Élise LAVOUÉ

Full Professor of Computer Science - HDR

elise.lavoue@univ-lyon3.fr

iaelyon School of Management
Université Jean Moulin Lyon 3
1C, avenue des Frères Lumière - CS 78242
69372 LYON CEDEX 08 (FRANCE)

AREAS OF EXPERTISE:
Technology Enhanced Learning (TEL)
Human Computer Interaction (HCI)
Tailored Gamification - User Engagement - Behaviour Analysis - Learning Analytics

---

Short Biography

Élise Lavoué is a full professor of computer Science at iaelyon School of Management, Jean Moulin Lyon 3 University, Lyon, France and head of the Situated Interaction, Collaboration, Adaptation, and Learning (SICAL) research group within the LIRIS lab at the same university.

She was a visiting professor in 2016 at McGill University (ATLAS lab) during 8 months, before defending her HDR that same year. Her research interests include motivational techniques, adaptive gamification, user engagement and learning analytics, and spans the fields of technology-enhanced learning and human–computer interaction.
She has authored or co-authored over 130 publications, including journal articles, book chapters, and conference papers, in these areas. She received the best research paper award at CSEDU 2013, best industry paper at CSEDU 2020, and honorable mention at CHI Play 2019.

Editor-in-Chief of the STICEF journal since January 2020, she is currently in charge of the Special Group of Interest (SIG) in the European Association of Technology-Enhanced Learning (EATEL), member of the executive board of the ATIEF association (Association des Technologies de l'Information pour l'Éducation et la Formation), and member of the research ethics board of the University of Lyon. She served as general co-chair (CSCL'19), organizing chair (EC-TEL'16), program committee co-chair (EC-TEL'17, IHM 2018), and program committee member for the EC-TEL, CSCL, LAK, and ITS international conferences. She is also member of the EC-TEL conference steering committee.

PROFESSIONAL EXPERIENCE

2022-Present: **Full Professor**, iaelyon School of Management, Jean Moulin Lyon 3 University, LIRIS lab
2016: **Visiting Professor, McGill University** (8 months), ATLAS lab. Sabbatical semester (CRCT CNU)
2009-2022: **Associate Professor**, University Lyon 3, LIRIS lab (2015-…), MAGELLAN lab (2009-2015)
2008-2009: **Postdoctoral research fellow and Lecturer** (ATER, 96hrs teaching/yr) (INSA Lyon)
2005-2008: **PhD Student and Assistant Lecturer** (Allocataire Moniteur, 60hrs teaching/yr) (INSA Lyon)

UNIVERSITY DEGREES AND DIPLOMAS

2016: **Habilitation** (Entitlement to steer PhD students and to supervise doctoral dissertations – French HDR-*Habilitation à Diriger des Recherches*), Université Lyon 3 "Supporting self-regulated learning: designing reflective and engaging learning environments"
2008: **Ph.D. Computer Science**, INSA Lyon "Platform supporting Interconnection of Communities of Practice (ICP). Application to tutoring with TE-Cap" (INSA Lyon)
2005: **M.S. Computer Science**, University of Lyon, France
2005: **Engineering Degree** (Master level), INSA Lyon (Industrial Engineering Department), France

GRANTS AND AWARDS

2020: **Best Industrial Paper award** for an article presented at **CSEDU 2020** international conference
2019: **Honorable Mention Award** for an article presented at the **ACM CHI PLAY 2019** conference (top 4%)
2016: Explora Pro **mobility Grant** from the Région Rhône-Alpes (**20k€**)
2015: **Bonus for scientific excellence** (PEDR) for 4 years, renewed in 2019
2013: **Best Paper award** for an article presented at **CSEDU 2013** international conference
2005: Doctoral Grant for 3 years

PRINCIPAL INSTITUTIONAL RESPONSIBILITIES

09/2023-Present: Responsible for e-learning training, iaelyon School of Management
09/2019-Present: **Head of the SICAL team**, LIRIS lab (10 permanent researchers)
01/2018-09/2019: Deputy head of the SICAL team, LIRIS lab (10 permanent researchers)
2019-2023: Member of the steering committee of the ASLAN Laboratory of Excellence, in charge of a WP
2017-Present: Head of the LIRIS Transversal Actions commission (1 call for projects per year)
2012-2018: **Head of the Technology Enhanced Learning (TEL) projects department**, IAE Lyon (3 members)

TEACHING AREAS

Collaborative Information Systems
Information System Design
Web protocols and languages
Web and Information Systems
Affective Computing / Adaptive Gamification

RESEARCH TEAMS

SICAL (Situated Interaction, Collaboration, Adaptation and Learning) research team @ LIRIS–CNRS (UMR 5205) Laboratory of Image Informatics and Information Systems (https://liris.cnrs.fr/equipe/sical)

