



WORKSHOP AND ANNUAL MEETING
SPATIAL INFORMATION IN THE ERA OF DATA SCIENCE:
CHALLENGES AND PRACTICAL SOLUTIONS

NAPOLI 316 DECEMBER 2018



International Federation of Surveyors
Fédération Internationale des Géomètres
Internationale Vereinigung der Vermessungsingenieure
FIG COMMISSION 3
Spatial Information Management

Dear Colleagues and Friends,

Please allow me to invite you to the Annual Workshop and Meeting of FIG Commission 3, organized in joint with the Consiglio Nazionale Geometri e Geometri Laureati, the Collegio dei Geometri e Geometri Laureati di Napoli and the EGoS General Assembly, 3rd to 6th December 2018, Naples, Italy.

The place will be the ideal opportunity to explore and discuss the latest progress and research on enhancing spatial data networks, ensure user trust and boost the digital transformation process on

**“Spatial Information in the Era of Data Science:
Challenges and Practical Solutions”**

Roma, 11.10.2018

Enrico Rispoli
FIG Commission 3 Chair



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Participants and Focus

Data can be cataloged by volume, services and variety.

Big Data involves unprecedented data volumes, such as those available from information systems, sensors, business transactions, social media, online publications and so on.

Data is available in many forms and in real time on ubiquitous and pervasive technologies, such as smartphone apps. The variety of data, given the multitude of sources that can be available on a single topic, makes it difficult to integrate information into a single result that can be sure.

The techniques for dealing with the volume of data are constantly expanding with tried and tested methods, but the requirements for adequate management and services, and the variety of sources raise new problems. Services and variety imply the use of ever more complex processes and algorithms, dealing with technical, interoperability, applications, user-requirements, open source, etc. to be handled. They make it difficult to integrate information into a result that you can rely on. A rich background of geographical knowledge will always be essential for an effective management of information systems in general, and Geographic Information Systems in particular.

Geographic Information Systems (GIS) are designed to correlate data concerning the territory around the planet; make this information easy to view, analyze and share. The use of Big Data in this field has become so widespread as to constitute a modern science that, while offering new and unique opportunities, pushes for incessant research, involves challenges and raises many technical, social and educational questions that require increasingly updated solutions.

The workshop aims to put the evolution of recent Data Science themes related to spatial information in the spotlight, to discuss how these are translated to new ideas and contributions to projects, develop technological solutions and evaluate their effectiveness.

The workshop will also investigate new exploitation, development and use methodologies of VGI derived information to various geographic and social scientific disciplines that make use of mapping, GIS, SIM and SDI systems and procedures.

Whether you represent a surveyor in the public or private sector, a scholar or university representative, investigating spatial information strategies, you are welcome to take part in the workshop, present and publish your work in a highly qualified field.

The best paper will get international recognition, and will be published in the FIG network communication.

Special support will be offered to Young Surveyors presenting their work who are interested in participating in the workshop.

You should not miss the 2018 FIG Commission 3 Workshop and Meeting edition.



Commission 3 Topics

Within the main topic of the workshop, a larger number of other topics of interest related to SDI, SIM, VGI and crowdsourcing will be discussed. Topics will include, but are not limited to:

- SDI at all levels – local, regional, national and global;
- SIM challenges – natural and environmental risk prevention and disaster management, mitigation, waste management, etc.;
- VGI collection, dissemination, analysis, applications, maintenance and visualization;
- e-Governance and SDI in supporting decision making – theory, applications and best practice;
- Integration of SDIs – cadastre, land use, utilities, environment, socio-economic;
- SDI interoperability – standards, technical tools, metadata, portals;
- 3D/4D Cadastre;
- Utilization of VGI and Crowdsourcing with SDI, SIM and environmental information;
- 2D/3D/4D geospatial models, algorithms, visualization, standards and applications;
- Web and mobile GIS – challenges, services and real-time capabilities;
- Business models and SDI, public-private partnerships and economic aspect.

Paper submission for Commissions 3

It is important that all submitted papers focus on the workshop theme and topics. Other related topics can be proposed, but it is suggested to contact the organizing committee beforehand. All papers are to be submitted through the EasyChair system (details below). All registered delegates can present a single presentation/paper/poster only. Please use the FIG formatting for preparing your manuscript. Three channels for submitting papers are available:

Full paper refereed channel

Full paper submission deadline:	20/10/2018
Notification of acceptance for <u>presentation</u> :	06/11/2018
Notification of acceptance through the peer review:	20/11/2018
Final revised paper submission deadline:	26/11/2018

Papers submitted in this channel (approximately 6000 words in English) must present significant scientific results. Manuscripts must describe original work that has neither been published before, nor is currently under review elsewhere.

High-quality accepted submissions will be considered for publication in an international scientific journal.



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Extended abstract / Poster refereed channel

Extended abstract or poster submission deadline: 20/10/2018
Notification of acceptance for presentation: 06/11/2018
Final revised extended abstract submission deadline: 26/11/2018

The extended abstract should be 350 to 500 words in length (in English) describing the objectives, results, conclusions and significance of your work (relevant artwork can be embedded). Posters can also be presented during the workshop (instead of presentation) based on the acceptance of the extended abstract.

Submit your paper to

FIG paper format can be downloaded from the workshop website.

Please submit papers through the EasyChair Conference Management System, via this link:

<https://easychair.org/conferences/?conf=fig32018>

For more information please visit the conference website:

<http://com3fig.wixsite.com/fig-commission3-2018>





LOCATION

Naples is truly a city that pulsates with energy, animated by the noise of the markets and populated by picturesque and playful characters, always ready to welcome visitors with a smile and good humor.



Naples is one of the largest and most enchanting cities of art in the Mediterranean.

The city dominates the homonymous gulf, which extends from the Sorrento peninsula to the volcanic area of the Campi Flegrei and offers a very impressive view, with the imposing volcano Vesuvius and, in the distance, three magnificent islands - Capri, Ischia and Procida - that look like little jewels born of the sea. In addition to its beautiful landscapes, Naples owes its well-deserved fame to the charm of a historic center that tells 2500 years of history and was included in 1995 in the UNESCO World Heritage List.

Naples is a city where historical and archaeological stratifications create unique and enchanting itineraries of visits. Not much remains of "Partenope": the Greek city of the origins can be traced, for example, in the Greek walls that pass through via Mezzocannone. The Roman ruins, on the other hand, are more numerous: among the many is located in the center the archaeological area of San Lorenzo Maggiore, which hosts part of the Greek agora of the fifth century. B.C. and many Roman finds from an era in which the city was already a 'metropolis'.

The intense cultural life of this capital of art unfolds, as well as in museums like the Madre, even along the cafes of Galleria Umberto I and its clubs are teeming with life even in the evening, when Naples becomes the city of university students, musicians, pizza and good company.