



UN-GGIM

ACADEMIC NETWORK

Global Geospatial Information Management (UN-GGIM)

ANNUAL PROGRESS REPORT

June 2017 – June 2018

For

8th UN-GGIM Expert Committee Meeting

New York

June 2018

MESSAGE FROM CHAIR

As the Chair of the UN-GGIM Academic Network and on behalf of the Network, I am delighted to present this report to the 8th UN-GGIM Committee of Experts meeting in New York, August 2018. Since the official establishment of the Academic Network at the 6th UN-GGIM Committee of Expert, August 2016 in New York, and in line with its working plan, and the approval of its Terms of References (ToR) at the UN-GGIM Extended Bureau meeting in New York, December 2016, the Network has been very active with series of contributions and participation at several conferences and events, and actively promoted the Network at different international events for engaging new members.

We are enthusiastic to report to the 8th UN-GGIM Expert Committee Meeting that during the last year, from June 2017 to June 2018, significant progress has been achieved in the consolidation of the Academic Network as an active body supportive of the main goals of UN-GGIM.

The main achievements of the Academic Network in the past years are:

- The Academic Network participate actively in all key meetings of UN-GGIM, including in high-level and expert meetings, regional congresses and working group sessions;
- We expanded our membership to 30 universities and research centres. We have representation in all continents and with the significant presence in those countries known for their research in relation to geospatial and land matters;
- Technical review of reports and technical documents produced by the UN-GGIM secretary;
- Conduction of a successful International Forum as part of the 7th UN-GGIM Expert Committee Meeting in 2017 in NY, with a strategic theme and focus in line with the need of UN-GGIM.

In cooperation with all members of the Advisory Board, the Network has created an ambition Work Plan for the next two years. The goal of the plan is to:

- Define and develop a set of research projects in line with the UN-GGIM major activities that academic network members and members from the wider UN-GGIM communities can participate and contribute;
- Organize parallel academic events at critical UN-GGIM forums and meetings;
- Expanding its member base in all regions;
- Participate actively in technical groups, regional groups and sub-committees on UN-GGIM;
- Build and populate an online registry of technical capacities across the members of the Network;
- Connect activities with other UN-GGIM networks and social organizations;
- Provide technical support to UN-GGIM secretary with a review of technical documents as required.

For all events, expected outputs, outcomes, key performance indicators are provided to facilitate tracking progress. We hope this Action Plan will inspire members to participate actively in the Network and ensure that we meet our primary goal to support UN-GGIM in supporting countries to have access to better spatial data and systems.

Prof. Abbas Rajabifard
Chair, UN-GGIM Academic Network
June 2018

WORKING PLAN 2018 – 2019

This section describes the plan of actions proposed for the UN-GGIM Academic Network for 2018 and 2019. A formal body constituted as part of the United Nations Global Geospatial Information Management (UN-GGIM). The Academic Network is the strategic knowledge, research and training arm of it.

OVERALL STRATEGIC APPROACH

According to its Terms of references, the Academic Network of the UN-GGIM has the functions of:

- Provide academic counsel and guidance to UN-GGIM concerning strategic knowledge, research, education and training and to serve as a strategic academic arm for UN-GGIM and its related organizations and affiliated members in achieving their visions and goals.
- Provide a forum for coordination and dialogue among academics and researchers from the geospatial information management community with a view to advance activities related to the administration, management, and use of geospatial information, and to identify and respond to challenges and opportunities in which UN-GGIM and related members can achieve their visions.
- Provide a platform that the needs of member countries for geospatial information data, technology, training and education, and the information of the capacities of academic network members are shared, so that geospatial data, technology, training and education can be widely used through this platform.
- To advise and support geospatial information and land administration training and capacity building programs of the UN-GGIM.
- To offer advice in response to UN-GGIM questions, identify and inform UN-GGIM concerning academic knowledge gaps or problems that may exist or arise, and propose initiatives as appropriate to address such questions and challenges.
- Bring to the attention of UN-GGIM and its regional organizations state-of-the-art research and academic trends on global geospatial information, or write white papers on any of related topics, and also offer training/ education in those fields.
- Create a communication platform for member countries to bring to the attention of the Academic Network fundamental problems and areas of research that are of high interest to local, national and regional organizations.
- Address governance, data management, institutional, technology adoption and sustainability issues related to the management of geospatial information.
- Undertake work that is able to contribute to the Sustainable Development Goals of the UN and other areas as appropriate including, access to land, property rights, ownership, land degradation, rapid urbanization, and climate change, in coordination with other expert entities.
- Undertake activities that foster collaboration between universities and research groups at an international level, including to identify and address common research topics and overarching trends.
- Promote and encourage close collaboration between Universities and their national geospatial counterparts.
- Encourage the development and sharing of geospatial analytics.

