


THIBAUD CHASSIN, PhD



I am a GIS solution expert passionate about leveraging our collective intelligence and the wisdom of the crowd to resolve real-world challenges. I aspire to empower and mentor, fostering critical thinking and innovative GIS applications for societal challenges. My expertise combines virtual geographic environments and Public Participatory GIS.

PROFESSIONAL EXPERIENCE

Principal Investigator - Professor (Assistant) of GIS and Digital Geographies

University of Graz 

September 2024 - Present

- Apply to competitive Austrian & European Funding (Aim for ERC starting grant in October 2025)
- Supervise & mentor students (currently 3 master students and 1 PhD student starting in June 2025)
- Teach introduction and advanced concepts of GIS and digital geographies at Bachelor and Master level
- Collaborate on international academic projects

GIS Developer (Back-End) / Geo-data Expert

Urbio  ranked *1st proptech startup in Switzerland 2023*

October 2022 - Present

- Team member of a startup in urban energy planning creating an energy digital twin of Europe
- Designed and implemented a vector tile solution to explore 6M+ buildings with 50+ energy criteria
- Established a flexible geocoding solution for unstructured address data
- Set up geo-data pipelines ingesting 3D data (citygml) in an extensive geospatial data model
- Key actor in discussion and decision around geo-data structure and visualization
- Drove projects in a flat management environment


GIS Teaching Assistant

HEIG-VD / EPFL 

October 2017 - December 2022

- Principal TA in GIS courses in Bachelor 2nd and 3rd year (outlined exercises and exams, organized student practical work, marked exams)
- TA for a summer school on BIM and GeoBIM (helped students during exercises)
- Composed the syllabus of a new Master course "Development of advanced GIS tools" (built teaching materials, taught classes in-presence and online, and supervised student projects)
- Supervised and mentored Bachelor final year GIS projects
- Contributed to the development of international web GIS standards through the OGC Innovative Program

GIS Software Engineer

Capgemini 

February 2016 - September 2017


- Proactively maintained and enhanced geo-web applications, adapting to specific sectors like mail delivery, water management, and railway systems, with a focus on automation and optimization



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EDUCATION


Ph.D. in 3D Participatory E-Planning

LASIG, EPFL 

2017 - 2022

- Combined virtual geographic environment and Public Participatory GIS to enhance urban participatory processes in Switzerland
- Designed and managed experiments with 100+ participants
- Applied AI models to analyze qualitative and quantitative data
- Shared my academic work with peers through 15 international scientific conferences and 11 first-author publications
- Contributed to discussions with city officials regarding urban participatory projects
- Assisted in the writing of national grant applications (reviewed grant applications)
- Initiated and led international collaboration

Master and Bachelor Degree in Geomatic Sciences

Sorbonne University 

2008 - 2015

LANGUAGES

- French (Native)
- English (Full Professional Proficiency)
- German (notions, currently learning)

SKILLS & PROFICIENCIES

- ArcGIS / QGIS / FME environments
- Geo-data management and data model (SQL - postGIS)
- GIS web development (vue.js, mapbox, geo-django)
- Geo-data processing and analysis (python and jupyter notebook)
- Employ pre-trained AI models, LLM prompting
- Industry and academic standards, agile methodology, flat management

AWARD

2019, **Computers & Geosciences Research Scholarships** co-sponsored by Elsevier and the International Association for Mathematical Geosciences (IAMG)



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PUBLICATIONS [1]

MONOGRAPHS THESIS

- [1] **Chassin T.** The Future of Civic Technologies for the Involvement of Citizens in Urban Planning: 3D Urban Participatory e-Planning in the Spotlight. EPFL, Lausanne, CH. doi: [10.5075/epfl-thesis-10140](https://doi.org/10.5075/epfl-thesis-10140), 2022.

