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## Summary

I have published 60+ peer-reviewed papers, almost half of them before getting my PhD from the Technical University of Valencia (UPV), including: 14 journal articles (JCR indexed), 53 conference papers (CORE<sup>1</sup> indexed) and 4 book chapters. My [current h-index](#) is 12. I am usually listed as first or corresponding author in the vast majority of my publications. According to [DBLP](#), I have collaborated with 50+ researchers from international research centers abroad. I have participated in 8 research projects with competitive funding schemes, among which I was 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 a visiting researcher and visiting professor in 3 prestigious research centers abroad. To date, I have received 2 scholarship grants and 12 research/industry awards/honors. I am the co-founder and former CTO of [Sciling](#), a machine learning company based in Spain. My research has been featured in national and international press, including e.g. [New Scientist](#), [Communications of the ACM](#), [Phys.org](#), and [Science Daily](#).

## Research Areas

I primarily do multidisciplinary research at the intersection of Human-Computer Interaction and Machine Learning. I am mostly interested in implicit interaction research, where a computer can take any user action as input to proactively infer and anticipate what the user needs. In particular, I have exploited mouse cursor movements to [conduct large-scale usability evaluations](#), [predict user engagement](#), [aid website revisitation](#) or [restyle their design](#). I am currently focused on data-driven interaction research, i.e., working with and informing decisions based on data in order to support novel interaction models or improve existing ones. I am particularly interested in artificial data generation, as a practical way to lower the costs of collecting and labeling large amounts of human data.

## Education

PhD in Computer Science, UPV. With Highest Honors + International Mention + <b>Best PhD Award</b> <sup>2</sup>	2009 - 2012
MSc in Communications and Mobile Services Development, UPV. With Highest Honors	2005 - 2006
BSc in Industrial Engineering, UPV. Highest Honor in Final Degree Project	2002 - 2005
BSc in Industrial Design, UPV. Highest Honor in Final Degree Project + <b>Bancaja Award</b> <sup>3</sup>	1998 - 2001

## Professional Experience

Postdoctoral scholar, Aalto University	2019
Co-founder and CTO, Sciling	2014 - 2018
Postdoctoral fellow, UPV	2015
Postdoctoral researcher, UPV	2013 - 2014
Research assistant, UPV	2009 - 2012
Undergraduate specialized fellow, UPV	2008
Web developer, freelance	2007 - 2008
Undergraduate fellow, UPV	2000

## Academic Projects (Selection)

PI in <i>JITL</i> (Spanish MECD, VLC/CAMPUS)	2015
PI in <i>μcaptcha</i> (UPV, VLC/CAMPUS)	2015
Co-PI in <i>CORAL</i> (European Commission, H2020)	2015
Research staff in <i>tranScriptorium</i> (European Commission FP7)	2013 - 2014
Research staff in <i>CasMaCat</i> (European Commission FP7)	2012 - 2013
Research staff in <i>MIPRCV</i> (Consolider program, Spanish MICINN)	2009 - 2012

<sup>1</sup>Widely used to assess CS conferences in many European universities, see <http://www.core.edu.au/conference-portal>.

<sup>2</sup>Top 10% among all the PhD theses defended at the UPV, usually only 1 thesis gets awarded per department each year.

<sup>3</sup>Awarded to the best final degree projects conducted in companies, under a cooperative educational program.

## Research Visits

User Interfaces group, Aalto University (Finland)	2018
Institute for Visualization and Interactive Systems (VIS), Stuttgart University (Germany)	2013
German Research Center for Artificial Intelligence (DFKI), Saarland University (Germany)	2012

## Scholarship Activities

I have served as AC for CHI (2016) and MobileHCI (2016). I also have served as PC member of other top-tier conferences like IUI (2013–2015, 2019), ICMI (2014–2015), ICWE (2014), CIKM (2015, 2017, 2019), and SIGIR (2018–2019).

