NLP, APIdays Mediterranea — 2015

2. Las matemáticas de la lengua, Lenguando Valencia — 2014

1. Implicit Human-Computer Interaction with Web-based Systems, Yahoo! Labs — 2012

Outreach Activities (Selection)

4. Synthesizing Human-like Stroke Gestures with the Kinematic Theory, Marie Skłodowska-Curie's multiToUCH Innovative Training Network — 2021

3. Mid-Air Gesture Recognition from Point Clouds, FCAI AI Day — 2020

2. Design Maps: Interactive exploration of large-scale design datasets, FCAI AI Day — 2019

1. Interactive-predictive technologies for NLP over the Web Valencia Idea Research Council — 2010

Other Talks (Selection)

8. Data-driven Natural Language Explanations for Graphical User Interfaces, Visual computing group @ Aalto — 2020

7. Predicting user engagement with direct displays on SERPs, FCAI Science meetup — 2020

6. Generative models of aimed movements, FCAI Science meetup — 2019

5. Synthetic handwriting: The case for stroke gestures, ELEC cookie Friday @ Aalto — 2019

4. Drawing inspiration for UI designers, User Interfaces group @ Aalto — 2019

3. Generating UI mockups, User Interfaces group @ Aalto — 2019

2. Sampling phrases for text entry experiments, PRHLT group @ UPV — 2014

1. The WKM algorithm, PRHLT group @ UPV — 2012

Awards and Honors (Selection)

26. Best paper award nominee, UMAP — 2023

25. Outstanding reviewer recognition, CHI — 2023

24. Best paper honorable mention, EICS — 2022

23. Reviewer recognition, ICMI — 2022

22. Reviewer recognition, IUI — 2022

21. Outstanding reviewer recognition, ICMI — 2021

20. Outstanding reviewer recognition, MobileHCI — 2021

19.	Reviewer recognition, INTERACT	2021
18.	Quality Teaching Awards finalist, Aalto University	2020
17.	Top-10 Master's level course, Aalto University	2020
16.	Reviewer recognition, UIST	2020
15.	Reviewer recognition, ISMAR	2020
14.	Reviewer recognition, ICMI	2020
13.	Outstanding reviewer recognition, IMWUT	2017
12.	Outstanding reviewer recognition, CHI	2016
11.	Honorable mention award ICT category, Valencia Idea	2015
10.	SME-Instrument (European Commission) Phase 1	2015
9.	Extraordinary PhD Thesis Award	2014
8.	First prize at "Innovation and Commercial Excellence" Consum-UPV awards	2014
7.	Semi-finalist of the ACM Student Research Competition, SIGGRAPH	2011
6.	Honorable mention award ICT category, Valencia Idea	2010
5.	Best demonstration award at the 13th European Conference on Digital Libraries	2009
4.	First prize Interactive Design category at Valencia Crea	2007
3.	Vodafone foundation scholarship for MSc programs	2006
2.	Honorable mention award in the Interactive Design category at Valencia Crea	2005
1.	SENECA scholarship for student mobility	2005

Media/Press Coverage (Selection)

15.	UL Press release: When AI recommends artworks you'll love	2023
14.	UL Press release: Mouse movements reveal your behaviour (also at reddit)	2021
13.	Aalto Press release: New chatbot can explain apps and show you how they access hardware or data	2021
12.	Aalto Press release: How mobile apps grab our attention	2020
11.	Grupo HORO: Sciling	2018
10.	Karel de Grote University College: Translation is only the beginning	2017
9.	InnDEA & presspeople & tendencias21: CORAL: COst ORiented Agile Localization	2016
8.	Levante & ABC & EFE & many more: Gestures à Go Go	2016
7.	Phys.org & CACM & The Stack & many more: Tiny QWERTY soft keyboards	2015
6.	Science Daily & Levante & NewsEsp & La Razón: On sentence memorability	2014
5.	InfoRUVID: Excellence research annual directory	2012
4.	New Scientist & ACM Tech News: Mash-up aids translation of obscure languages	2012
3.	ABC digital edition: Designing transcription games that can train your mind	2012
2.	ABC digital edition: A mobile app interruption can delay your task up to 4 times	2012
1.	TV report in Canal9: Interactive transcription of ancient manuscripts	2009

Tech Transfer

Note: All the following inventions have a national (Spanish) scope. Their titles have been translated into English.

Patents

ES2597839 Masticatory anomalies detection method. Co-authored with **University of Salamanca**.

ES2597237 Device and method to standardize gum flattening. Co-authored with **University of Salamanca**.

