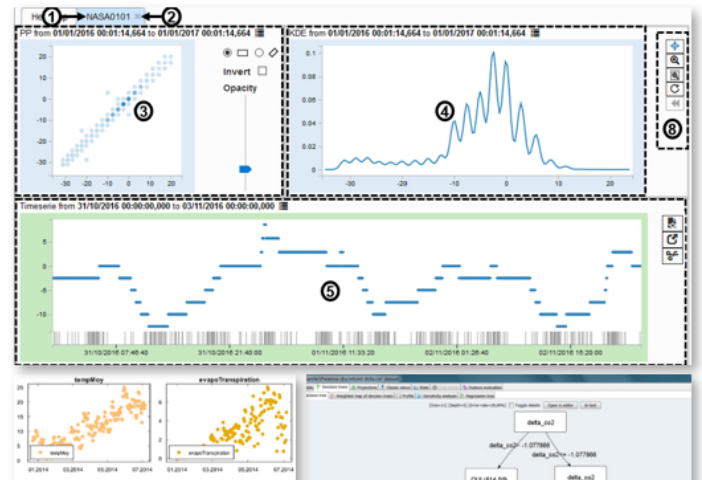


Data Processing and Statistics



The Data Processing and Statistics group undertakes applied research in computer science with a focus on Data Analytics, Artificial Intelligence and Statistics. The overall objective of the research group is to support the digital and the ecological transition of our society.

Research challenges

The activities are organised around the Artificial Intelligence and Data Processing technology line. This technology line is composed of software modules implementing methods and algorithms continuously improved by our team of experts as a result of our research activities. In particular, we are active in:

- Supporting the selection, the parameterization, and the integration of data processing methods, especially machine learning and statistics approaches, for solving real world problems
- Combining computer-based analysis and human input to build efficient knowledge models
- Making data analytics and visualization fast and scalable (e.g. using distributed computing approaches)
- Data provenance research to guarantee reproducible workflow for scientific data production and analysis.

When required the technology line is combined with the Geocomputation, Visualisation and Augmented and Virtual Reality technology lines, developed and managed by our sister research Group Interactive Visualisation and Geocomputation of the ENVINFO Unit.

Researchers have a diversified portfolio of projects funded under various competitive calls at national and international level: EU H2020, ESA, and FNR. We are also involved in collaborative projects with the industry. Due to the interdisciplinary nature of their projects, staff members have developed a solid experience in working with people with various backgrounds from business and academia.

They have also developed a specific expertise in the integration of software components issued from the Tech Lines into interactive web-based platforms targeting the specific application fields below.

Application fields

Space-related applications. Biotechnologies, Smart Agriculture. Environmental Crisis Management, Energy sector, Water sector, Biodiversity, Sustainability and Circular Economy, Security and Defence, etc.

Equipment

Researchers have access to the LIST High Performance Computing (HPC) when we deal with computational intensive problems. At the end of 2018, they will also have access to the new large visualisation wall managed by the Interactive Visualisation and Geocomputation research group.

Partners

ADICONSUM (IT), ARTTIC (FR), Centre National d'Etudes Spatiales - CNES (FR), Deutsches Institut für Normung E.V., Ecole Nationale Supérieure de la Police (FR), E.On (HU), European Space Agency (ESA), Goodyear (LU), Fraunhofer (DE), SAP (DE), German Police University (DE), International Security Competence Centre (AT), Institut de Seguretat publica de Catalunya (ES), KU Leuven (BE), Technisches Hilfswerk (DE), University of Luxembourg (LU), University of Lorraine (FR), University of Genève (CH), University of Louvain (BE), University of Manchester (UK), University of Salzburg (AT), VITO (BE), von Karman Institute for Fluid Dynamics (BE).

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