Principles for Action

Considering this function and acknowledging that as a voluntary organization requires delicate management of the energy requested by its members, the following principles have been developed for conducting all activities during the next two years:

- Use of electronic resources as possible and limit the need for travel as essential for members to participate.
- Encourage active participation of all members in the activities with coordination from the advisory board and the Executive Committee.
- Work in cooperation with subsidiary networks and other stakeholders to ensure knowledge and advice is adequate to different cultures and language barriers are reduced.

Strategies for Success

Considering the opportunities offered by the ability of the Academic Network to cooperate directly with UN-GGIM in its mission, initiatives for the next two years would need to be achieved based on overarching strategies that enable better cooperation with other UN-GGIM internal networks as well as external stakeholders.

Therefore, for all initiatives of the Network, the following Strategies are proposed:

- To ensure participation and reduce duplication, communicate before, during and after actions and activities of the Network with its members as well as key liaison officers of UN.
- Update the website frequently with information relevant to the network and use actively Twitter and LinkedIn to publicise progress on all initiatives and future activities.
- Seek cooperation with similar initiatives in other regional or global bodies such as FIG, FAO and UN-Habitat.
- When possible, find local or regional activities to ensure initiatives of the Network have a practical result and produce a change to countries.

INITIATIVES

Six initiatives have been identified to be the focus of the Academic Network. For each initiative key performance indicators and a target for them have been identified.

Organise Parallel Academic Events at Key UN-GGIM Forums and Meetings

Considering the need to build capacity among UN-GGIM member countries, this initiative sees to allow members of the Academic Network to provide a discussion space in where theoretical and practical knowledge is shared between practitioners in government, academia and the private sector.

Parallel events should be coordinated with UN-GGIM and local organizer to ensure appropriate integration with the agenda and relevance of the topic. When possible, parallel events should be accessible by web seminar and all presentations uploaded to the Network's website.

KPI: Number of events a year with parallel academic events

Target: 2 events a year for 2018 and 4 events in 2019

Expanding Member Base in All Regions

It is fundamental the expansion of the network across the globe to ensure appropriate support is provided to a large number of member countries of UN-GGIM. In this, there should be a good balance of members across regions, particularly in developing countries in where the need to improve geospatial information management is vital. It is aimed that the network will have 200 members by the end of 2019.

To increase members, the following activities will be conducted:

- Promotion of the network in all parallel events.
- Members to promote the Network during their own participation at professional events.
- Direct contact of Advisory Board members to local potential members.
- Mail out invitations to events and to join the network.

KPI: New members per year

Target: 70 new members in 2018 and 100 new members in 2019.

Participate Actively in Technical Groups, Regional Groups and Sub-committees on UN-GGIM

Most of the technical activities of UN-GGIM are developed at the regional groups and sub-committee level. It is fundamental that members of the Academic Network participate actively in these subgroups and ensure there are opportunities for the network to support any training or knowledge identified.

As of March 2018, the following regional groups exist in UN-GGIM:

- Asia-pacific
- Americas
- Arab states
- Europe
- Africa

Expert Subcommittee

1. Subcommittee on Geodesy (formerly WG on Global Geodetic Reference Frame)

Expert Groups

1. Expert Group on the Integration of Statistical and Geospatial Information
2. Expert Group on Land Administration and Management

Working Groups

1. Working Group on Development of a Statement of Shared Principles for the Management of Geospatial Information
2. Working Group on Trends in National Institutional Arrangements in Geospatial Information Management
3. Working Group on Geospatial Information and Services for Disasters
4. Working Group on Global Fundamental Geospatial Data Themes
5. Working Group on Legal and Policy Frameworks for Geospatial Information Management
6. Working Group on Marine Geospatial Information and regional groups are:

To achieve this participation, the following activities will be conducted:

- Open nomination for Network members to participate in these subgroups.

- Publication of a current list of representatives in the Network's website.
- Official introductory letter of the representative person by the Network's chair, Prof Abbas Rajabifard, to the subgroup chair or president.
- Upload of the semestral report of activities in the subgroup by representatives with coordination of the Network Secretary.

