

Sciling, SL
Camí a la Mar, 75
46120 Valencia

luis@sciling.com
(+34) 687742008
<https://luis.leiva.name>

Summary in Numbers

I have published +50 peer-reviewed papers, half of them before getting my PhD¹ in Computer Science, including 16 journal articles (JCR indexed), 50 conference papers (CORE² indexed) and 4 book chapters. I am usually listed as first or second author in the large majority of my publications. According to [DBLP](#), I have collaborated with 54 researchers from international research centers abroad. I have participated in 8 research projects with competitive funding schemes, among which I was PI in 2 projects and co-IP in 1 project. 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. I have received 2 scholarship grants and 12 research/industry awards.

Research Areas

I primarily do multidisciplinary research at the intersection of Human-Computer Interaction and Machine Learning. I am used to learning different skills and combine them in creative ways. For instance: [using mouse cursor behavior to aid website revisitation or restyle their design](#); [a polyglot machine translator tailored to one's mother language](#); [a word soup game to transcribe text images](#); or [a usable captcha scheme for mobile devices based on handwriting math recognition](#). Overall, I like to build interactive systems for end-users, aimed at making their life easier.

Education

PhD in Computer Science, UPV. With Highest Honors + International Mention + Best PhD Award ³	2009 - 2012
MSC in Communications and Mobile Services Development, UPV. With Highest Honors	2005 - 2006
Industrial Engineer, UPV. Highest Honor in Final Degree Project	2002 - 2005
Industrial Design, UPV. Highest Honor in Final Degree Project + Bancaja Award	1998 - 2001

Professional Experience

Co-founder & CTO, Sciling	2015 - present
Postdoctoral researcher, UPV	2013 - 2015
Researcher, UPV	2009 - 2012
Undergraduate specialized fellow, UPV	2008
Web developer, freelance	2007 - 2008
Undergraduate fellow, UPV	2000

Research 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

Research Internships

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 served as PC member of some top-tier ACM conferences like IUI (2013–2015), ICMI (2014–2015), ICWE (2014), CIKM (2015), and SIGIR (2018).

¹ By way of comparison, doctoral candidates at the UPV usually submit their PhD thesis with 3–5 publications on average.

² Widely used to assess the quality of CS conferences in Europe: <http://www.core.edu.au/conference-portal>.

³ Top 10% among all the PhD theses defended at the UPV so far.

I am a regular reviewer for CHI (2011–), IUI (2012–), MobileHCI (2011–), and ICMI (2011–). I have also reviewed for reputable journals like ACM TWEB (2015–2016), IwC (2015), IJHCS (2016), Pattern Recognition (2017), IMWUT (2016, 2017), and ESWA (2018), among others. I have also reviewed occasionally for InfoVis (2011), UIST (2012), EICS (2012, 2014), DIS (2012, 2014), UbiComp (2013), MUM (2013), WWW (2015), CIKM (2015), and PervasiveHealth (2015).

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 program Lecturer on Artificial Intelligence, Pattern Recognition and Digital Imaging, UPV	2014
Master's program 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)

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

* SIGCHI (Special Interest Group on Computer-Human Interaction) and SIGGRAPH (Special Interest Group on Computer Graphics and Interactive Techniques) represent major areas of computing, addressing the interests of technical communities that drive innovation. See <https://www.acm.org/special-interest-groups>

Media/Press Coverage (Selection)

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

Research Publications

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

References

Available upon request.

Recent Publications (Selection)

Journal articles

- 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. *μcaptcha*: 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**. Used by **Yahoo!** and **US Census Bureau**, among others.

Conference papers

- 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>
- 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 work that have been transferred to the industry. **Note:** All titles have been translated into English.

National Patents

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

Commercial Products (Selection)

- E6. K156512010 Interactive hypervideo visualization for browsing behavior analysis on websites. **Reference software**. Used by diverse data-mining companies, design studies, and research centers.
- E5. R160212011 Interactive multimodal transcription of handwritten documents. Used by the online platform **Transkribus**.
- E4. R161682012 Indexing system of handwritten documents. Used by **Biblioteca Nacional de España**.
- E3. R168732014 Captcha based on math expressions. Used by **WIRIS, SL**.
- E2. R168942014 Context-aware gesture recognizer for interactive text editing. Used by **Casmacat Workbench**.
- E1. R168952014 Machine translation engine for minority languages. Used by **Red Municipal de Bibliotecas de Barcelona**.

Intellectual Property

- I3. R158952011 Method to redesign websites based on implicit interactions.
- I2. R169862014 Touch-lock mechanism with math expressions. Co-authored with **WIRIS, SL**.
- I1. R156652010 Pointer monitoring device to ease task switching.