Intellectual Property

R158952011 Method to redesign websites based on implicit interactions.

R169862014 Touch-lock mechanism based on handwritten math expressions.

R156652010 Pointer monitoring device to ease task switching.

Commercial Products (Selection)

K156512010 Interactive hypervideo visualization for browsing behavior analysis on websites.

R160212011 Interactive multimodal transcription of handwritten documents. Exploited by **Transkribus**.

R161682012 Indexing system of handwritten documents. Exploited by the **National Library of Spain**.

R168732014 Captcha based on handwritten math expressions. Exploited by **WIRIS, SL**.

R168942014 Context-aware gesture recognizer for interactive text editing. Exploited by **Casmacat Workbench**.

R168952014 Machine translation engine for minority languages. Exploited by the **Municipal Libraries Network of Barcelona**.

Recent Publications

I report the Impact Factor (*IF*) of each journal according to the publication year of each article, together with the respective quartile position (Q1, ..., Q4). I also report the *CORE* ranking of each conference paper,[3] which ranges from A* (flagship conference, top 4%), A (top 14%), B (top 26%), or C (49%) conferences.[4]

Journal Articles (Selection, last 5 years)

15. Désirée C. A. Lemarquis, Bereket A. Yilma, <u>Luis A. Leiva</u>. What Can a Swiped Word Tell Us More? Demographic and Behavioral Correlates from Shape-Writing Text Entry. Neural Computing and Applications, 2023, In press. *IF:* 5.102 (Q1)

14. <u>Luis A. Leiva</u>, Asutosh Hota, Antti Oulasvirta. Describing UI Screenshots in Natural Language. ACM T. Intelligent Systems and Technology **14**(1), 2022. *IF:* 9.904 (Q1) In collaboration with **Aalto University**.

13. <u>Luis A. Leiva</u>, Morteza Shiripour, Antti Oulasvirta. Modeling How Different User Groups Perceive Webpage Aesthetics. Universal Access in the Information Society, 2022, In press. *IF:* 2.420 (Q2) In collaboration with **Aalto University**.

12. Lukas Brückner, <u>Luis A. Leiva</u>, Antti Oulasvirta. Learning GUI Completions with User-defined Constraints. ACM Transactions on Interactive Intelligent Systems, **12**(1), 2022. *IF:* 2.672 (Q2) In collaboration with **Aalto University**.

11. Klen Čopič Pucihar, Nuwan T. Attygalle, Matjaž Kljun, Christian Sandor, <u>Luis A. Leiva</u>. Solids on Soli: Millimetre-Wave Radar Sensing through Materials. PACM-HCI **6**(EICS), 2022. *IF:* 3.124 (Q2) Best paper honorable mention award. In collaboration with **University of Primorska** and **CityU**.

10. Lokesh Kumar T., <u>Luis A. Leiva</u>. Attentive Sequence-to-Sequence Modeling of Stroke Gestures Articulation Performance. IEEE Transactions on Human-Machine Systems **51**(6), 2021. *IF:* 2.968 (Q1)

9. Nuwan T. Attygalle, <u>Luis A. Leiva</u>, Matjaž Kljun, Christian Sandor, Alexander Plopski, Hirokazu Kato, Klen Čopič Pucihar. No Interface, No Problem: Gesture Recognition on Physical Objects using Radar Sensing. Sensors **21**(17), 2021. *IF:* 3.576 (Q1) In collaboration with **University of Primorska**, **CityU**, **University of Otago** and **NAIST**.

8. V. Javier Traver, <u>Luis A. Leiva</u>, Vicente Martí-Centelles, Jenifer Rubio-Magnieto. Educational videogame to learn the periodic table: Design rationale and lessons learned. Journal of Chemical Education, **98**(7), 2021. *IF:* 1.385 (Q1) In collaboration with **Universitat Jaume I**.

7. V. Javier Traver, Judith Zorío, <u>Luis A. Leiva</u>. Glimpse: A Gaze-Based Measure of Temporal Salience. Sensors **21**(9), 2021. *IF:* 3.576 (Q1) In collaboration with **Universitat Jaume I**.

6. <u>Luis A. Leiva</u>, Asutosh Hota, Antti Oulasvirta. Interactive Exploration of Large-scale UI Datasets with Design Maps. Interacting with Computers, 2021. *IF:* 1.036 (Q2) In collaboration with **Aalto University**.