OTHER COLLECTIVE RESPONSIBILITIES

2022-2024: In charge of an educational and digital ecosystem steering unit within the INCLUDE project, dedicated to the inclusion of students in universities
2020-Present: Member of the Lyon University **Research Ethics Board**
2019-Present: Member of the Lyon **Educational District Scientific Board**
2019-Present: Member of the **Scientific and Educational Orientation Board of INSPE** of Lyon Educational District
2017-2020: Member of the Committee of Experts in Computer Science & Mathematics in Lyon3 university

SYNTHESIS AND IMPACT OF SCIENTIFIC PRODUCTION

16 international journals (Computers and Education, IEEE TLT, IJHCS, UMUAI . . .).
32 peer-reviewed international conferences (LAK, AIED, CSCL, EC-TEL, CHI Play . . .)
Google Scholar statistics (18/3/2024) – **Citations: 2418, h-index: 24**

Scientific animation

2020- Present: **Editor-in-chief** of the **STICEF** journal
2016-2019 / 2021-Present: Member of the Executive Board of the ATIEF association
2020-Present: Member of the EATEL board (European Association of Technology-Enhanced Learning)
2017-Present: Member of the Steering Committee of the European Conference on Technology-Enhanced Learning
2017-2018: Co-Head of EduIHM (HCI for Education) working group (60 members)
2016-2019:
2015-2017: Member of Orphée Steering Committee, ANR network in e-Education, international activities

Coordination of Projects and Grants

Principal Investigator:
RENFORCE (2023-2026): AAP ANR (National Agency for Research) (overall budget: 651 k€) "Reflexive Multisensory Immersive Environment for Chemical Risk Training". Partners: ECP-Lyon 2, Centrale Lyon, INL, CNRS.

LudiMoodle+ (2023-2024): AAP ANR (National Agency for Research) (overall budget: 1 214 k€; fundings: 622 k€) "Gamification for Student Achievement". Partners: ECP-Lyon 2, Lyon 3 University, INSA Lyon, University Educational District, Pimenko, CNRS.

LUDISOM (2020-2023) – AAP CNRS 2020 (overall budget: 28k€ + funding for a 3-year PhD student): "Go to sleep, teenagers! Gamification of a digital learning environment for a sleep education program". Partners: CRNL and HESPER (INSERM, University Lyon 1)

LudiMoodle (2017-2020) - e-FRAN call (overall budget: 955k€): "Adaptive gamification of digital learning resources in Moodle for enhancing learners' motivation". National project (Edunao, University of Lyon, Lyon Educational District) – Web: http://ludimoodle.universite-lyon.fr

EmoViz (2015-2017) – CMIRA / Coopera call (overall budget: 161k€): "Supporting Learners' Regulation based on Visualization of Emotional Information" - International project (University McGill, University of Geneva)

Coordination for the LIRIS lab:

MétaEducation (2014 - 2017): Investissements d'Avenir e-Education 2 (196k€)

JEN living lab (2014): Projets Exploratoires Premier Soutien (PEPS) Interdisciplinaires Université de Lyon - CNRS 2014 (10k€

JANUS (2012 – 2013): LabEx IMU call 2012 (55 k€)

QuEJAnT (2012 - 2013): Région Rhône-Alpes and Grand Lyon call Imaginove "Serious Game et Nouveaux Usages" (78 k€)

Industrial Training and Research Agreements (CIFRE) with Woonoz company (2012-2015; 2018-2020), SpeakPlus company (2016-2017), Sciado Partenaires (2020-2023) and Sydo company (2021-2024). Funding for three 3-year PhD students.

Organization of conferences and workshops

- Co-organization **CROSSMMLA Workshop** « Learning Analytics for Smart Learning Environments Crossing Physical and Virtual Learning Spaces », in conjunction with LAK 2022 (https://sites.google.com/view/crossmmla/).
- Co-organization **LA4SLE Workshop** « Learning Analytics for Smart Learning Environments », in conjunction with EC-TEL 2021 (https://sites.google.com/view/la4sleworkshop/).
- Co-organization **GamLA Workshop** « When Gamification meets Learning Analytics », in conjunction with LAK 2021. (https://projet.liris.cnrs.fr/GamLA/)
- **Conference Co-Chair CSCL 2019**, 13th International Conference on Computer Supported Collaborative Learning, (400 participants, 431 submissions, selection rate: 30%).
- **Program Committee Co-Chair IHM 2018**, 30th national conference on Human-Computer Interaction
- **Program Committee Co-Chair EC-TEL 2017**, 12th European Conference on Technology Enhanced Learning, (148 submissions, selection rate: 25.3%)
- **Local Organization Chair EC-TEL 2016** (200 participants)
- Demo and Poster Co-Chair EC-TEL 2015
- Workshop Chair EIAH 2015, national conference on Technology Enhanced-Learning

