

1. Publications in peer-reviewed scientific journals

For publications of my post-doctoral time, my contribution is described.

1.a. Publications resulting from postdocs

Aubert, A.H., Friedrich, M. (**submitted**). *Gamifying quantitative face-to-face interviews: an empirical theory-based evaluation*, APPL PSYCHOL-HLTH WE

I have conceived the assessment study of the gamification part. The rest of the work is shared.

Aubert, A.H., Esculier, F., Lienert, J. (**submitted**). *Testing online Swing weight elicitation for participatory Multi-Criteria Decision Analysis*, DECIS SUPPORT SYST

I have conceived the study, designed and performed the analysis, interpreted the results and was lead author of writing and reviewing.

Aubert, A.H., Medema, W., & Wals, A.E.J. (**2019**). *Towards a framework for designing and assessing game-based approaches for sustainable water governance*, WATER-SUI, 11(4), 869-888.

<https://doi.org/10.3390/w11040869>

I initiated the original idea and message of the paper and was lead author.

Aubert, A. H., & Lienert, J. (**2019**). *Gamified online survey to elicit citizens' preferences and enhance learning for environmental decisions*, ENVIRON MODELL SOFTW, 111, 1-12.

<https://doi.org/10.1016/j.envsoft.2018.09.013>

I have conceived the study, designed and performed the analysis, interpreted the results and was lead author of writing and reviewing.

Aubert, A.H., Bauer, R., Lienert, J. (**2018**). *A review of water-related serious games to specify use in environmental Multi-Criteria Decision Analysis*, ENVIRON MODELL SOFTW, 105, 64-78.

<https://doi.org/10.1016/j.envsoft.2018.03.023>

I have conceived the study, designed and performed the analysis, interpreted the results and was lead author of writing and reviewing.

Rode, M., Wade, A., Cohen, M., Hensley, R., Bowes, M., Kirchner, J., Arhonditsis, G., Jordan, P., Kronvang, B., Halliday, S., Skeffington, R., Rozemeijer, J., **Aubert, A.H.**, Rinke, K., Jomaa, S. (**2016**) *Sensors in the stream: the high-frequency wave of the present*, ENVIRON SCI TECHNOL, 50(19). <http://dx.doi.org/10.1021/acs.est.6b02155>

This paper is the outcome of an International Workshop on temporal high resolution water quality monitoring and analysis, held on 21st-22nd of July 2014 at the Helmholtz Centre for Environmental Research – UFZ Magdeburg (Germany). I was involved in the workshop and in the writing and reviewing of the publication.

Aubert, A.H., Thrun, M.C., Breuer, L., Ultsch A. (**2016**) *Knowledge discovery from high-frequency stream nitrate concentrations: hydrology and biology contributions*, SCI REP, 6, 31536.

<http://dx.doi.org/10.1038/srep31536>

I have developed the goals of this study, initiated the collaboration, interpreted the results and was lead author of writing and reviewing.

Aubert, A.H., Breuer, L. (**2016**) *New seasonal shift in in-stream diurnal nitrate cycles identified by mining high-frequency data*, PLOS ONE, 11(4). <http://dx.doi.org/10.1371/journal.pone.0153138>

I have conceived the study, designed and performed the analysis, interpreted the results and was lead author of writing and reviewing.

Breuer, L., Hiery, N., Kraft, P., Bach, M., **Aubert, A.H.**, Frede, H.-G. (**2015**) *HydroCrowd: a citizen science snapshot to access the spatial control of nitrogen solutes in surface waters*, SCI REP, 5, 16503. <http://dx.doi.org/10.1038/srep16503>

I have written the paper based on results of a Master thesis, while doing this I contributed to improvements in the data analysis. I was involved in the review process.

