

The Seminars on “Information Technology Outlook” – PhD Programme in Computer Science and Mathematics



Aline Menin

Laboratory I3S / INRIA Méditerranée  
SPARKS/wimmics INRIA team  
Université Côte d'Azur  
Sophia Antipolis, France  
<https://amenin.gitlab.io>



**Monday November 20, 2023**  
**14:00-15:00**



**Sala Consiglio**  
**Dipartimento di Informatica**



**<https://shorturl.at/cmHJL>**

## Visualization of spatio-temporal data: challenges for user perception and representation

**Summary:** The study of spatio-temporal data (i.e. data described in terms of geospatial and temporal information) is essential to support decision-making processes in the context of public policy initiatives such as transportation infrastructure, sustainable development, pollution reduction, etc. In this context, geo-visualization brings together methods and tools from information visualization and cartography, which plays a decisive role in the design and development of powerful tools for the analysis of geo-spatial data. Nonetheless, the nature of the data hinders the design process of efficient visualization solutions. Through illustrative case studies, we will discuss the importance of representing spatio-temporal data, the challenges and perspectives to represent all the dimensions of the data (space, time and objects) and the associated attributes in such a way as to effectively communicate the knowledge derived from them, while respecting the natural properties of the data (the geographical layout of places and the order of time units).

**Short bio:** Aline Menin is an associate professor at Côte d'Azur University and a tenured researcher at the SPARKS/Wimmics team of the I3S laboratory, France. She has a Ph.D. in Computer Science by the Univ. Grenoble Alpes, France, where she designed and developed a visualization framework to assist domain experts in extracting knowledge from individual mobility data. Her research interests are (Geo-) Visualization, Human-Computer Interaction, and User-Centered Design and Evaluation.