

Last five years main R&D projects and technical publications

– Stéphane C. Gobron

Relevant Projects

Period & Project name	Objectives	Target	Technology	Partners	Grant type & role
2020 ~ 2021 Spark-IT	- running the project: share, collect, and sort ideas - long term analysis: record and analyze behavior	- Anyone will to perform a brainstorming	- interconnected eTablets (7) and tactil tables (2); Unity + network.	- HEP-Valais	FNS – 100 kCHF <i>Technical leader</i> 50% of the budget
2020 ~ 2021 CHUV-ER	- Getting new medical staff member to know CHUV emergency topography & permanent staff member before arriving !	- New staff members (=>frequent turnover)	- 3D representation of the hospital - serious game	- CHUV + UniL, Lausanne, VD	UniL Grant 20 kCHF <i>Main applicant</i>
2019 ~ 2021 PréGIS	- Visualize and Share large data set at multi-scale levels - Predict potential traffic jam - Helping predicting effect on large scale traffic	-Parking management staff -Geneva City hall staff	4k tactil board	- hepia, HES-SO Genève - Parking management - City of Geneva	HES-SO <i>WP leader</i> 250 kCHF 40% of the budget
2016 / 2017 / 2018 / 2019 / 2020 Gamification & Serious Game Symposium	- Annual congress organized to bring together the forces of our country on the themes of gamification and learning through serious play or gamification	- Researchers as well as industrial partners	- any!	- ZHdK, EPFL, HEAD, HEP-VD, eesp, hepia, HEIG-VD, HEIA-FR... - Entreprises privées - Instituts publics	InnoSuisse <i>General chair & proceeding chair</i> Annual budget around 100 kCHF
2019 ~ 2021 Soft-Skill & talent detection	- Identification of soft skills	- health related staff members	- eBook	- Dept of health, gestion and engineering, HE-Arc - Faculty of psychology	Intern grant <i>Main applicant</i> Group funds, HE-Arc
2018 ~ 2021 Stay Fit Longer	- Perform daily physical and cognitive exercises with the help of a virtual guide / coach	- 65 yo. and more seniors	- e-Tablette - Gamification - Virtual Guide	- HES-SO, HE-VS-Gestion (leader) - CHUV - MindMaze S.A. - Univ. of Montreal - Univ. of Bruxelles	UE- H2020 – type AAL <i>WP leader</i> 2.4 m€, among 150 kCHF for the virtual guide
2017 ~ 2021 1400^{ème} anniversaire de St-Ursanne	- General public: Passing on the cultural heritage and the legend of Saint-Ursanne through gamification - Dogmatic: Offer a spiritual dimension via a journey in 20 steps	- Family related tourism - Pilgrimage / religious individuals	- Augmented reality+ eTablets - Serious Game	- St- Ursanne ecclesiastic committee - Jura-Tourisme - Canton of Jura - Swiss confederation - Clergy (Vatican)	Cantons & Swiss confederation <i>WP leader</i> 1.4 mCHF among 320 kCHF pour le « Chemin secret »
2016 ~ 2020 End of Life	- Confront the problems of the end of life: homes, palliative care - Valuing the individual by evaluating professional assets - Suggest to supervisors their team's strengths or weaknesses	- Nurse staff	- PC - book of which we are the hero	- Health dept, HE-Arc - Deux EMS (JU, NE) - Paliative care Institution	Bootstraps Arc <i>Main applicant</i> 58 kCHF
2016 ~ 2020 Situation d'urgence	Putting childcare professionals in an emergency situation: teaching the first steps and training in questions of 144	- Childhood educators	- Roman photo interactif	- Health dept, HE-Arc - Childhood section, City of Lausanne	Bootstraps Arc <i>Main applicant</i> 65 kCHF
2016 ~ 2019 Jeu sérieux pour combattre les Troubles musculo squelettiques	- Learn about your own body - Realize your postural habits - Become aware of the importance of gestures and postures	- Handling staff	- VR - Serious Game - Nonintrusive 3D body motion capture	- CHUV - Longines - UTBM - Audemars-Piguet - PSA group - Witchlake S.à.r.l.	Interreg – EU <i>Main applicant</i> 943 kCHF dont 420 kCHF pour le logiciel d'apprentissage