Supervision and expertise

Supervision of 9 PhD students (6 as the principal supervisor)
Supervision of 4 Post-doctoral students

Jury member for 13 PhD defenses (3 as an external examiner in international jury, 5 as a rapporteur)

Project Expertise Activity

Reviewer for the generic calls of the ANR (National Research Agency) 2014, 2016, 2019, 2020
Reviewer for the Research Foundation - Flanders, Belgium, 2017

Reading Committees / Editorial Committees

Full Paper Associate Chair, Conference ACM CHI 2023, research in HCI

Full Paper Associate Chair, Conference ACM CHI PLAY 2022, research in games and HCI

Member of international program committees: AIED (2020, 2022); ITS (2018-2021); ACM L@S (2021, 2022); EC-TEL (2013-2021); LAK (2016-2022); ICALT (2016-2022); ICSLE (2015-2016); ICWL (2014-2017), KMIS (2010-2015)

Reviewer for international journals: Computers & Education (2015, 2016, 2019, 2020, 2021), International Journal of Human–Computer Interaction (IJHCI) (2021), International Journal of Human Computer Studies (IJHCS) (2017, 2022), Frontiers in Education (2021), Journal on Multimodal User Interfaces (JMUI) (2021), Journal of Computing in Higher Education (JCHE) (2016, 2017, 2020), Plus ONE (2017), IEEE Transactions on Learning Technologies (2016, 2018, 2019, 2020), IEEE Multimedia (2015), Interactive Learning Environments (2012, 2014, 2015), Simulation and Gaming (S & G) (2013), Journal on Multimodal User Interfaces (JMUI) (2013), International Journal of Learning Technology (IJLT) (2013).

Reviewer for international conferences: CHI (2019, 2021, 2022), CSCL (2013 à 2019), CHI Play (2019, 2021), ISLS 2021, INTERACT 2017, ICLS 2018.

Academic Associations

Member of the ATIEF, AFIHM and EATEL scientific associations

International collaborations

- University of Waterloo, HCI Games Group, Canada (Lennart Nacke, Gustavo Tondello). Ongoing collaborative project on the identification of player types based on interaction traces using a gamified online environment
- The Pennsylvania State University, US (Na Sun, PhD). Stay of 2 months founded by the EmoViz project. Study on the use of emoji for peer feedback during collaborative design activities. 1 article
- McGill University, Canada (Susanne Lajoie). Visiting Professor in 2016 and collaboration within the Emoviz project on the design of tools to support emotion regulation. 1 article
- École polytechnique Montréal, Canada (Michel Desmarais). Collaborative project in 2014-2015 on the application of educational data mining methods for adaptive gamification. 3 articles
- Université de Genève, Suisse (Gaëlle Molinari et Mireille Bétrancourt). Several collaborations since 2013 on the design of emotion awareness tools and studies of their impact on learner regulation. 3 articles
- INESC-ID, Lisbon, Portugal (Claudia Ribeiro, PhD). Stay of 1 month in 2014 funded by the European Network of Excellence GALA. Collaboration on the analysis of learners' engagement in the serious games. 1 article

RECENT INTERNATIONAL SCIENTIFIC PRODUCTIONS & PUBLICATIONS

For the complete list, please visit my pages following the URLs: Mypage & Google Scholar

Publications in peer-reviewed journals

Elise Lavoué, Sophie Villenave, Audrey Serna, Clementine HelfensteinDidier, Patrick Baert & Guillaume Lavoué (2023). Influence of Scenarios and Player Traits on Flow in Virtual Reality. *IEEE Transactions on Visualization and Computer Graphics*. p. 1-14. To be published

Audrey Serna, Stuart Hallifax & Élise Lavoué (2023). Investigating the Effects of Tailored Gamification on Learners' Engagement over Time in a Learning Environment. *Proceedings of the ACM on Human-Computer Interaction*, 7, Issue CHI PLAY, pp 264–288.

S. Dumas   Reyssier, A. Serna, S. Hallifax, J.-C. Marty, S. Simonian & E. Lavoué (2023) How   does   adaptive gamification impact different types of student motivation over time?, *Interactive Learning Environments*. Online first.

