

Luis P. Prieto

Observing & Supporting Practitioners In-Situ

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Research profile and trajectory

Luis P. Prieto is a Senior Research Fellow at the School of Educational Sciences in Tallinn University (Estonia), and member of the Center of Excellence in Educational Innovation at the same university. A telecom engineer by training, Dr. Prieto later pursued a Ph.D. and an academic career in the fields of technology-enhanced learning (TEL), computer-supported collaborative learning (CSCL), learning design (LD) and learning analytics (LA).

His research interests have always emphasized the *naturalistic observation of teaching and learning practice* using of a variety of methods, from unstructured qualitative observation and analysis, wearable sensors such as mobile eye-trackers. This variety of methods has been applied, for example, to understand teachers' classroom orchestration – what has been termed 'multimodal teaching analytics'. Dr. Prieto has also proposed and evaluated *technologies to support educational practice*, from learning design tools to help teachers implement their pedagogical designs, to reflection tools that enable practitioners to gather and visualize data about their daily practice. Dr. Prieto is now joining these two research strands (naturalistic observation and support of professional practice), along with new data collection and analysis tools (e.g., diaries and epistemic network analysis) to investigate the field of *doctoral education*, of which Dr. Prieto is an avid practitioner and educator (e.g., through doctoral workshops and his blog, A Happy PhD).

Dr. Prieto has held positions in well-known labs in those areas in Spain, Switzerland and Estonia, including a prestigious Marie Curie Fellowship. Throughout his research career, Dr. Prieto has always worked in *multi-disciplinary* teams involving educational scientists, psychologists, and computer scientists. Learning from these inter-disciplinary contacts, he has used (and devised himself) a variety of theoretical frameworks and analytical lenses, both qualitative *and* quantitative.

Education

2008
2012


1996
2001

PhD Information and Communication Technologies, *University of Valladolid*, Valladolid, Spain.


BSc Telecommunications Engineering, *University of Valladolid*, Valladolid, Spain.

Professional Experience


Academia

 **Senior Research Fellow**, *Center of Excellence for Educational Innovation (HUT), School of Educational Sciences*, Tallinn University (TLU), Estonia.


- Research on the use of Teaching and Learning Analytics to support educational innovation.

 **Scientist (Marie Curie Fellow)**, *Computer Human Interaction for Learning and Instruction (CHILI)*, École Polytechnique Fédérale de Lausanne (EPFL), Switzerland.

- Modelling teacher orchestration and workload in-context using wearable and ubiquitous sensors
- Tools to promote everyday teacher reflection in professional development
- Augmented paper classroom technologies
- Mixed methods studies, with emphasis on quantitative (e.g., eye-tracking) measures

 **Postdoctoral Researcher**, *GSIC-EMIC research group*, University of Valladolid, Spain.

- Development and evaluation of technologies for teacher professional development around learning design (METIS EU project)

 **Doctoral Researcher**, *GSIC-EMIC research group*, University of Valladolid, Spain.

- Architectures, technologies and professional development actions for supporting collaborative learning (multiple Spanish national research projects)
- Mixed methods studies, with emphasis on qualitative/interpretive perspectives

Industry


 **R&D Engineer**, *Telefónica Investigación y Desarrollo (TID)*, Valladolid, Spain.


- Software development of telecommunication platforms
- Technical lead of team in mobile and grid computing research (XtreemOS EU project)


Awards

 **Estonian National Research Award (Social Sciences)**, *Estonian Academy of Sciences*, Team award.

 **Best Paper Award**, *European Conference on Technology-Enhanced Learning*.

 **Marie Curie Intra-European Fellowship**, *European Commission*.
Modelling and Integration of Orchestrated Classrooms through Tangible and paper Interfaces

 **Best Doctoral Thesis Award**, *eMadrid (R&D Network on Educational Technology in the Region of Madrid)*.

 **Ph.D. Extraordinary Award, Engineering/Architecture Area**, *University of Valladolid*.

Research stays

2014
2015

Marie Curie Intra-European Fellowship, *École Polytechnique Fédérale de Lausanne*, Switzerland.

Modelling and Integration of Orchestrated Classrooms through Tangible and paper Interfaces

2013

Postdoctoral research stay, *Laboratoire d'Informatique de Grenoble*, France.

Joint work and publications on authoring tools for learning design, and their appropriation by teachers

2010

Predocctoral research stay, *SRI International*, Menlo Park, CA, USA.