KPI: % of subgroup with an active representation and submission of semestral reports

Target: 80% of all subgroups of UN-GGIM with a representative and 70% of representative semestral reports are uploaded to the website

Build and Populate an Online Registry of Technical Capacities Across the Members of the Network

A request by country members is to understand the technical and academic capacity in geospatial management in the different regions and countries. During the next two years, the Academic Network will develop an online platform for academic network members to upload their academic capabilities in areas such as training, research and consultancy.

To achieve this, the following task will be conducted:

- The Secretary of the Network, Daniel Paez, will conduct a design of the online tool.
- Consultation of the tool will be conducted with the members.
- New and existing members will be encouraged to populate the repository.

KPI: a new online repository of capabilities running

Target: tool open for entering information by October 2018 and open for consultation by March 2019

Provide Technical Support to UN-GGIM secretary with Review of Technical Documents

One important mission of UN-GGIM is to provide technical support to UN-GGIM secretary, its chairs and other executive officers. It is the goal of the Academic Network to develop appropriate systems to respond with agility to requirements to review documents and another technical report.

To achieve this, the following tasks will be conducted:

- Chair of the Academic Network, Abbas Rajabifard, will delegate the responsibility of reviewing the document on one advisory committee member.
- The Secretary, Daniel Paez, will provide support to contact members in case of being required by the reviewer leader.

KPI: time to respond to review documents

Target: 100% of the feedback to documents provided within 6 weeks from the initial request

MEETINGS AND ADMINISTRATION PROCESS

During the 2017-2018 year, the Academic Network Executive Committee and Advisory Board (Appendix B) has held several meetings and also communicated via email for different activities related to the Network. These meetings allow us to address critical technical matters, such as our future working plan, as well as administrative tasks including membership applications.

The following table shows the details of the significant meetings conducted:

Date	Main Matters Discussed
<p>31 July 2017 (Forum as a side event as part of 7th Session UN-GGIM)</p>	<ul style="list-style-type: none"> ● Chair report ● Academic agenda for future activities ● High-level meeting preparation
<p>24 January 2018 13 May 2018 (Executive Board meeting)</p>	<ul style="list-style-type: none"> ● 2017 Chair report (Abbas Rajabifard) ● 2018 Workplan and events (Abbas Rajabifard and Maria Brovelli) ● Major Meetings and conferences ● 2018 Regional Committees Plan/Report ● Registry of current capabilities (Maria Brovelli) ● Marketing Strategy brainstorm (Executive Committee and Advisory Board)

Additionally, the Executive Committee had multiple meetings in order to address key administrative issues as well as the implementation of the communication strategy, mainly the website, and attendance of a representative at different UNGGIM meetings. The Chair (Professor Abbas Rajabifard) and the Secretary (A/Professor Daniel Paez) met on 3 occasions in Melbourne, New York and Istanbul to plan activities and complete administrative tasks.

MEMBERSHIP

Increasing our membership is a crucial element of success for the Academic Network. According to the ToR, the members of the Network are comprised of relevant universities, academic institutions or research centres where geospatial information research and/or education are accomplished and also these interested members want to collaborate with UN-GGIM and contribute to the Academic Network voluntarily.

Currently, the Academic Network has over 30 members from all continents (this includes members of the Executive and the Advisory Board). This coverage allows the Academic Network to serve the needs of UN-GGIM global issues properly, as well as provide advice and support to regional and technical matters.

We have developed and approved a voting process; new institutional members are voted in when they meet the established objective membership criteria as determined by majority vote of the existing members of the UN-GGIM Academic Network. After reviewing applicant documentation, an online voting service utilizing a simple majority voting method and providing anonymity for voters is used for the voting process at <http://www.opavote.org/>.

We have received and accepted 15 new applications in the past year, in which have assessed and found all are eligible to join. The members of the Academic Network are:

Institute Name	Country
The University of Melbourne	Australia
Politecnico di Milano	Italy
University of Los Andes	Colombia
Wuhan University	China
KU Leuven	Belgium
University of New Brunswick	Canada
University of Maine	USA
University of Twente	Netherlands
University of Salzburg	Austria
Obafemi Awolowo University	Nigeria
FIMO Center, University of Engineering and Technology, Vietnam National University	Vietnam
The University of the West Indies	Trinidad and Tobago
Faculty of Engineering, University of the Republic	Uruguay
University Putra Malaysia (UPM)	Malaysia
Aalborg University Copenhagen	Denmark
Institute of geography Kazakhstan	Kazakhstan
University of Waterloo	Canada
Harvard University	USA