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2014 ~2019 Smart2Fry	Eco-project to influence kitchen professional behaviors: - guarantee the nutritional quality of cooked products - make massive electricity savings	- Kitchen staff	- eTablet - Embedded system	- Food industrie - Alpsens S.A.	InnoSuisse/CTI <i>Main applicant</i> 435 kCHF
2015 ~ 2017 SG4HEP	Platform of five serious games for primary classes: triangulated puzzle, logical sequence, vision in space, 3D construction	Children from 7 to 9 years old	- e-Tablet	- HEP-VD	HES-SO grant <i>Main applicant</i> 30 kCHF
2013 ~ 2016 SG4R	Multimodal (VR + haptic) platform of six serious games for leg rehabilitation	- Patients with stroke	- Virtual reality - Double haptic robot	- HEIG-VD - Lambda-Heath-System, Yverdon, VD	HES-SO grant <i>Main applicant</i> 250 kCHF

Books

- [1] **Gobron S.**, Rekik Y., editorial authors (2020), *International conference Gamification & Serious Games Symposium 2020*, (GSGS'20), e-book, GSGS'20, NIFFF, HE-Arc / HES-SO Press, Swiss Innovation Agency (Innosuisse), ISBN: 978-2-940387-26-7, 94 pages, Sep.~ Nov.-- online edition due to Covid-19.
- [2] **Gobron S.**, editorial author, (2019). *Gamification & Serious Games Symposium 2019* (GSGS'19), proceedings book, NIFFF, HE-Arc / HES-SO Press, ISBN: 978-2-940387-23-6, 160 pages, July 3-5.
- [3] **Gobron S.**, editorial author, (2018). *Gamification & Serious Games Symposium 2018* (GSGS'18), proceedings book, NIFFF, HE-Arc / HES-SO Press, ISBN: 978-2-940387-23-6, 108 pages, July 5-6.
- [4] **Gobron S.**, editorial author, (2017). *Gamification & Serious Games Symposium 2017* (GSGS'17), proceedings book, NIFFF, HE-Arc / HES-SO Press, ISBN: 978-2-940387-20-5, collection# (ISSN): 2297-914X, 116 pages, June 30th- July 1st.
- [5] **Gobron S.**, editorial author, (2016). *Gamification & Serious Games Symposium 2016* (GSGS'16), proceedings book, "Why so serious?". Imagine the future, NIFFF, HE-Arc / HES-SO Press, ISBN 9 7 8-2-940387-16-8, 48 pages, July 1st.
- [6] **Gobron S.** and Gutierrez M., (2015). *WebGL par la pratique*, Press Polytechnique Universitaire Romande (PPUR/EPFL), 360 pages, May, [120 open source online exemples](#), [book reviews](#).