Joint work and publications on lightweight collaborative applications and their integration in teacher practice in primary and middle schools

Memberships

- Member of the International Society of the Learning Sciences (ISLS)
- Member of the Society for Learning Analytics Research (SoLAR)

Citations and impact metrics (Google Scholar)

1930 Total citations

25 h-index

50 i10-index

Selected peer-reviewed journal publications (8 out of 28)

2020

Prieto, Luis P, Paul Magnuson, Pierre Dillenbourg, and Merike Saar (2020). "Reflection for action: Designing tools to support teacher reflection on everyday evidence". In: *Technology, Pedagogy and Education*. **JCR Impact Factor: 1.481 (Q3)**, pp. 1–17.

2019

Prieto, L. P., M. J. Rodríguez-Triana, R. Martínez-Maldonado, Y. Dimitriadis, and D. Gašević (2019). "Orchestrating learning analytics (OrLA): Supporting inter-stakeholder communication about adoption of learning analytics at the classroom level". In: *Australasian Journal of Educational Technology* 35.4. **JCR Impact Factor: 1.396 (Q2)**, pp. 14–33.

2018

Prieto, L.P., K. Sharma, Ł. Kidzinski, M.J. Rodríguez-Triana, and P. Dillenbourg (2018). "Multimodal teaching analytics: Automated extraction of orchestration graphs from wearable sensor data". In: *Journal of Computer Assisted Learning* 34.2. **JCR Impact Factor: 1.859 (Q2)**, pp. 193–203.

2017

Asensio-Pérez, J. I., Y. Dimitriadis, F. Pozzi, D. Hernández-Leo, L. P. Prieto, D. Persico, and S. L. Villagrà-Sobrino (2017). "Towards Teaching as Design: exploring the interplay between full-lifecycle Learning Design tooling and Teacher Professional Development". In: *Computers & Education* 114. **JCR Impact Factor: 4.538 (Q1)**, pp. 92–116.

2017

Schwendimann, B. A., M. J. Rodríguez-Triana, A. Vozniuk, L. P. Prieto, M. Shirvani Boroujeni, A. Holzer, D. Gillet, and P. Dillenbourg (2017). "Perceiving learning at a glance: A systematic literature review of learning dashboard research". In: *IEEE Transactions on Learning Technologies* 10 (1). **JCR Impact Factor: 1.869 (Q2)**, pp. 30–41.

2014

Prieto, L. P., P. Tchounikine, J. I. Asensio-Pérez, P. Sobreira, and Y. Dimitriadis (2014). "Exploring teachers' perceptions on different CSCL script editing tools". In: *Computers & Education* 78. **JCR Impact Factor: 2.556 (Q1)**, pp. 383–396.

2011

Prieto, L. P., M. Holenko Dlab, I. Gutiérrez, M. Abdulwahed, and W. Balid (2011). "Orchestrating technology enhanced learning: a literature review and a conceptual framework". In: *International Journal of Technology Enhanced Learning* 3.6. **SCOPUS SJR: 0.233 (Q3)**, pp. 583–598.

2011

Prieto, L. P., S. Villagrà-Sobrino, I. M. Jorrín-Abellán, A. Martínez-Monés, and Y. Dimitriadis (2011). "Recurrent routines: Analyzing and supporting orchestration in technology-enhanced primary classrooms". In: *Computers & Education* 57.1. **JCR Impact Factor: 2.621 (Q1)**, pp. 1214–1227.

Selected book chapters (3 out of 6)

2020 Prieto, Luis P, María Jesús Rodríguez-Triana, Tobias Ley, and Brendan Eagan (2020). "The Value of Epistemic Network Analysis in Single-Case Learning Analytics: A Case Study in Lifelong Learning". In: *International Conference on Quantitative Ethnography (ICQE20)*.

2018 Dillenbourg, Pierre, Luis P. Prieto, and Jennifer K. Olsen (2018). "Classroom Orchestration". In: *International Handbook of the Learning Sciences*. Routledge, pp. 180–190.

2017 Ruiz-Calleja, Adolfo, Luis P. Prieto, Tobias Ley, María Jesús Rodríguez-Triana, and Sebastian Dennerlein (2017). "Learning Analytics for Professional and Workplace Learning: A Literature Review". In: *Data Driven Approaches in Digital Education. EC-TEL 2017*. Springer, Cham, pp. 164–178.