Texas A&M University-Corpus Christi	USA
Kyiv National University of Construction and Architecture	Ukraine
Ecole Superieure Polytechnique de la Jeunesse	Burkina Faso
University of Münster	Germany
Geography Institute	México
University of Lagos	Nigeria
Geomatika University College	Malaysia
CNR-IREA Institute of Electromagnetic Sensing of the Environment	Italy
University of Santiago	Chile
Technical University Vienna	Austria
Nova Information Management School	Portugal

These are pending members that are currently going through the voting process:

Institute Name	Country
University of Alabama	USA
Roma Tre University	Italy
University of Novi Sad	Serbia

The following map illustrates the location of organizations that are currently a member of UN-GGIM Academic Network.



COMMUNICATIONS AND PROMOTION

WEBSITE AND MEDIA

During this second year of the network, the website was updated (unggim.academetwork.org), LinkedIn account ([linkedin.com/company/unggiman](https://www.linkedin.com/company/unggiman)) and Twitter account (@UNGGIMAN) maintained. The website has proven to be an invaluable tool to connect members and disseminate information about the Network activities and at the same time an essential tool to conduct key administrative tasks such as accepting new submissions.

In order to facilitate membership, engage and share material with the broader geospatial community, the Academic Network website is available in 4 languages: **English, French, Spanish and Arabic.**



The strategic knowledge, research and training arm of UN-GGIM.

[About Us](#) [Governance](#) [Network Members](#) [Forum and Events](#) [How to Join](#) [Contact Us](#)



Welcome to UN-GGIM Academic Network



The primary objective of the UN-GGIM Academic Network is to support the aims and objectives of the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) as UN-GGIM sets the agenda for the development of global geospatial information and promotes its use to address key global challenges.



For more information about the UN-GGIM please visit ggim.un.org

Language:

[English](#) [Français](#) [Español](#) [العربية](#)

UPCOMING Forum 2018

We are excited to announce that UN-GGIM Academic Network's second annual forum will be held at the Eighth Session UN-GGIM at the UN Headquarters on Monday July 30, 2018 in CR3 from 14:00-18:00. The forum will focus on urban settlements, resilience, and sustainability. Check back to learn more about the forum theme and program. [Read More](#)

News

[Call for Session Proposals at the UN World Geospatial Information Congress](#)

[UPCOMING Academic Network Forum 2018!](#)

[Professors Strobl and Rajabifard Met in Australia](#)

[Overview: Academic Network Forum 2017](#)

[Academic Network Forum 2017](#)

Tweets by @UNGGIMAN

[UN-GGIM Academic Network](#) Retweeted

[UN-GGIM: Europe](#) @UNGGIMEurope

Very interesting overview of the @UNGGIMAN from @GISstrobl. More details at unggim.academetwork.org #GGIMEurope

[UN-GGIM Academic N...](#)

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MEETINGS AND WORKSHOPS ATTENDED

First Academic Network International Forum

During the 7th UN-GGIM meeting in 2017, we have successfully conducted our first International Forum called “**Secure Land Rights and Smart Cities- Making it work for sustainable development**”. This forum took place in New York on the 31st July 2017, with a full room of just over 100 participants.

During the period June 2017 and June 2018, members of the Academic Network participated actively in multiple events across the world. During these events, the Academic Network was promoted and key UN-GGIM matters discussed. This participation allows the Network to expand its understanding of the needs of member countries as well as provide technical advice when required.

Regional Meetings

We are also pleased to inform the development of regional meetings of the Academic Network during the last year. Both members from Europe and Latin-American conducted sessions that allow the strengthening relationship within Network members and at the same time open key conversations with country representatives. The two regional meetings were:

- UN-GGIM Academic Network European Meeting, Milan, 9 February 2018 (Coordinated by Maria Brovelli, and officially welcomed by the Academic Network Chair, Abbas Rajabifard).
- UN-GGIM Academic Network American Meeting, Cartagena, Colombia 4 December 2017 (Coordinated by Daniel Paez).