5. Sameera Palipana, Dariush Salami, <u>Luis A. Leiva</u>, Stephan Sigg. Pantomime: Mid-Air Gesture Recognition with Sparse Millimeter-Wave Radar Point Clouds. PACM-HCI **5**(IMWUT), 2021. *IF:* 3.124 (Q2) In collaboration with **Aalto University**.

4. <u>Luis A. Leiva</u>, Ioannis Arapakis. The Attentive Cursor Dataset. Frontiers in Human Neuroscience **14**(1), 2020. *IF:* 2.673 (Q1) In collaboration with **Telefonica Research**.

3. Shaun Wallace, Brendan Le, <u>Luis A. Leiva</u>, Aman Haq, Audrey Kintisch, Gabrielle Bufrem, Linda Chang, Jeff Huang. Sketchy: Drawing Inspiration from the Crowd. PACM-HCI **6**(CSCW), 2020. *IF:* 3.124 (Q2) In collaboration with **Brown University**.

---

[3]Unlike in many academic fields, premiere conferences in Human-Computer Interaction (e.g., CHI, MobileHCI) are highly selective venues. These conferences exceed many HCI journals in terms of selectivity, visibility, and impact.

[4]See http://www.core.edu.au/conference-portal.

2. <u>Luis A. Leiva</u>, Radu-Daniel Vatavu, Daniel Martín-Albo, Réjean Plamondon. Omnis Praedictio: Estimating the Full Spectrum of Human Performance with Stroke Gestures. International Journal of Human-Computer Studies **142**(1), 2020. *IF:* 2.006 (Q1) In collaboration with **École Polytechnique de Montréal**, **University of Suceava**, and **WIRIS, SL**.

1. Ioannis Arapakis, Antonio Penta, Hideo Joho, <u>Luis A. Leiva</u> A Price-Per-Attention Auction Scheme Using Mouse Cursor Information. ACM Transactions on Information Systems **38**(2) 2020. *IF:* 1.767 (Q1) In collaboration with **Telefonica Research**, **Universitat Pompeu Fabra**, and **University of Tsukuba**.

Conference Papers (Selection, last 5 years)

17. Tuukka Ruotsalo, Kalle Mäkelä, Michiel Spapé, <u>Luis A. Leiva</u>. Affective Relevance: Inferring Emotional Responses via fNIRS Neuroimaging. Proc. SIGIR, 2023. *CORE:* A*. In collaboration with **University of Helsinki**.

16. Bereket A. Yilma, <u>Luis A. Leiva</u>. Together Yet Apart: Multimodal Representation Learning for Personalised Visual Art Recommendation. Proc. UMAP, 2023. *CORE:* B. Best paper award nominee.

15. Bereket A. Yilma, <u>Luis A. Leiva</u>. The Elements of Visual Art Recommendation: Learning Latent Semantic Representations of Paintings. Proc. CHI, 2023. *CORE:* A*.

14. Yue Jiang, <u>Luis A. Leiva</u>, Paul Houssel, Hamed R. Tavakoli, Antti Oulasvirta. UEyes: Understanding Visual Saliency across User Interface Types. Proc. CHI, 2023. *CORE:* A*. In collaboration with **Aalto University**.

13. Mateusz Dubiel, Sylvain Daronnat, <u>Luis A. Leiva</u>. Conversational Agents Trust Calibration: A User-Centred Perspective to Design. Proc. CUI, 2022. *CORE:* Unranked. In collaboration with **University of Strathclyde**.

12. Utkarsh Kunwar, Sheetal Borar, Moritz Berghofer, Julia Kylmälä, Ilhan Aslan, <u>Luis A. Leiva</u>, Antti Oulasvirta. Robust Gesture Recognition for Wearable Devices using Deep Learning. Proc. IUI, 2020. *CORE:* A. In collaboration with **Aalto University**.

11. Shaun Wallace, Tianyuan Cai, Brendan Le, <u>Luis A. Leiva</u>. Debiased Label Aggregation for Subjective Crowdsourcing Tasks. Proc. CHI EA, 2022. *CORE:* A*. In collaboration with **Brown University**.

10. <u>Luis A. Leiva</u>, Sunjun Kim, Wenzhe Cui, Xiaojun Bi, Antti Oulasvirta. How We Swipe: A Large-scale Shape-writing Dataset and Empirical Findings. Proc. MobileHCI, 2020. *CORE:* B. In collaboration with **DGIST**, **Aalto University** and **Stony Brook University**.

9. Lukas Brückner, Ioannis Arapakis, <u>Luis A. Leiva</u>. When Choice Happens: A Systematic Examination of Mouse Movement Length for Decision Making in Web Search. Proc. SIGIR, 2021. *CORE:* A*. In collaboration with **Telefonica Research**.