I review regularly for CHI (2011–), IUI (2012–), MobileHCI (2011–), and ICMI (2011–2015). I have reviewed for reputable journals like ACM TWEB (2015–2016), IwC (2015–2016, 2018–), IJHCS (2016), THMS (2015, 2019), Pattern Recognition (2017), IMWUT (2013, 2016–2018), and ESWA (2018–), among others. I have also reviewed occasionally for InfoVis (2011), UIST (2012), EICS (2012, 2014), DIS (2012, 2014), MUM (2013), WWW (2015), PervasiveHealth (2015), TEI (2018), and ISMAR (2019).

I am registered as an independent expert for the European Commission R&D program. I am also a member of the Association for Computing Machinery (ACM) and the Special Interest Group in Computer-Human Interaction (SIGCHI). I am a former member of the International Association of Pattern Recognition (IAPR).

## Teaching Experience

Visiting professor at FAMNIT, University of Primorska	2018
Master's guest lecturer on Artificial Intelligence, Pattern Recognition and Digital Imaging, UPV	2014
Master's lecturer on Communications and Mobile Services Development, UPV	2007 - 2010
Course instructor at System Training Center, Valencia	2001 - 2002

## Invited Research Talks (Selection)

Recent Research Adventures at Sciling	UP-FAMNIT, 2018
Human-Computer Interaction meets Machine Learning	Telefónica I+D, 2015
Interacción y Aprendizaje	Universitat Jaume I, 2012
Implicit Human-Computer Interaction with Web-based Systems	Yahoo! Labs, 2012
The Role of Implicit Interaction between Users and Computers	DFKI Research Center, 2011

## Awards and Honors (Selection)

A12. Outstanding Reviewer Recognition, IMWUT	2017
A11. Outstanding Reviewer Recognition, SIGCHI	2016
A10. Honorable mention award ICT category, Valencia Idea	2015
A9. SME-Instrument (European Commission) Phase 1	2015
A8. First prize at "Innovation and Commercial Excellence" Consum-UPV awards	2014
A7. Semi-finalist of the ACM Student Research Competition, SIGGRAPH	2011
A6. Honorable Mention award ICT category, Valencia Idea	2010
A5. Best Demonstration award at the 13th European Conference on Digital Libraries	2009
A4. First prize Interactive Design category at Valencia Crea 8	2007
A3. Vodafone Foundation Scholarship for MSc programs	2006
A2. Honorable Mention award in the Interactive Design category at Valencia Crea 6	2005
A1. SENECA Scholarship for student mobility	2005

## Media/Press Coverage (Selection)

InnDEA & presspeople & tendencias21: <a href="#">CORAL: COst ORiented Agile Localization</a>	2016
Levante & ABC & EFE & many more: <a href="#">Gestures à Go Go</a>	2016
Phys.org & CACM & The Stack & many more: <a href="#">Tiny QWERTY soft keyboards</a>	2015
Science Daily & Levante & NewsEsp & La Razón: <a href="#">On sentence memorability</a>	2014
InfoRUID: <a href="#">Excellence research annual directory</a>	2012
New Scientist & ACM Tech News: <a href="#">Mash-up aids translation of obscure languages</a>	2012
ABC digital edition: <a href="#">Designing transcription games that can train your mind</a>	2012
ABC digital edition: <a href="#">A mobile app interruption can delay your task up to 4 times</a>	2012
TV report in Canal9: <a href="#">Interactive transcription of ancient manuscripts</a>	2009

## Research Publications

See <https://luis.leiva.name/web/pubs.php>

## Recent Publications

I report the Impact Factor (*IF*) of each journal according to the publication year of each paper, together with the respective quartile position (Q1, ..., Q4). I also report the *CORE* ranking of each conference paper,<sup>4</sup> which ranges from A\* (flagship conference, top 4%), A (top 14%), B (top 26%), or C (49%) conferences.<sup>5</sup>