Other Events

The following table lists the events in which the Executive Committee and the Advisory Board have actively participated and promoted the UN-GGIM Academic Network:

Date	Event	Participant
June 2017	ICC (ICA), USA	Menno-Jan Kraak
June 2017	4th Plenary meeting of UN-GGIM Europe, Belgium	Josef Strobl
August 2017	7th Session of the UN Committee of Experts on Global Geospatial Information Management, USA	Multiple board members
September 2017	4th Responsible Management Education Research Conference, Brazil	Maria Antonia Brovelli
October 2017	Spatially Enabled Platform to Support Livability for Smart Cities, Malaysian Board of Surveyors, Malaysia	Abbas Rajabifard
October 2017	FOSS4G and State of the Map Argentina, Buenos Aires, Argentina	Maria Antonia Brovelli

October 2017	ICSU General Assembly, Taipei	Menno-Jan Kraak
February 2018	International BIM Conference, Iran	Abbas Rajabifard
February 2018	World Urban Forum, Malaysia	Daniel Paez
March 2018	World Bank Land and Poverty Conference, USA	Abbas Rajabifard
May 2018	FIG Congress, Turkey	Abbas Rajabifard, Daniel Paez

The Network has already planned for participation in the coming months, including:

Date	Event	Participant
August 2018	FOSS4G, Tanzania	Maria Antonia Brovelli
September 2018	International Symposium and Workshops: A Smart Sustainable Future for All, Australia	Abbas Rajabifard
October 2018	ISPRS Technical Symposium Commission IV, Netherlands	Maria Antonia Brovelli
November 2018	UNWGIC, China	Multiple members
February 2019	FIG Working Week, Vietnam	Multiple members

FUTURE ACTIVITIES

RESEARCH PROJECTS

The Academic Network has identified two research projects that will be conducted in the next year, in collaboration with the Network Members and the FIG Commission 7:

Cadastral Template 2.0 and Sustainable Development

Using the data collected over 50 countries, this research project will discuss global trends and propose effective local, national, and global solutions with emphasis on how Cadastral Template 2.0 can contribute to the implementation of the SDGs. The Cadastral Template is a spatial data foundation for sustainable development and the significant role of land in development will be expanded in this research to facilitate the SDGs.

The Role of Geospatial Research and Innovation in Implementing the SDGs

The Academic Network will identify research areas that will contribute to the analysis and implementation of the SDGs. All Members of the Network will be invited to partake in this research project.

UPCOMING FORUM

Second Academic Network International Forum

Following a successful event at the Seventh Session UN-GGIM in 2017, the UN-GGIM Academic Network will hold a forum with the theme, **'The SDGs Connectivity Dilemma: Urban Settlements, Resilience, and Sustainability'** at the Eighth Session of UN-GGIM at the UN Headquarters in New York on 30 July 2018 (Appendix A). In continuation from last year's forum on 'Secure Land Rights and Smart Cities – Making It Work for Sustainable Development' and the discussion on urban challenges, the UN-GGIM Academic Network will focus on the urgent demand for safe, sustainable, and resilient urban communities and settlements with particular emphasis on the SDGs.

Appendix A

Concept Note for Upcoming Academic International Forum



Eighth Session of the Committee of Experts on UN-GGIM UN-GGIM Academic Network Forum

The SDGs Connectivity Dilemma: Urban Settlements, Resilience, and Sustainability

Monday, 30 July 2018

14:00 – 18:00

Conference Room 3 (CR-3)

United Nations Headquarters, New York

Concept Note

Background

Following a successful event at the Seventh Session UN-GGIM in 2017, the UN-GGIM Academic Network will hold a forum with the theme, **'The SDGs Connectivity Dilemma: Urban Settlements, Resilience, and Sustainability'** at the Eighth Session of UN-GGIM at the UN Headquarters in New York on 30 July 2018. In continuation from last year's forum on 'Secure Land Rights and Smart Cities – Making It Work for Sustainable Development' and the discussion on urban challenges, the UN-GGIM Academic Network will focus on the urgent demand for safe, sustainable, and resilient urban communities and settlements with particular emphasis on the SDGs.

Cities and urban areas are growing in an era when communities and their various challenges are interconnected across different domains and jurisdictions. Academics and practitioners working towards sustainable development must understand, analyse, and utilise the linkages that drive social, economic, and environmental systems. Moreover, understanding the interdependent existence of people and the space they inhabit is determined by the availability of data, namely geospatial data. This level of connectivity at local, national, and global levels shapes future urban forms, while the unavailability of, and inaccessibility to spatial data will cause urban development to lag far behind the required pace and quality. Therefore, the lack of a comprehensive spatial data ecosystem can impede the process of strengthening community and infrastructure resilience, prevent protection of social and environmental sustainability, and narrow the development gap.