Peer-reviewed articles and book chapters

- [7] **Gobron S.**, Chatelain S., Bolinhas C., and Correia de Oliveira D. (2019). "[A Picture-based Serious Game to Train Non-medical People for Emergency Situations](#)", proceedings of the IEEE SeGAH 2019, international conference on Serious Games and Applications for Health, Ritsumeikan Center for Games Studies, Kyoto, Japan, August 5-7.
- [8] Fröhlich M., Bolinhas C., Depeursinge A., Widmer A., Chevrey N., Hagmann P., Simon C., Kokje V., and **Gobron S.**, (2018). "[Holographic visualisation and interaction of fused CT, PET and MRI volumetric medical imaging data using dedicated remote GPGPU ray casting](#)", book chapter of *the Medical Image Computing and Computer Assisted Intervention*, Springer, pp. 102-110.
- [9] Sisto M., Zare M., Ouerhani N., Bolinhas C., Divernois M., Mignot B., Sagot J-C., **Gobron S.**, (2018). "[Virtual Reality Serious Game for Musculoskeletal Disorder prevention](#)", book chapter, *Augmented and Virtual Reality*, part I, Springer, pp. 43-59.
- [10] Sisto M., Wenk W., Ouerhani N., **Gobron S.**, (2017). "[A study of transitional virtual environments](#)", book chapter of *Augmented and Virtual Reality*, part 1, pp. 35-49.
- [11] Charmillot P-A., **Gobron S.**, (2017). "[Jouer pour mieux accompagner la mort de l'autre, est-ce bien sérieux ?](#)", book chapter of the *Revue internationale de soins palliatifs*, 2017/2 (Vol. 32), pp. 37-44.
- [12] **Gobron S.**, Zannini N., Wenk N., Schmitt C., Charrotton Y., Fauquex A., Lauria M., Degache M., and Frischknecht R., (2015). "[Serious games for rehabilitation using head-mounted display and haptic devices](#)", book chapter of *Augmented and Virtual Reality*, Volume 9254 of the series Lecture Notes in Computer Science, pp. 199-219.
- [13] Boulic R., Ahn J., **Gobron S.**, Wang N., Silvestre Q., and Thalmann D., (2014). "[Towards the Instantaneous Expression of Emotions with Avatars](#)", book chapter of *CyberEmotions*.
- [14] Ouerhani N., Pazos N., Aeberli M., Senn J., and **Gobron S.**, (2015). "[Dynamic Street Light Management Towards a citizen centred approach](#)". Proceedings of the Hybrid City Conference, Athens, Greece, September 17-19.

- [15] Carrino F., Vaucher Q., Pasquier R., Bourquin V., Abou Khaled O., Mugellini E. and **Gobron S.** (2020), "Bombuscar: Gamification Design of a Carpooling-Based Freight Transport", Proceedings of the international conference Gamification & Serious Game Symposium 2020 (GSGS'20), HE-Arc / HES-SO Press, Swiss Innovation Agency (Innosuisse), ISBN: 978-2-940387-26-7, Neuchatel, pp. 79-82, Sep.~ Nov.
- [16] Collet A., Rosset N., Duay V., Bourquin S., **Gobron S.**, and Abou Khaled O. (2020), "Improving a Digital Manufacturing Operation Manual- Thanks to Augmented Reality", Proceedings of the international conference *Gamification & Serious Game Symposium 2020 (GSGS'20)*, HE-Arc / HES-SO Press, Swiss Innovation Agency (Innosuisse), ISBN: 978-2-940387-26-7, Neuchatel, pp. 42-45, Sep.~Nov.