1.b. Publications resulting from PhD

- Aubert, A.H.**, Gascuel-Oudou, C. and Merot, Ph. (2015) *Motifs temporels de qualité de l'eau, analyse guidée par une décennie de données haute-fréquence mesurées dans un observatoire agro-hydrologique*, HUILLE BLANCHE, 6, 5-11. <http://dx.doi.org/10.1051/lhb/20150062>
- Aubert, A.H.**, Kirchner, J.W., Gascuel-Oudou, C., Faucheux, M., Gruau, G. and Merot, P. (2014) *Fractal water quality fluctuations spanning the periodic table in an intensively farmed watershed*, ENVIRON SCI TECHNOL, 48(2), 930-937. <http://dx.doi.org/10.1021/es403723r>
- Aubert, A.H.**, Tavenard, R., Emonet, R., de Lavenne, A., Malinowski, S., Guyet, T., Quiniou, R., Odobez, J.-M., Merot, P. and Gascuel-Oudou, C. (2013) *Clustering flood events from water quality time-series using Latent Dirichlet Allocation model*, WATER RESOUR RES, 49(12), 8187-8199. <http://dx.doi.org/10.1002/2013WR014086>
- Aubert, A. H.**, Gascuel-Oudou, C., Gruau, G., Akkal, N., Faucheux, M., Grimaldi, C., Hamon, Y., Jaffrezic, A., Lecoz-Boutnik, M., Molenat, J., Petitjean, P., Ruiz, L. and Merot, P. (2013) *Solute transport dynamics in small, shallow groundwater-dominated agricultural catchments: insights from a high-frequency, multisolute 10 yr-long monitoring study*, HYDROL EARTH SYST SC, 17(4), 1379 - 1391. <http://dx.doi.org/10.5194/hess-17-1379-2013>
- Aubert, A. H.**, Gascuel-Oudou, C. and Merot P. (2013) *Annual hysteresis of water quality: A method to analyse the effect of intra- and inter-annual climatic conditions*, J HYDROL, 478, 29-39. <http://dx.doi.org/10.1016/j.jhydrol.2012.11.027>

2. Peer-reviewed books/monographs

None so far.

3. Peer-reviewed conference proceedings

None so far.

4. Contributions to books

Salmon-Monviola, J., **Aubert, A. H.**, Gascuel-Oudou, C., Durand, P., and Ruiz, L. (2012) *Le cycle de l'azote, les flux et concentrations en nitrate des cours d'eau: chroniques passées et projections*, in *Changement climatique dans l'Ouest: évaluation, impacts, perceptions*, edited by P. Merot, P. Dubreuil, D. Delahaye and P. Desnos, pp. 217-228, Presses Universitaires de Rennes, Rennes.

5. Patents and licenses

(MIT licenses, see Section 9)

6. Oral contributions to conferences

Aubert, A.H., *Decision-making: a serious game! (Invited, provisory title)*, In Weekly seminar IEE/EPFL (Lausanne (Switzerland), planned on 07/05/2019)

Aubert, A. H., Lienert, J., *Online weight elicitation: is there really an issue?*, In EURO 2018 (Valencia (Spain), 8–11/07/2018)

Aubert, A. H., Lienert, J., *Preference construction for environmental MCDA: Learning to make informed decisions*, In 1st winter meeting of EURO Working Group on Behavioral OR (EWG-BOR) (poster flash) (Dübendorf (Switzerland), 29–30/01/2018)

Aubert, A.H., *Analyse de décisions et environnement: un jeu d'équilibre(s)*, In Réunion de l'axe de recherche AGILE de l'UMR Inra–Agrocampus Ouest 1069 (Rennes (France), 18/12/2017)

Aubert, A. H., Lienert, J., *Decision-making: a serious game !*, In Eawag Symposium 2017 (Dübendorf (Switzerland), 15/09/2017)

Aubert, A. H., Lienert, J., *Environmental Decision Analysts: Let's be playful!*, In IFORS 2017 (Québec (Canada), 17–21/07/2017)

Aubert, A. H., Lienert, J., *Participatory environmental decision-making: let's play a serious game!*, In Eawag Symposium 2016 (poster flash) (Dübendorf (Switzerland), 15/09/2016)

Aubert, A. H., Lienert, J., *Serious games in environmental MCDA: enhancing preference construction and citizen involvement*, In 28th European Conference on Operational Research (Poznan (Poland), 3–6/07/2016)

Aubert, A. H., Lienert, J., *Constructing preferences: let's play a serious game!*, In Summer School on Behavioural Operational Research (Espoo (Finland), 15–22/05/2016)

Aubert, A.H., Kirchner, J., Tavenard, R., Fovet, O., Merot, Ph. and Gascuel-Oudou, C., *Transdisciplinary approaches to analysing hydro chemical time series: get a new look at data*, In International workshop on temporal high-resolution water quality monitoring and analysis (Magdeburg (Germany), 20–21/07/2014)

Aubert, A.H., Kirchner, J., Faucheux, M., Merot, Ph. and Gascuel-Oudou, C., *Long-term, high-frequency water quality monitoring in an agricultural catchment: insights from spectral analysis*. In EGU General Assembly 2013, session: "HS2.3 - Monitoring Strategies: temporal trends in groundwater and surface water quality and quantity" (Vienna (Austria), 7–12/4/2013)