"This is an open forum and all Session Attendees are invited"

The spatial expansion of urban settlements and the rapid growth of urban populations demand adequate methods for advancing urban services, infrastructures, mobility, and governance. According to UN-Habitat, the area occupied by cities are estimated to triple while the number of urban residents will double by 2030. Thus, resilience and sustainability are critical determinants of long-term impact that will emerge from future development projects to drive even urbanisation. The SDGs aim to foster efforts to strengthen the resilience and sustainability of communities and cities, however, impeding factors, such as natural disasters, socio-political conflicts, climate change, and economic shocks increasingly expose urban communities and settlements to complex social, economic, and environmental vulnerability. As a result, the Academic Network Forum will focus on the role of geospatial and land information in developing strategic pathways to improve resilience, examining geographic factors of inequalities, and identifying the requirements and enabling tools for achieving the SDGs.

The role of geospatial technologies and platforms has not been sufficiently accounted for in the implementation of the SDGs, namely in the area of urban resilience. Geospatial data, infrastructures, and systems can help stakeholders and decision-makers effectively manage and analyse the distribution of urban needs and align sustainable development investments with local demands. The integration of geospatial and statistical information in the urbanisation process can inform and balance the spatial distribution of settlements, infrastructures, and services, and strengthen the capacity of development to adapt to changing circumstances. Within this context, this Academic Network Forum aims to discuss the connection between urban settlements, resilience, and sustainability.

Forum Objectives

In line with emerging and critical issues identified by the UN-GGIM, the Forum will:

- a. Identify current challenges of urban communities and settlements and opportunities for integrating geospatial and statistical information;
- b. Examine how geospatial information will support and inform inclusive and even urbanisation, resilient development, and the SDGs; and
- c. Present and develop roadmaps for a more sustainable and resilient future for all, particularly in light of growing disaster risks.

For more information, please contact:

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“This is an open forum and all Session Attendees are invited”

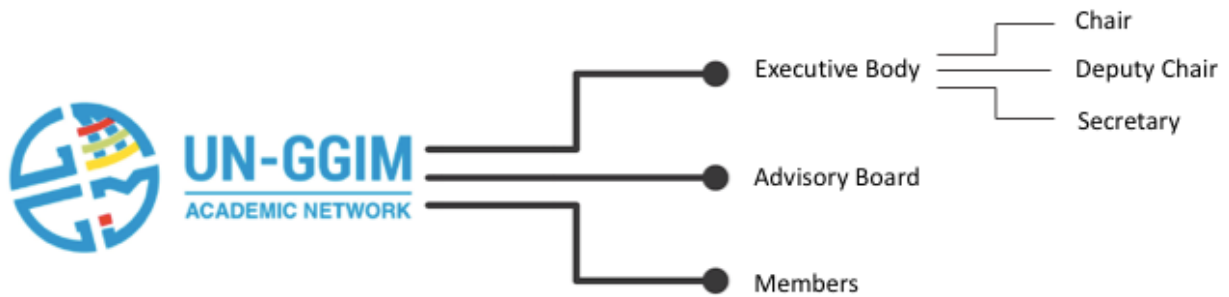
Updated: 16 May 2018

Appendix B

Governance and Administration

MAIN OFFICERS

According to its approved Terms of References, the Academic Network has an Executive Committee comprised of a Chair, Deputy Chair and Secretary, and an Advisory Board of 7 members for the operation and coordination of the Academic Network. The following chart shows the organizational structure:



In the 2017-2018 year, the elected officers were:



Chair

Prof. Abbas Rajabifard
University of Melbourne
(Australia)



Deputy Chair

Prof. Maria Antonia Brovelli
Politecnico di Milano
(Italy)



Secretary

A/Prof. Daniel Paez
University of Los Andes
(Colombia)

ADVISORY BOARD

The Academic Network Task Team in charge of developing the Terms of References of the Academic Network has accepted to continue their involvement as the Advisory Board for the Network. During the last year the members of the Advisory Board were:



Prof. Huayi Wu
Wuhan University
(China)



Prof. Joep Crompvoets
KU Leuven
(Belgium)



Prof. Harlan Onsrud
University of Maine
(USA)



Prof. David Coleman
University of New Brunswick
(Canada)



Prof. Menno-Jan Kraak
University of Twente
(Netherlands)



Prof. Jide Kufoniya
Obafemi Awolowo University
(Nigeria)



Prof. Josef Strobl
University of Salzburg
(Austria)