- [17] Gonzalez S., Charmillot P-A., Senn J., and **Gobron S.** (2020), "'End-of-Life", a Serious Game to Develop Skills for Healthcare Professionals", Proceedings of the international conference *Gamification & Serious Game Symposium 2020 (GSGS'20)*, HE-Arc / HES-SO Press, Swiss Innovation Agency (Innosuisse), ISBN: 978-2-940387-26-7, Neuchatel, pp. 34-37, Sep.~ Nov.
- [18] **Gobron S.** and Skoruppa K. (2020), "Object Hunt for Speech Therapy", Proceedings of the international conference *Gamification & Serious Game Symposium 2020 (GSGS'20)*, HE-Arc / HES-SO Press, Swiss Innovation Agency (Innosuisse), ISBN: 978-2-940387-26-7, Neuchatel, pp. 27-29, Sep.~ Nov.
- [19] Sisto M., Gagnebin-Brown M., Nemeth J., Sommer N., and **Gobron S.**, (2019). "St-Ursanne, circuit secret", Proceedings of the Gamification & Serious Game Symposium 2019 (GSGS'19), HE-Arc / HES-SO Press, Neuchatel, p.35-38, July 4-5.
- [20] Cardin S., Cerra M., Bolinhas C., Sisto M., Schaer R., Bieler M., Perez D., **Gobron S.**, and Widmer A., (2019). "Gamification to improve adherence in home-based activities for seniors", Proceedings of the Gamification & Serious Game Symposium 2019 (GSGS'19), HE-Arc / HES-SO Press, Neuchatel, p.93-96, July 4-5
- [21] Fischer F., Senn J., Karmous M., Sisto M., and **Gobron S.**, (2018). "HapticBikeTraining Project", Proceedings of the Gamification & Serious Game Symposium (GSGS'18), HE-Arc / HES-SO Press, Neuchatel, pp. 58-59, July 5-6.
- [22] Noguera G., Marquis L., Clarys B., and **Gobron S.**, (2018). "Archogame- A Serious Game in the Field of Archeology". Proceedings of the Gamification & Serious Game Symposium (GSGS'18), HE-Arc / HES-SO Press, Neuchatel, pp. 56-57, July 5-6.
- [23] Németh J., Carron P.-N., Bentvelzen A., and **Gobron S.**, (2018). "Gamified-ED3D Project". Proceedings of the Gamification & Serious Game Symposium (GSGS'18), HE-Arc / HES-SO Press, Neuchatel, pp. 34-35, July 5-6.
- [24] Francey O., Chevailler R., Weiss M., and **Gobron S.**, (2018). "A Serious Game in Mixed Reality towards Urban Network Development". Proceedings of the Gamification & Serious Game Symposium (GSGS'18), HE-Arc / HES-SO Press, Neuchatel, pp. 28-29, July 5-6.
- [25] Sisto M., Zare M., Ouerhani N., Sagot J-C., and **Gobron S.**, (2018). "Virtual Reality Puzzle Game for Musculo-Skeletal Disorders Prevention". Proceedings of the Gamification & Serious Game Symposium (GSGS'18), HE-Arc / HES-SO Press, Neuchatel, pp. 24-25, July 5-6.
- [26] Bolinhas C., Sommer N., Sisto M., and **Gobron S.**, (2018). "First steps towards a virtual coach within a Serious Game to prevent Musculo-Skeletal Disorder". Proceedings of the Gamification & Serious Game Symposium (GSGS'18), HE-Arc / HES-SO Press, Neuchatel, pp. 16-17, July 5-6.