Reyssier, S., Hallifax, S., Serna, A., Marty, J.-C., Simonian, S. & Lavoué, E. The impact of game elements on learner motivation: influence of initial motivation and player profile. *IEEE Transactions on Learning Technologies*, 2022. doi: 10.1109/TLT.2022.3153239.
(Impact Factor 2020: 3.72; SJR 2020: Q1)

Lavoué E, Ju, Q., Hallifax, S., Serna, A. Analyzing the relationships between learners' motivation and observable engaged behaviors in a gamified learning environment. *International Journal of Human-Computer Studies*, 154, 102670, 2021. doi: 10.1016/j.ijhcs.2021.102670.
(Impact Factor 2020: 3.632; SJR 2020: Q1)

Ez-Zaouia, M., Tabard, A., & Lavoué, E. Emodash: a Dashboard Supporting Retrospective Awareness of Emotions in Online Learning. *International Journal of Human-Computer Studies*. 139, 102411, 2020.
(Impact Factor 2019: 3.163; SJR 2019: Q1)

Lavoué, E., Kazemitabar, M., Doleck, T., Lajoie, S. P., Carrillo, R., & Molinari, G. Towards emotion awareness tools to support emotion and appraisal regulation in academic contexts. *Educational Technology Research and Development*, 68(1), 269-292, 2020.
(Impact Factor 2018: 2.115; SJR 2018: Q1)

Lavoué E., Monterrat B., Desmarais M., George S. Adaptive Gamification for Learning Environments, *IEEE Transactions on Learning Technologies*, 12(1), p. 16-28, 2019.
(Impact Factor 2018: 1.869; SJR 2018: Q2)

Monterrat B., Lavoué E., George S. Adaptation of gaming features for motivating learners, *Simulation and Gaming*, 48(5), p. 625-656, 2017.
(SJR 2017: Q2)

Papers in international peer-reviewed conferences and proceedings

Basille, A., Lavoué, E., Serna, A. (2022). Impact of viewpoint on social presence and collaborative processes in a collaborative serious game. *14th International Conference on Computer Supported Education (CSEDU 2022)*. 22-24 april 2022, 8p.

Hallifax, S., Lavoué, E., Serna, A. (2020). To tailor or not to tailor gamification? An analysis of the impact of tailored game elements on learners' behaviours and motivation, *In: Bittencourt I., Cukurova M., Muldner K., Luckin R., Millán E. (eds) Artificial Intelligence in Education. AIED 2020*. Lecture Notes in Computer Science, vol 12163. Springer, Cham, p. 216-227. (CORE A)

Ezzaouia, M., Tabard, A., Lavoué, E. (2020). PROGDASH: Lessons Learned From a Learning Dashboard in-the-wild. *12th International Conference on Computer Supported Education (CSEDU 2020)*, Prague, Czech Republic, 2-4 may 2020, p. 105-117.
Best Industrial Paper Award (top 13%)

Stuart Hallifax, Audrey Serna, Jean-Charles Marty, Guillaume Lavoué, Elise Lavoué. Factors to Consider for Tailored Gamification. *6th ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play (CHI PLAY'19)*, 22 October 2019, Barcelona (Spain), p. 559-572.
Honorable Mention Award (top 13%)

Stuart Hallifax, Audrey Serna, Jean-Charles Marty, Elise Lavoué. Adaptive gamification in education: A literature review of current trends and developments. *European Conference on Technology Enhanced Learning (EC-TEL)*, 16 September 2019, Delft (Pays-Bas), Springer, Cham, p. 294–307. (CORE B)

Na Sun, Elise Lavoué, Chulakorn Aritajati, Aurélien Tabard, Mary Beth Rosson. Using and Perceiving Emoji in Design Peer Feedback. *13th international conference on Computer Supported Collaborative Learning (CSCL 2019)*, Lyon, France, 17-21 June 2019, p. 296-303. (CORE: A)

Monterrat, B., Yessad, A., Bouchet, F., Lavoué, E., & Luengo, V. MAGAM: A Multi-Aspect Generic Adaptation Model for Learning Environments. *12th European Conference on Technology Enhanced Learning*, Tallinn, Estonia, 12-15 September 2017, p. 139-152. (CORE: B)

R., Renaud C., Prié Y. & Lavoué E. Dashboard for monitoring student engagement in mind mapping activities. *17th IEEE International Conference on Advanced Learning Technologies (ICALT 2017)*, Timisoara, Romania, 3 July 2017, p. 433-437. (CORE: B)

Ezzaouia M., Lavoué E., EMODA: a Tutor Oriented Multimodal and Contextual Emotional Dashboard. *7th International Learning Analytics and Knowledge Conference (LAK 2017)*, Vancouver, Canada, 13-17 March 2017, p. 429-438. (CORE: A)

Monterrat B., Desmarais M., Lavoué E., George S. A Player Model for Adaptive Gamification in Learning Environments. *17th International Conference on Artificial Intelligence in Education (AIED 2015)*, Madrid, Spain, 22-26 June 2015, p. 297-306. (CORE: A)

Web sites & Social Networks

https://www.eliselavoue.fr