

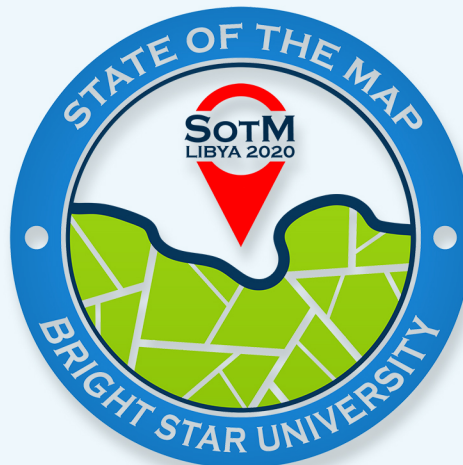


Bright Star University EL Brega and OpenStreetMap Libya



6th International Conference

Smart Cities and State of the Map Libya 2020



SotM Libya

September 2nd & 3rd 2020



المجعية الليبية للاستشعار عن بُعد ونظم المعلومات الجغرافية
THE LIBYAN SOCIETY FOR REMOTE SENSING AND
GEOGRAPHIC INFORMATION SYSTEMS



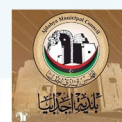
الممدار
الجدید



شركة سرات
لإنتاج وتعميم النفط والغاز



المؤسسة الوطنية للنفط
National Oil Corporation



هيئة أبحاث العلوم الطبيعية والتكنولوجيا
Authority of Natural Science Research and Technology

Bright Star University
EL Brega & OpenStreetMap Libya
6th International Conference
Smart Cities and State of the Map
Libya 2020

Conference Goals

1. Animate the role of the local Universities in the development and building bridges of local and international cooperation, enable researchers to participate and exchange experiences for a better flow of knowledge.
2. Study the state of the map of spatial data and geographic information systems in Libya.
3. Enhance the level of social awareness about the importance of developing the base map of Libya on the OpenStreetMap platform and the laws regulating its work.
4. Introduce the concept of smart cities and digital transformation as tools for sustainable development.
5. Highlight the importance of innovation in the field of digital technologies to support and develop smart cities through automation, robotics, and artificial intelligence applications.

Conference Themes

1. The Smart city

- 1.1 Educational programs on sustainable development.
- 1.2 The role of Information and Communications Technology, Internet of things, Big Data, and cloud computing in developing digital systems and smart cities to keep pace with the era of the Fourth Industrial Revolution and digital transformation.
- 1.3 Enable intelligent digital systems in health care, education, transportation, and traffic management, telecommunications, housing, utilities and infrastructure, security and safety, the environmental and Economic policies for the implementation of the smart city concept.
- 1.4 Smart City Technology: Sensors, Integrated systems, and applications, modeling and prototyping, Robotics and autonomous transportation

2. Energy and Environment

- 2.1 Challenges in renewable, green energies, and the impacts of global warming and climate change on Libya.
- 2.2 Modeling the resources and ecosystems of cities.
- 2.3 Challenges of pollution, waste management, air quality, water, urban soils, and biodiversity.

3. Urban planning

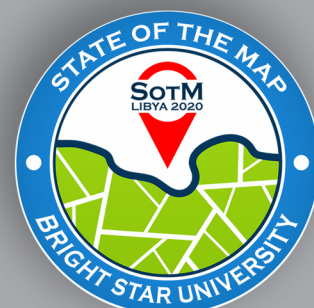
- 3.1 New generations of urban plans to achieve sustainable development and regenerate of Libyan Cities.
- 3.2 Societal studies, demographic growth vs. the phenomenon of slums spread, and the expansion of Towns and urban areas out of municipal plans.
- 3.3 Urban Planning Support Systems and city management tools: Digital Twins, 3D City Models, and city Portals.

4. Citizens and Government, Administration and Economy

- 4.1 Collective Intelligence, Social Awareness, and Community Connectivity for the Public Benefit and its Role in the development of smart cities.
- 4.2 E-government, governance in the management of public institutions and municipalities, transparency, and quality of services across unified digital platforms.
- 4.3 E-commerce, smart banking systems, and the sustainability of Libyan economic systems.
- 4.4 Digital systems in the field of national security, public safety, risk management, disasters, epidemics, and smart healthcare systems.
- 4.5 Sustainable development against the necessity of achieving stability and social peace and addressing Post-war impacts and eliminating war remnants.
- 4.6 Spatial and sustainable development based on Regional and National Innovation Systems.
- 4.7 The impact of digital transformation on the labor market and unemployment rates in Libya.

5. Architectural, Engineering and Construction

- 5.1. The challenges of reconstruction in Libya, the housing crisis, utilities, and public services.
- 5.2. Innovative building materials, methods, and techniques, construction waste recycling, engineering tests, specifications, and standardization.