Aubert, A.H., Mérot, P. and Gascuel-Oudou, C., *Describing annual water quality cycle and its inter-annual variations in agricultural headwater catchment (Kervidy-Naizin, France)*. In 2ème rencontres Réseau des Bassins Versants, session "Observations long terme: acquisitions, traitements et interprétations" (Strasbourg (France), 22–23/09/2011)

Aubert, A.H. *Qualité des eaux et variabilité climatique sur Naizin*, In : Assemblée générale de l'ORE Agrhys (Rennes (France), 22/03/2011)

7. Outreach activities (e.g. public engagement in science, technology and knowledge transfer activities, scientific art performances, etc.)

Stakeholder workshop (moderation), *First FANFAR workshop (Reinforced cooperation to provide Operational flood forecasting and alerts in West Africa)*, Agrhymet, (17–21/09/2018, Niamey (Niger))

Focus group workshop with students (preparation and moderation), *Testing gamified interview tool for Multi-Criteria Decision Analysis 2*, ZHdK Game Design seminar (22/03/2017, Zürich (Switzerland))

Focus group workshop with students (preparation and moderation), *Testing gamified interview tool for Multi-Criteria Decision Analysis*, ZHdK Game Design seminar (23/11/2016, Zürich (Switzerland))

Stakeholder workshop (preparation and moderation), *OCAPI-Wings Paris: Objectifs et options pour la gestion des urine et fèces des nouvelles constructions du Grand Paris*, Colloque ARCEAU (21/07/2016, Paris (France))

Serious game (creation and use), *Travelling with N through the hillslope*, EU Water Day of Maria-Ward-Schule (12/06/2015, Bad Homburg (Germany)).

EGU Education Planet Press (geoscientific news for children) about hydrology (review and translation), [<http://www.egu.eu/education/planet-press/>] (2014–present)

Science talk, selected for Paris regional Fame Lab competition, [<https://www.youtube.com/watch?v=ATPlytXW9M4>] (17/03/2014, Paris (France))

12 columns aimed for a radio diffusion for Michel Cabaret, director of Espace des Sciences, La Science en Question broadcast, France Bleu Armorique radio (10/2013, Rennes (France))

Short documentary, in collaboration with Espace des sciences, *Les nitrates au fil de l'eau*, [<http://www.espace-sciences.org/explorer/videos/les-nitrates-au-fil-de-l-eau>] (09/2012, Rennes (France))

Short documentary, *Augustine et la goutte d'eau*, presented in the Science Festival Sciences en cour[t]s dedicated to PhD student research, [http://www.sciences-encourts.fr/?page_id=1168] (04/2012, Rennes (France))

Animation on water quality and agriculture after creating the activities, for the French National Institute for Agronomic research, at the International Agriculture Fair (SIA) 2012 (02/2012, Paris (France))

Radio talk on agro-hydrology for the Labomatik broadcast, on RadioCampusRennes (Université de Rennes1 radio), [<http://www.radiocampusrennes.fr/labm/podcast-9191>] (02/2012, Rennes (France))

Web journalism for a website about environment in Brittany (GIP Bretagne Environnement, Rennes (France)), writing the section on waste, [<http://www.bretagne-environnement.org/Dechets>] (09/2007–02/2008)

8. General contributions to science (e.g. spokesperson for experiments, leader of expeditions, founder of networks and training programmes, etc.)

Not relevant so far.

9. Other artefacts with documented use (e.g. maps, methods, prototype demos, software, databases, design, arXiv-articles, contributions to big data collaborations, etc.)

Browser based application to elicit weights given to objectives for a wastewater management decision-making in rural Switzerland, available online since 11/2018 (link to be release after the experimental testing). The experimental testing is on-going at the time of writing. Concept: Aubert, A.H.; Development: Sahandabadi A. (Eawag). MIT license.

Browser based gamified application to provide information about objectives for a wastewater management decision-making in rural Switzerland, available online since 10/2018 (link to be release after the experimental testing). The experimental testing is on-going at the time of writing. Concept: Aubert, A.H.; Development: OpinionGames GmbH. MIT license.

Eawag Survey App, available on the App Store (for iOS devices) since 12/**2016**. Prototype of an innovative gamified Multi-Criteria Decision Analysis survey tool for weight elicitation, under focus group testing at the time of writing. The accompanying concept paper is in preparation. Concept: **Aubert, A.H.**; Development: Takomat GmbH.