PEER-REVIEWED FULL PAPERS

- [2] **Chassin T.**, Ingensand J., Joerin F. Media Coverage of 3D Visual Tools Used in Urban Participatory Planning, International Journal of E-Planning Research (IJEPR), 12(1) doi: [10.4018/IJEPR.318085](https://doi.org/10.4018/IJEPR.318085), 2023.
- [3] **Chassin T.**, and Ingensand J.: E-guerrilla 3D participation: Approach, implementation, and usability study. Front. Virtual Real. 3:1054252. doi: [10.3389/frvir.2022.1054252](https://doi.org/10.3389/frvir.2022.1054252), 2022.
- [4] **Chassin, T.**, Ingensand, J., Touya, G., and Christophe, S.: Experiencing Virtual Geographic Environment in Urban 3D Participatory E-Planning: A User Perspective, Landscape and Urban Planning, 224(104432) doi: [10.1016/j.landurbplan.2022.104432](https://doi.org/10.1016/j.landurbplan.2022.104432), 2022.
- [5] **Chassin T.**, Cherqui A., Ingensand J., and Joerin F.: Impact of Digital and Non-Digital Urban Participatory Approaches on Public Access Conditions: An Evaluation Framework. ISPRS International Journal of Geo-Information; 10(8):563. doi: [10.3390/ijgi10080563](https://doi.org/10.3390/ijgi10080563), 2021.
- [6] **Chassin, T.**, Ingensand, J., Touya, G., and Christophe, S.: How do users interact with Virtual Geographic Environments? Users' behavior evaluation in urban participatory planning, Proc. Int. Cartogr. Assoc., 4, 19, doi: [10.5194/ica-proc-4-19-2021](https://doi.org/10.5194/ica-proc-4-19-2021), 2021.
- [7] **Chassin, T.**, Ingensand, J., Lotfian, M., Ertz, O., and Joerin, F.: Challenges in creating a 3D participatory platform for urban development, Adv. Cartogr. GIScience Int. Cartogr. Assoc., 1, 3, doi: [10.5194/ica-adv-1-3-2019](https://doi.org/10.5194/ica-adv-1-3-2019), 2019.

BOOK CHAPTER

- [8] **Chassin T.** Introduction to Interactive 3D e-Participatory Methods through the Lens of Urban Planning Projects. In The Handbook of Teaching Qualitative and Mixed Research Methods: A Step-by-Step Guide for Instructors, edited by A. Ruth, A. Wutich, and H.R. Bernard. Oxford, England: Routledge, ISBN: 9781032100272, 2024.



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PUBLICATIONS [2]

ABSTRACT-REVIEWED FULL PAPERS, ABSTRACTS, SHORT PAPERS

- [9] **Chassin, T.** and Ingensand, J.: Are city features influencing the behavior of photographers? An analysis of geo-referenced photos shooting orientation, Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLIII-B4-2021, 353–359, doi: [10.5194/isprs-archives-XLIII-B4-2021-353-2021](https://doi.org/10.5194/isprs-archives-XLIII-B4-2021-353-2021), 2021.
- [10] **Chassin, T.**, Lotfian, M., Ingensand, J., and Joerin, F.: A categorization of applied participatory 3d platforms in urban design, 5th International Conference Urban e-Planning, 2021.
- [11] **Chassin, T.**, Ingensand, J., Lotfian, M., Ertz, O., and Joerin, F.: Action-research: Assessment of using a 3D participatory platform for reviewing a Swiss city urban development plan, ECSA Conference, 2020.
- [12] Lotfian, M., Ingensand, J., Ertz, O., Oulevay, S., and **Chassin, T.**: Auto-filtering validation in citizen science biodiversity monitoring: a case study, Proc. Int. Cartogr. Assoc., 2, 78, doi: [10.5194/ica-proc-2-78-2019](https://doi.org/10.5194/ica-proc-2-78-2019), 2019.
- [13] Ingensand, J., Nappez, M., Produit, T., and **Chassin, T.**: Automated reconstruction of 3d buildings in historic city centers from lidar data and 2d building footprints, ISPRS Ann. Photogramm. Remote Sens. Spatial Inf. Sci., IV-4/W6, 19–23, doi: [10.5194/isprs-annals-IV-4-W6-19-2018](https://doi.org/10.5194/isprs-annals-IV-4-W6-19-2018), 2018.
- [14] **Chassin T.**, Ingensand J., and Joerin F., 2018. Towards the use of a 3D virtual globe to support public participatory decision making : short papers of the 21th AGILE Conference on Geographic Information Science. Lund University 12-15 June 2018, Lund, Sweden. ISBN 978-3-319-78208-9, 2018.
- [15] **Chassin T.**, Ingensand J., and Joerin F. Towards an open 3D participatory citizen debate. PeerJ Preprints 6:e27207v1 doi: [10.7287/peerj.preprints.27207v1](https://doi.org/10.7287/peerj.preprints.27207v1), 2018.
- [16] Touya, G. and **Chassin, T.**: RJMCMC based Text Placement to Optimize Label Placement and Quantity, Proc. Int. Cartogr. Assoc., 1, 116, doi: [10.5194/ica-proc-1-116-2018](https://doi.org/10.5194/ica-proc-1-116-2018), 2018.