### Journal articles (selection)

- J12. [Luis A. Leiva](#) Responsive Text Summarization. *Information Processing Letters*, 130(1), 2018. *IF*: 0.748 (Q3)
- J11. Marc Franco-Salvador, [Luis A. Leiva](#) Multilingual Phrase Sampling for Text Entry Evaluations. *Int. J. Human-Computer Studies*, 113(1), 2018. *IF*: 2.863 (Q1) In collaboration with **Symanto Research**.
- J10. [Luis A. Leiva](#), Vicent Alabau. Polyglot Machine Translation. *Journal of Intelligent & Fuzzy Systems*, 32(1), 2017. *IF*: 1.004 (Q3)
- J9. [Luis A. Leiva](#), Daniel Martín-Albo, Réjean Plamondon. The Kinematic Theory Produces Human-like Gestures. *Interacting with Computers*. In Press, 2017. *IF*: 1.268 (Q2) In collaboration with **École Polytechnique de Montréal**.
- J8. Daniel Martín-Albo, [Luis A. Leiva](#), Jeff Huang, Réjean Plamondon. Strokes of Insight: User Intent Detection and Kinematic Compression of Mouse Cursor Trails. *Information Processing & Management*. **52**(6), 2016. *IF*: 1.265 (Q2) In collaboration with **Brown University** and **École Polytechnique de Montréal**.
- J7. [Luis A. Leiva](#), Daniel Martín-Albo, Réjean Plamondon. Gestures à Go Go: Authoring Synthetic Human-Like Stroke Gestures Using the Kinematic Theory of Rapid Movements. *ACM T. Intelligent Systems and Technology* **7**(2), 2016. *IF*: 9.390 (Q1) In collaboration with **École Polytechnique de Montréal**.
- J6. [Luis A. Leiva](#), Francisco Alvaro.  $\mu$ captcha: Human Interaction Proofs Tailored to Touch-Capable Devices via Math Handwriting. *Int. J. Human-Computer Interaction* **31**(7), 2015. *IF*: 0.850 (Q2) In collaboration with **WIRIS, SL**. Software available at <https://plugins.wordpress.org>
- J5. [Luis A. Leiva](#), Jeff Huang. Building a better mousetrap: Compressing mouse cursor activity for web analytics. *Information Processing & Management* **51**(2), 2015. *IF*: 1.265 (Q2) In collaboration with **Brown University**.
- J4. [Luis A. Leiva](#), Vicent Alabau, Verónica Romero, *et al.* Context-Aware Gestures for Mixed-Initiative Text Editing UIs. *Interacting with Computers* **27**(6), 2015. *IF*: 1.268 (Q2) Software used in research projects: MIPRCV, CasMaCat, and tranScriptorium.
- J3. [Luis A. Leiva](#), Vicent Alabau. Automatic Internationalization for Just In Time Localization of Web-Based User Interfaces. *ACM T. Computer-Human Interaction* **22**(3), 2015. *IF*: 1.079 (Q2) In collaboration with **Sciling, SL**. Software used in research projects: JITL and CORAL.
- J2. [Luis A. Leiva](#), Enrique Vidal. Warped K-Means: An algorithm to cluster sequentially-distributed data. *Information Sciences* **237**(1), 2013. *IF*: 4.038 (Q1) Software used in research projects: MIPRCV and ALMPR.
- J1. [Luis A. Leiva](#), Roberto Vivó. Web browsing behavior analysis and interactive hypervideo. *ACM T. Web* **7**(4), 2013. *IF*: 1.595 (Q1) Reference software. **More than 100000 downloads**. Exploited by **Yahoo!** and **US Census Bureau**, among others.