Edited proceedings volumes (3)

2018 Martinez-Maldonado, Roberto, Vanessa Echeverria, Luis P. Prieto, Maria Jesus Rodriguez-Triana, Daniel Spikol, Mutlu Curukova, Manolis Mavrikis, Xavier Ochoa, and Marcelo Worsley, eds. (2018). *Proceedings of the Second Multimodal Learning Analytics Across (Physical and Digital) Spaces (CrossMMLA2018)* (Sydney, Australia, Mar. 6, 2018). CEUR Workshop Proceedings 2163. Aachen.

2017 Prieto, Luis P., Roberto Martinez-Maldonado, Daniel Spikol, Davinia Hernandez-Leo, María Jesús Rodríguez-Triana, and Xavier Ochoa, eds. (2017b). *Joint Proceedings of the Sixth Multimodal Learning Analytics (MMLA) Workshop and the Second Cross-LAK Workshop (MMLA-CrossLAK)* (Vancouver, Canada, Mar. 14, 2017). CEUR Workshop Proceedings 1828. Aachen.

2015 Prieto, L. P., Y. Dimitriadis, A. Harrer, M. Milrad, and J. D. Slotta, eds. (2015). *Proceedings of the Orchestrated Collaborative Classroom Workshop 2015 (OCCW15)* (Gothenburg, Sweden, June 7, 2015). CEUR Workshop Proceedings 1411. Aachen.

Selected peer-reviewed conference publications (7 out of 41)

2019

Rodríguez-Triana, Maria Jesus, Luis P Prieto, Tobias Ley, Ton de Jong, and Denis Gillet (2019). "Tracing Teacher Collaborative Learning and Innovation Adoption: a Case Study in an Inquiry Learning Platform". In: *Proceedings of the 13th International Conference on Computer Supported Collaborative Learning (CSCL2019)*. ISLS, pp. 432–439.

2018

Rodríguez-Triana, María Jesús, Luis P Prieto, Alejandra Martínez-Monés, Juan I Asensio-Pérez, and Yannis Dimitriadis (2018). "The teacher in the loop: customizing multimodal learning analytics for blended learning". In: *Proceedings of the 8th International Conference on Learning Analytics and Knowledge*. ACM, pp. 417–426.

2018

Saar, Merike, Luis P. Prieto, María Jesús Rodríguez-Triana, and Marge Kusmin (2018). "Personalized, teacher-driven in-action data collection: technology design principles". In: *Proceedings of the 18th IEEE International Conference on Advanced Learning Technologies (ICALT)*.

2016

Rodríguez-Triana, M. J., A. Holzer, L. P. Prieto, and D. Gillet (2016). "Examining the effects of social media in co-located classrooms: A case study based on SpeakUp". In: *Adaptive and Adaptable Learning: Proceedings of the 11th European Conference on Technology-Enhanced Learning (EC-TEL 2016)* (Lyon, France). **Conference Best Paper Award**.

2015

Prieto, L. P., K. Sharma, Y. Wen, and P. Dillenbourg (2015). "The burden of facilitating collaboration: Towards estimation of teacher orchestration load using eye-tracking measures". In: *Proceedings of the 11th International Conference on Computer-Supported Collaborative Learning (CSCL 2015)* (Gothenburg, Sweden). Vol. 1, pp. 212–219.

2013


Prieto, L. P., S. Villagrà-Sobrino, Y. Dimitriadis, J. I. Asensio-Pérez, and I. M. Jorrín-Abellán (2013). "Fostering CSCL Adoption: An Approach to Professional Development Focused on Orchestration". In: *Proceedings of the 10th International Conference on Computer-Supported Collaborative Learning (CSCL 2013)* (Madison, WI). Vol. 1, pp. 383–390.


2011

Prieto, L. P., S. Villagrà-Sobrino, Y. Dimitriadis, P. Schank, W. Penuel, and A. H. DeBarger (2011). "Mind the gaps: Using patterns to change everyday classroom practice towards contingent CSCL teaching". In: *Proceedings of the 9th International Conference on Computer-Supported Collaborative Learning (CSCL 2011)* (Hong Kong, China), pp. 518–525.