8. Kashyap Todi, <u>Luis A. Leiva</u>, Daniel Buschek, Pin Tian, Antti Oulasvirta. Conversations with GUIs. Proc. DIS, 2021. *CORE:* B. In collaboration with **Aalto University** and **University of Bayreuth**.

7. <u>Luis A. Leiva</u>, Ioannis Arapakis, Costas Iordanou. My Mouse, My Rules: Privacy Issues of Behavioral User Profiling via Mouse Tracking. Proc. CHIIR, 2021. *CORE:* Unranked. In collaboration with **Telefonica Research** and **Cyprus University of Technology**.

6. Kashyap Todi, Gilles Bailly, <u>Luis A. Leiva</u>, Antti Oulasvirta. Adapting User Interfaces with Model-based Reinforcement Learning. Proc. CHI, 2021. *CORE:* A*. In collaboration with **Aalto University** and **Sorbonne University**.

5. <u>Luis A. Leiva</u>, Moises Diaz, Miguel A. Ferrer, Réjean Plamondon. Human or Machine? It Is Not What You Write, But How You Write It. Proc. ICPR, 2020. *CORE:* B. In collaboration with **École Polytechnique de Montréal** and **ULPGC**.

4. Lukas Brückner, Ioannis Arapakis, <u>Luis A. Leiva</u>. Query Abandonment Prediction with Deep Learning Models of Mouse Cursor Movements. Proc. CIKM, 2020. *CORE:* A*. In collaboration with **Telefonica Research**.

3. Ioannis Arapakis, <u>Luis A. Leiva</u>. Learning Efficient Representations of Mouse Movements to Predict User Attention. Proc. SIGIR, 2020. *CORE:* A*. In collaboration with **Telefonica Research**.

2. <u>Luis A. Leiva</u>, Yunfei Xue, Avya Bansal, Hamed R. Tavakoli, Tuğçe Köroğlu, Jingzhou Du, Niraj R. Dayama, Antti Oulasvirta. Understanding Visual Saliency in Mobile User Interfaces Proc. MobileHCI, 2020. *CORE:* B. In collaboration with **Huawei Technologies** and **Nokia Oyj**.

1. Klen Čopič Pucihar, Christian Sandor, Matjaž Kljun, Wolfgang Huerst, Alexander Plopski, Takafumi Taketomi, Hirokazu Kato, <u>Luis A. Leiva</u>. The Missing Interface: Micro-Gestures on Augmented Objects. Proc. CHI EA, 2019. *CORE:* A*. In collaboration with **University of Primorska**, **Utrecht University**, and **NAIST**.

Artistic Contributions

5. Poliniza Urban Art   Valencia, Spain, 2006

4. EnVideo Festival   Cáceres, Spain, 2005

3. Pixel Dance Video Art Festival   Thessaloniki, Greece, 2005

| 2. VAIA International Video Art Festival | Alcoy, Spain, 2003-2004 |
| 1. OFFF International Festival of Web Creation and New Audiovisual Technologies | Barcelona, Spain, 2002 |

Entrepreneurship

Co-founder of Sciling, a B2B Machine Learning company	2014
Founder of Speed Zine Media, a B2C independent filming company	2003

Foreign Languages

English (C1 certificate, ESOL)	2012
Catalan/Valencian (C2 certificate, JCQV)	2012
Italian (1 year, uncertified)	2006
French (5 years, uncertified)	1998

Memberships

European Laboratory for Learning and Intelligent Systems (ELLIS)	2023
Association for Computing Machinery (ACM)	2011-2023
Asociación Interacción Persona-Ordenador (AIPO)	2013-2023
Independent expert for the European Commission, R&D program	2015-2023
Special Interest Group in Computer-Human Interaction (SIGCHI)	2013-2021
Finnish Center for Artificial Intelligence (FCAI)	2019-2020
International Association of Pattern Recognition (IAPR)	2009-2010

Major Collaborators

Prof. Antti Oulasvirta, Aalto University, Finland

Dr. Ioannis Arapakis, Telefonica I+D and Barcelona GSE, Spain

Prof. Réjean Plamondon, Polytechnique Montreal, Canada

Prof. V. Javier Traver, Universitat Jaume I, Spain

Prof. Tuukka Ruotsalo, University of Copenhagen, Denmark

Prof. Klen Čopič, University of Primorska, Slovenia

Prof. Radu-Daniel Vatavu, University of Suceava, Romania