- 5.3. BIM Building Information Modeling, Modular construction and Building, Environmental, and Ecological Design.
- 5.4. Smart Homes and Building performance.
- 5.5. Asset, facility and utility management, infrastructure, and City Information Modeling CIM.
- 5.6. Cloud computing in support of smart management of engineering and construction projects.
- 5.7. Urban Mobility: traffic and transportation Management.
- 5.8. Physical urban systems and Underground Space Management.

6. OpenStreetMap OSM

- 6.1 OSM License compliance with Libyan regulations.
- 6.2 OSM data model and quality.
- 6.3 Education in OSM.
- 6.4 OSM Humanitarian and scientific context: Applications, and use cases.

7. Mapping

- 7.1 Digital Spatial Infrastructure: the Libyan Geo-referencing systems, map projections, and base maps.
- 7.2 The participatory mapping activities with the absence of postal addressing & location data in Libya.
- 7.3 Volunteered Geospatial Information VGI.
- 7.4 Unmanned Aerial Vehicles (UAVs) for surveying, photogrammetry, and mapping activities.
- 7.5 3D mapping and surface scanning applications with Light Detection and Ranging LiDAR.
- 7.6 Ground Penetrating Radar GPR for subsurface and underground modeling.
- 7.7 Automated, semantic, interactive and dynamic maps of cities, historical and archaeological sites, and Digital Humanities DH projects.

8. Software Development

- 8.1 Open data and open source and the role of cloud computing in data flow and exchange.
- 8.2 Develop systems, applications, and tools for creating and supporting city maps and digital models using: JOSM - Python - Geocoding - Java - JSON - CityGML - GIS into Revit using Dynamo - IFC - QGIS - GeoServer.
- 8.3 Navigation, GPS software and applications development.
- 8.4 Artificial Intelligence and Deep Learning in Automated and Smart City Mapping.
- 8.5 Interoperability, Geospatial, and Cloud Computing.
- 8.6 OSM and digital games, virtual and augmented reality.
- 8.7 The role of Open Geospatial Consortium OGC in the development of standards.
- 8.8 App Development for portable digital devices and smartphones.
- 8.9 Web programming for GIS applications.

Participation

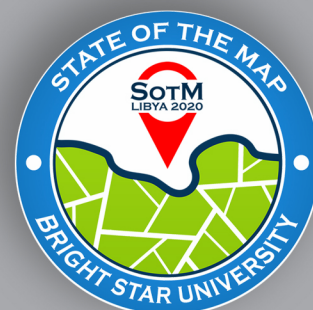
Participants are encouraged to submit their work to SotM@bsu.edu.ly in one or more of the following options:

- 1. Keynote speakers and visual presentations (30 min talk).
- 2. Complete research paper.
- 3. Poster of scientific research or technical project.
- 4. Proposal for a workshop.
- 5. Participation in the competition of the Libyan innovator for automation, artificial intelligence, smart digital systems, robotics, and the Internet of things and their applications in developing smart cities.

- check conditions on the conference website: <https://sotm.bsu.edu.ly/>

Participation Fees

Due to the Libyan situation, we do encourage and assist all participants, with **no** conference registration **fees**, and all participations are **free of charge**.



Participation Conditions

- Present new findings and scientific contribution, respect deadlines for submission, and use of custom conference paper templates.
- Works must be conducted according to the requirements and methodology of scientific research, academic writing, respect of intellectual property, and copyrights.
- No part or all of the work has never been submitted or published during another conference and was not previously published by any means in any form.

Deadlines

- | | |
|---|-------------------|
| ● The submission of abstracts | 10/06/2020 |
| ● Notification of acceptance | 20/06/2020 |
| ● Full paper submission | 20/07/2020 |
| ● Submission of a final revised version | 10/08/2020 |

Activities

- Competition of the Libyan innovator for automation, artificial intelligence, smart digital systems, robotics, and the Internet of things and their applications in developing smart cities.
- Exhibition of Digital Technologies for Remote Sensing, Geographic Information Systems, Architecture Engineering, Construction, and Smart City Development Systems.
- Workshop: about the use of the OSM Platform and its role in supporting the Internet of Things and the development of smart cities.
- Workshop about Distance Education: Necessity and Challenges.
- OSM Annual Award: delivered to the top ten contributors to the development of the OpenStreetMap Libya

Note: Telepresence is available to facilitate participation.

- **To contact the preparatory committee:**

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- **To communicate with the scientific committee:**

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- **To Contact the OpenStreetMap Libyan Working Group:**
OSMLibya@bsu.edu.ly

- **To communicate with the committee of the competition of Libyan innovator for automation, artificial intelligence, smart digital systems, robotics, and the Internet of things and their applications in developing smart cities.**

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