Participation in research projects (selection)


Tallinn University (TLU)

 **Doctoral Education for Technology-Enhanced Learning (DE-TEL)**, *Erasmus-Plus Strategic Partnership (2019-1-NO01-KA203-060280)*, European Commission. Development of a doctoral program and educational resources for the area of technology-enhanced learning

 **Educational Data Pilots for Tallinn University: Demonstrating the Practical Benefits for Multiple Stakeholders**, *TLU Research Funds (TF4217)*. Pilot studies to showcase the value of learning and teaching analytics to different higher education stakeholders


 **Cross-Border Educational Innovation thru Technology-Enhanced Research (CEITER)**, *ERA Chair (H2020-WIDESPREAD-2014-2)*, European Commission. Research on tools and practices to support educational innovations using teaching and learning analytics


École Polytechnique Fédérale de Lausanne (EPFL)


 **Modeling and Integration of Orchestrated Classrooms through Tangible and paper Interfaces (MIOCTI)**, *Marie Curie Intra-European Fellowship (FP7-PEOPLE-2012-IEF project no. 327384)*, European Commission. Research on modelling classroom orchestration (e.g., using eye-tracking techniques) and paper-based tangible environments for the classroom

University of Valladolid (UVA)

 **Meeting teachers co-design needs by means of Integrated Learning Environments (METIS)**, *European Lifelong Learning Project (531262-LLP-1-2012-1-ES-KA3-KA3MP)*, European Commission. Research on the technological and conceptual support of professional development actions (workshops) on learning design

 **Orchestrating educational web and specular spaces (EEE-WEB)**, *Spanish National Research Project (TIN2011-28308-C03-02)*, Spanish Ministry of Economy and Competitiveness. Research on orchestration of ubiquitous learning activities occurring across web, 3D virtual and augmented physical spaces

 **Service-based architecture for supporting design, enactment and evaluation of scripted and flexible CSCL situations (SOFOCLES)**, *Spanish National Research Project (TIN2008-03023/TSI)*, Spanish Ministry of Science and Innovation. Research on flexible enactment and orchestration of computer-supported collaborative activities

 **Learning Management System in VLE platforms**, *Spanish National Technology Transfer Project (IPT-430000-2010-054)*, Spanish Ministry of Science and Innovation. Research and development of deployment of technology-enhanced learning situations on VLE platforms

Other academic and editorial experience

- Organizer of numerous doctoral and supervision workshops at the University of Valladolid (Spain) and Tallinn University (Estonia) (2017-2020)
- Co-organizer of the Doctoral Consortium at the International Conference on Advanced Learning Technologies (ICALT 2020) (Tartu, Estonia) (2020)
- Doctoral Consortium Chair at the 26th International Conference on Collaboration Technologies and Social Computing (Tartu, Estonia) (2020)
- Ph.D. thesis degree committee member, Department of Computer and Systems Sciences (DSV), University of Stockholm, Sweden (2018)
- Workshop chair at the European Conference on Technology-Enhanced Learning (EC-TEL 2017) (Tallinn, Estonia) (2017)
- Co-organizer of the “Current and Future Multimodal Learning Analytics Data Challenges” workshop (MMLA 2017) (Vancouver, Canada) (2016)
- Program Committee member at the International Conference on Computer-Supported Collaborative Learning (CSCL 2017) (Philadelphia, US) (2017)
- Co-organizer of the “Connecting Learning Analytics and Design” workshop (CLAD 2016) (Lyon, France) (2016)
- Co-organizer of the “Orchestrating Learning Analytics” workshop (OrLA 2016) at the Learning Analytics Summer Institute (LASI) (Bilbao, Spain) (2016)
- Main organizer of the “Orchestrated Collaborative Classroom” workshop (Gothenburg, Sweden) (2015)
- Editor of the “Orchestrated Collaborative Classroom” workshop proceedings (2015)
- Guest editor for the “Young Researcher Special Issue” at the International Journal of Technology Enhanced Learning (2011)
- Program Committee member of the CSCL Track at the IEEE International Conference on Advanced Learning Technologies (ICALT 2016)
- Reviewer for multiple international journals and conferences, including Computers & Education, IEEE Transactions on Learning Technologies, IEEE Computer, International Journal on Technology-Enhanced Learning, International Conference on Computer-Supported Collaborative Learning (CSCL), European Conference on Technology-Enhanced Learning (EC-TEL), International Conference on Advanced Learning Technologies (ICALT), ACM International Conference on Tangible Embedded and Embodied Interaction (TEI), Learning Analytics and Knowledge (LAK) Conference and the International Conference on Quantitative Ethnography (ICQE)
- Participated in multiple scientific winter/summer schools and workshops, including two EATEL European Summer Schools in Technology-Enhanced Learning (2009, 2010), a Chinese-European Summer School on Technology-Enhanced Learning (2011), two Technologies for Vocational Education workshops (2012, 2014), CUSO Winter School on Future User Interfaces (2015), or the Multimodal Learning Analytics Data Challenges (2016)