Invited guest or keynote speaker

- [1] "[Serious game et santé : regard critique et exemples de réussites](#)" (2020). 20th forum of the [Numerical Patient "150 Shades of e-Health"](#), "Innover pour enrichir le continuum de soins." workshop sessions, online (due to Covid-19), Belgium, Oct.29, 2020, *in press*.
- [2] "[Swiss Marketing: Gamification vs. Serious Games, which potential markets](#)", (2020). *Swiss Marketing association*, HE-Arc-Gestion, University of Applied Science and Arts of Western Switzerland, Neuchatel, Switzerland, March 10, [[summary](#)], *in French*.
- [3] "[Situations d'urgence](#)", (2019). *Reseau-L*, Ville de Lausanne, Lausanne, Switzerland, December 9. (in French), [[summary](#)], *in French*.
- [4] "[From Swiss educational engineering system to health apps](#)", (2019). Grand Hôpital de Charleroi, Charleroi, Belgium, May.
- [5] "[Strengths of the Switzerland Education System-- From idea to deployment, looking for financing](#)", (2019). CNRS, Marseille, France, May 21.

- [6] "[Ludification et jeux sérieux : quelles différences ? Relation avec les niveaux de paradigmes d'utilisation ainsi que quelques exemples pratico-pratiques](#)", (2019). eesp / HES-SO, colloque du réseau Occupation Humaine et Santé, Prendre sa santé au jeu : exploration de la diversité occupationnelle, Lausanne, May 3.
- [7] "[Comment réaliser des projets de réalités augmentée, virtuelle et de Serious Games pour la formation continue ?](#)", (2019). Promotion de la formation continue, MAS- RAD, HES-SO, Neuchâtel, Suisse, April 12.
- [8] "[Few examples of serious games and gamifications](#)", (2019). European day of Logopedy, University of Neuchatel, Switzerland, February 6.
- [9] "[Introduction to Serious Games-- definition, motivation, and practical examples](#)", (2019). Game Technologies, Master of Science and Engineering (MSE), HES-SO.
- [10] "[Améliorer l'apprentissage par le Serious Gaming](#)", (2018). MedConnect'18, Ecreux, France, October 16.
- [11] "[Serious Game et Urgence : quel avenir ?](#)", (2017). 17ème symposium de Médecine d'Urgence de Charleroi- "Trauma Center et nouvelles technologies", Charleroi, Belgium, November 24.
- [12] "[Jouer pour mieux accompagner la mort de l'autre est-ce bien sérieux ?](#)", (2017). FISP 2017, Geneva, Switzerland, November.
- [13] "[Le jeu : un support pour dialoguer entre les générations](#)", (2017). Soins et technologies- Mariage forcé ou mariage heureux ?, Neuchatel, Switzerland, November 10, Twin talk with Pierre-Alain Charmillot.
- [14] "[Comment construire un pont entre l'ingénierie et la santé : expériences de réussite et d'échec](#)", (2017). Soins et technologies- Mariage forcé ou mariage heureux ?, Neuchatel, Switzerland, November 10, in French.
- [15] "[Multimedia tools and emotional dimension for health](#)", (2017). 17th forum of the Numerical Patient, "Du Patient Numérique aux trajets de soins augmentés ... Faut-il tuer le transhumanism(t)e?", Charleroi, Belgium, October 19, 2017, *in French*.
- [16] "[Gamification & Serious Games pour l'enseignement et la simulation en santé- concepts et exemples pratiques](#)", (2017). 1ère Journée d'Enseignement par Simulation, Sion Hopital, Sion, Switzerland, October 9.
- [17] "[Réalité Virtuelle, Mixte et Augmentée- Potentiels pour l'industries & exemples pratiques](#)", (2017). BIMO Forum, Réalité augmentée au service de l'économie, Bat. Strete J, Delémont, Switzerland, October 5.
- [18] "[Object Conception for Kids- an Upgrade of Three Serious Games](#)", (2017). Gamification & Serious Games Symposium 2017 (GSGS'17), Neuchatel, Switzerland, July 1st.
- [19] "[Virtual Reality's limits](#)", (2017). Technologies et expériences vécues, EspaceLouis-Agassiz 1, Faculty of Liberal Arts, University of Neuchatel, Switzerland, March 27, in French.
- [20] "[Jouer pour former à accompagner la fin de vie des personnes âgées : est-ce bien sérieux ?](#)", (2017). Journée scientifique : de la recherche à la formation- opérationnalisation et innovation pédagogique en soins palliatifs, Delémont, Switzerland, March 9, in French.
- [21] "[An InnovARC success story to reach an Interreg EU grant](#)", (2016). 24h Innovarc, in Besançon, France, November 24-25, in French.
- [22] "[Introduction to Serious Games: definition, motivation, and practical self-examples](#)", (2016). Journée thématique du Programme Doctoral du CRIS: Les artefacts technologiques au service des interactions sociales, University of Neuchatel, in Neuchatel, Switzerland, October 21.
- [23] "[Serious Games: introduction and current prospects](#)", (2016). HEIA-Fr, HES-SO, second annual Game-JAM, in Fribourg, Switzerland, in French, Feb. 15-19.

Expert, program, editorial and board committee member

- Founder, general chair & proceedings chair: [GSGS – Gamification & Serious Games Symposium](#);
- Program committee or board member of international journal and conferences
 - International journal of
 - [IJCG – International Journal of Computer Graphics](#);
 - [C&G – Computer & Graphics Journal](#);
 - [JPDC – Journal of Parallel and Distributed Computing](#);
 - Conferences
 - [ISVC – International Symposium on Visual Computing](#);
 - [WSCG – Winter School of Computer Graphics](#);
 - [GRAPP – International Conference on Computer Graphics Theory and Applications](#).
 - Local board committee member of
 - [GSGS, Neuchâtel \(general chair\)](#);
 - [Lambda Health System S.A., Yverdon \(advisor\)](#);
 - [Entrée-de-Jeux, La Chaux-de-Fond \(advisor\)](#);
 - [Be!Rescuer, Fribourg \(advisor\)](#).
- Academic outside current Engineering School
 - EPFL expert at Master level since 2012 for the [IIG – Immersive Interaction research Group](#);
 - PhD co-advisor: Nicolas Wenk, 2019~, [Artorg laboratory](#), under the direction of Prof.Dr. L. Marchal, UniBE, BE;