

SICAL Team

Situated Interaction, Collaboration, Adaptation and Learning

Laboratoire d'InfoRmatique en Image et Systèmes d'information

LIRIS UMR 5205 CNRS / INSA de Lyon / Université Claude Bernard Lyon 1 / Université Lumière Lyon 2 / Ecole Centrale de Lyon

The SICAL team develops novel approaches, models and tools to improve humans' ability to interact, learn and adapt, especially in collaborative environments. Our research tackles the following themes:

- learning environments, particularly serious games
- tools and models supporting design, prototyping and evaluation of interactive systems
- adaptable and adaptive systems.

In order to understand emerging use patterns and appropriation dynamics of novel learning interactive and/or adaptable systems, we are working on user-centered design methods and on traces of interaction.



Highlights

- Organization of the international conference EC-TEL 2016 (<http://www.ec-tel.eu/>)
- Organization of the Handicap 2014 and RJC IHM 2013
- Chair of the CNRS international summer school on Game-Based Learning
- Prédit 4: Award in « Logistique et transport de marchandises / connaissances » for the project ALF (Future Delivery Areas)
- Bests papers at International Conference on Computer Supported Education (CSEDU'2013) and IEEE International Conference on Advanced Logistics and Transport (ICALT'2014)



The team

Members

- 1 Professor
- 8 Associate Professors
- 8 PhD students

Defended PhD Thesis

- 2 per year in average
- Team created in 2015

Scientific skills and societal challenges

Scientific skills

- Scripting of learning activities
- Awareness tools
- Use and Analysis of traces of interaction
- Monitoring and regulation of collaborative activities
- Appropriation Dynamics
- Context modeling
- Behavioral analysis
- Adaptation
- Augmented reality
- Tangible and Multi-device Interaction
- Information visualization
- Accessibility

Societal challenges

- Make digital resources and services more readily available (to disabled people, through professional training, or distance learning)
- Adapt learning systems to people with disabilities
- Improve cultural discoveries through new user experiences (play, participation, contribution)
- Support the design of smart cities: services to users and professionals, leveraging big data.
- Improve engagement and motivation through new forms of learning (play, post WIMP interaction)
- Design better learning systems

Contacts

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Softwares and platforms

- PuPint: middleware for developing multi-device environments
- GOALS: Web platform supporting the creation of dynamic scenarios for serious games
- D3KODE: Platform supporting interactive transformation and visualization of traces
- Learning Adventure: collaborative game-based learning environment (collaboration with LIP6)
- DDART: activity dashboard support project based learning
- Traces: activity tracker for MacOS
- Patrimonum: participatory platform to support the appropriation of socio-cultural heritage

Positioning

International context

- Participation to program committees of international conferences (EC-TEL, ICALT, EMOOCs, CSCL, LAK, NordiCHI, ICWL, ECGBL, eLmL, etc) and journals (IJLT, IJTEL, TOIS, JCKBSE, etc.)
- Exchange of students and post-docs: École Polytechnique de Montréal / Portugal - Lisbon (INESC-ID) / Universities of Munich and Würzburg / University of Tlemcen / McGill University
- EmoViz: international project cooperation with McGill University and Université de Genève
- Activity History: collaboration with University of California San Diego (UCSD)
- Associate partner of the European excellence network GALA
- Partnership with École Centrale de Pékin (Beihang University)

National context

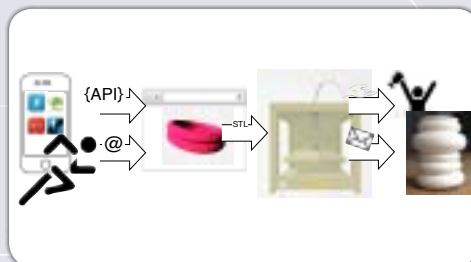
- Participation to program committees of major national conferences: EIAH, Handicap, IHM, IC, RJC EIAH, TICE, SysCO.
- Involvement in associations: ATIEF (CA), AFIHM (CA), IFRATH (CA), AFRV, ARCo
- Funded projects: SIM2B (FUI), JENLab (ANR), RobotPopuli (FUI), Jeux épistémiques numériques : conception et analyse des usages (PEPS), BibViz (PEPS), Spectacle en ligne(s) (ANR), Méta-éducation (E-Education), EmoViz (Coop-era), Plateforme PupInt (financement interne), projet SIRIMA (Suivi du regard pour l'interaction mobile avancée - financement interne), Patrimonum (PEPS)

Regional context

- Competitivity Poles : Imaginove and LUTB
- Labex IMU and Rhône-Alpes Region (interdisciplinary Projects: Archeorient, IRAA, CMW)
- Animation Actions "ARC6" « Web de savoir, d'histoire et de mémoire », « Conception de nouveaux jeux sérieux pour l'amélioration des processus éducatifs »

Industrial partnerships

- Numerous partnerships leading to student funding or projects: Adeneo Embedded, Awabot, Artefacts Studio, Biin, Corexpert, Dailymotion, EDF, Gerip, Intellysurf, IRI, Kiniro, Open Classrooms, Shazino, Speakplus, Symetrix, Interface Transport, SEMCO, SBT, Société Canal de Provence, groupe VISEO, Xerox Research Centre Europe, Web Services pour l'Éducation, Woonoz, ITOP Education, Riplay, Erdenet



International journals and conferences

- User Modeling and User-Adapted Interaction (UMUAI)
- Computers & Education (C&E)
- IEEE Transactions on Learning Technologies (TLT)
- International Journal on Learning Technologies (IJLT)
- Simulation and Gaming (S&G)
- Journal of Personal and Ubiquitous Computing
- International Journal of Sensor Networks
- Computer Support for Collaborative Learning (CSCL)
- ACM Conference on Human Factors in Computing Systems (CHI)
- European Conference on Technology Enhanced Learning (EC-TEL)
- IEEE International Conference on Advanced Learning Technologies (ICALT)