### Conference papers (selection)

- C12. [Luis A. Leiva](#), Daniel Martín-Albo, Radu-Daniel Vatavu. GATO: Predicting Human Performance with Multistroke and Multitouch Gesture Input Proc. *MobileHCI*, 2018. *CORE*: B. In collaboration with **University of Suceava**.
- C11. [Luis A. Leiva](#), Daniel Martín-Albo, Réjean Plamondon, Radu-Daniel Vatavu. KeyTime: Super-Accurate Prediction of Stroke Gesture Production Times. *Proc. CHI*, 2018. *CORE*: A\*. In collaboration with **École Polytechnique de Montréal** and **Ștefan cel Mare University of Suceava**.
- C10. [Luis A. Leiva](#), Daniel Martín-Albo, Radu-Daniel Vatavu. Synthesizing Stroke Gestures Across User Populations: A Case for Users with Visual Impairments Proc. *CHI*, 2017. *CORE*: A\*. In collaboration with **Ștefan cel Mare University of Suceava**.
- C9. Emilio Granell, [Luis A. Leiva](#). Less Is More: Efficient Back-of-Device Tap Input Detection Using Built-in Smartphone Sensors. *Proc. ISS*, 2016. *CORE*: A.
- C8. Ioannis Arapakis, [Luis A. Leiva](#). Predicting User Engagement with Direct Displays Using Mouse Cursor Information. *Proc. SIGIR*, 2016. *CORE*: A\*. In collaboration with **Yahoo! Labs**.
- C7. [Luis A. Leiva](#), Alireza Sahami Shirazi, Alejandro Catalá, *et al.* Text Entry on Tiny QWERTY Soft Keyboards. *Proc. CHI* 2015. *CORE*: A\*. In collaboration with **Universität Stuttgart**. In the news: <https://www.google.es/search?q=leiva+wearable+qwerty>

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<sup>4</sup>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 their selectivity, visibility, and impact.

<sup>5</sup>See <http://www.core.edu.au/conference-portal>.

- C6. Ioannis Arapakis, [Luis A. Leiva](#), B. Barla Cambazoglu. Know Your Onions: Understanding the User Experience with the Knowledge Module in Web Search. Proc. CIKM, 2015. *CORE*: A. In collaboration with **Yahoo! Labs**.
- C5. [Luis A. Leiva](#), Germán Sanchis-Trilles. Representatively memorable: sampling the right phrase set to get the text entry experiment right. Proc. CHI, 2014. *CORE*: A\*. Software used in CORAL project. In the news: <https://www.google.es/search?q=leiva+sanchis+eslogan>
- C4. [Luis A. Leiva](#), Vicent Alabau. The impact of visual contextualization on UI localization. Proc. CHI, 2014. *CORE*: A\*. Software used in JITL project.
- C3. [Luis A. Leiva](#), Vicent Alabau. On String Prioritization in Web-Based User Interface Localization. Proc. WISE, 2014. *CORE*: A. Software used in JITL project.
- C2. [Luis A. Leiva](#), Vicent Alabau. An automatically generated interlanguage tailored to speakers of minority but culturally influenced languages. Proc. CHI, 2012. *CORE*: A\*. In the news: <https://www.google.es/search?q=leiva+alabau+lenguas+minoritarias>
- C1. [Luis A. Leiva](#), Matthias Böhmer, Sven Gehring, Antonio Krüger. Back to the app: the costs of mobile application interruptions. Proc. MobileHCI, 2012. *CORE*: B. In collaboration with **DFKI** and **Saarland University**. My most cited paper so far.

## Tech Transfer

The following is an overview of the most prominent research works that have been transferred to the industry.

**Note:** All inventions have a national scope. Their titles have been translated into English.

### National Patents

- P2. P201531048 Masticatory anomalies detection method. Co-authored with **University of Salamanca**. Exploited by **Dental Picasso, SL**.
- P1. P201531068 Device and method to standardize gum flattening. Co-authored with **University of Salamanca**.

### Intellectual Property

- I3. R158952011 Method to redesign websites based on implicit interactions.
- I2. R169862014 Touch-lock mechanism based on handwritten math expressions.
- I1. R156652010 Pointer monitoring device to ease task switching.

### Commercial Products (Selection)

- E6. K156512010 Interactive hypervideo visualization for browsing behavior analysis on websites. Exploited by diverse data-mining companies, design agencies, and research centers.
- E5. R160212011 Interactive multimodal transcription of handwritten documents. Exploited by the online platform **Transkribus**.
- E4. R161682012 Indexing system of handwritten documents. Exploited by the **National Library of Spain**.
- E3. R168732014 Captcha based on handwritten math expressions. Exploited by **WIRIS, SL**.
- E2. R168942014 Context-aware gesture recognizer for interactive text editing. Exploited by **Casmacat Workbench**.
- E1. R168952014 Machine translation engine for minority languages. Exploited by the **Municipal Libraries Network of Barcelona**.