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RESEARCH ACTIVITIES [1]

In my academic pursuits, I aimed to grow a rich GIS interdisciplinary network, that I leveraged through several projects. I consider my research investigations to be rooted in current societal challenges focused on PPGIS and easily transferable to both practitioners and fellow experts. Consequently, I am committed to publishing all my results and materials in open access to ensure widespread availability and impact. The following is a selected list of the research projects I contributed:

Shaping 3D virtual environments following users' backgrounds and preferences

- Funding: Computers & Geosciences Research Scholarships
- Main Goals: Investigation of the impact of virtual geographic environments' level of detail, style, and interactivity on user behaviors in the context of urban representation
- Deliverables: two publications ([4] & [6]), one conference ([d]), abstract published in the IAMG newsletter (12.2020)
- Findings: Identified parameters to ease the cognitive load conveyed by 3D GIS environments and to help users to be more accurate while interacting with 3D tools
- Collaborators: Guillaume Touya (specialist in user cognition and setting up user experiments) and Sidonie Christophe (specialist in 3D representation and user cognition) from IGN
- Role: I led the entire project: scholarship application, coordinated the international collaboration, designed and implemented the experiment, recruited the participants (N=100+), and wrote the publications.

Applied 3D PPGIS in e-participatory planning

- Funding: Personal Ph.D. found
- Main Goals: Apply 3D PPGIS tools to real-world urban participatory development, evaluate the impact of these digital approaches on the projects
- Deliverables: four publications ([5], [7], [10] & [11]), three conferences ([b], [c] & [e]), two 3D PPGIS platform prototypes developed, several discussions with Swiss cities to integrate the prototypes in applied projects
- Findings: Introduced a framework focused on citizens' access to evaluate participatory approaches (digital and in-person), pinpointed the main challenges in adopting interactive 3D representations in urban participatory approaches
- Collaborators: Adeline Cherqui (expert in social sciences), Florent Joerin (specialist in participatory planning)
- Role: I designed and implemented the prototypes, approached municipalities, participated in the discussions with the municipalities' officials, and wrote the publications.



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PREVIOUS RESEARCH PROJECTS [2]

OGC innovation program (Testbed 13 & 14)

- Funding: HEIG-VD participation in OGC activities
- Main Goals: Outline a draft of an open standard for vector tiling, and develop additional portrayal ontologies to accommodate more complex symbolization
- Deliverables: Provided recommendations for both thematics, co-wrote two engineering reports in collaboration with all the participants
- Collaborators: OGC partner (including Mapbox, GeoSolutions, and University of Calgary among others), Olivier Ertz (Chair of the Symbology Encoding working group)
- Role: Participation in general discussions, coordination with all partners, technical exploration of vector tile solutions and styling geo-solutions, technical writing of parts of the reports, participated in official events

