



2018

ANNUAL REPORTS

BELGIAN NATIONAL SCIENTIFIC COMMITTEES



Académie royale des Sciences, des Lettres
et des Beaux-Arts de Belgique



Koninklijke Vlaamse Academie van België
voor Wetenschappen en Kunsten

RASAB vzw/asbl

The Royal Academies for Science and the Arts of Belgium - RASAB vzw/asbl

BELGIAN NATIONAL SCIENTIFIC COMMITTEES
ANNUAL REPORTS 2018

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INTRODUCTION

The National Scientific Committees' missions are the promotion and coordination of various scientific disciplines in Belgium, mainly seen in an international context. The creation of a national committee is subject to the existence of an international scientific union affiliated to ICSU or a scientific body of ICSU (scientific committees, special committees, etc.) concerning the same scientific discipline.

The National Scientific Committees work under the patronage of the *Académie royale des Sciences, des Lettres et des Beaux-Arts de Belgique*¹ and the *Koninklijke Vlaamse Academie van België voor Wetenschappen en Kunsten*², gathered in RASAB.

The committees are subject to regulations adopted by the Belgian Academies of Sciences and Arts.

The list of the members of the Belgian Scientific Committees can be found on RASAB's website: www.rasab.be.

¹ www.academieroyale.be

² www.kvab.be

NATIONAL COMMITTEE FOR ANTARCTIC RESEARCH

INTERNATIONAL UNION: SCIENTIFIC COMMITTEE ON ANTARCTIC RESEARCH (SCAR)

1. Introduction, mission, goals

The BNCAR is the official representing body of Belgium within SCAR (Scientific Committee on Antarctic Research). This implies that BNCAR members participate, when appointed, to the bi-annual meetings of SCAR as national delegate(s) or member(s) of one of the 3 SCAR Standing Scientific Groups (Geosciences, Life Sciences and Physical Sciences) or of other SCAR Standing Committees (e.g. Antarctic Geographic Information). They also contribute to the inter-sessional activities of these Scientific Standing Groups. BNCAR contributes to establish the Belgian annual report to SCAR and responds to particular information requests from SCAR. It also gives advice or responds on matters raised within international bodies such as the ATCM (Antarctic Treaty Consultative Meeting) and its CEP (Committee for Environmental Protection), CCAMLR (Convention for the Conservation of Antarctic Marine Resources), CCAS (Convention for the Conservation of Antarctic Seals), EPB (European Polar Board). Finally, BNCAR has as mission to promote (Belgian) Polar Science at an international level.

2. Meetings of the Committee

[a] Meeting of 23 June 2018

The BNCAR that participate to the 2018 SCAR open Science Conference met during the POALR2018 in Davos. A large number of BNCAR members and associate members were present and also actively involved in the organization of the SCAR Open Science Conference and adjacent meetings. A BNCAR meeting was organized during this week to highlight the Belgian presence at SCAR.

[b] Meeting of 6 November 2018

A Meeting was organised provide feedback on the meetings of various SCAR groups during Polar 2018 and the development of new SCAR research Programmes, especially for those members that could not attend the Davos meeting in June. An overview was given by the different delegates to the Standing Scientific groups as well as a general overview of the delegates meeting of SCAR by the president of BNCAR. During the meeting, activities of Belgian researchers during the upcoming Antarctic Field season were further discussed.

3. General Assembly of the Scientific Union

POLAR2018 (15-26 June 2018, Davos). POLAR2018 was a joint event from the Scientific Committee on Antarctic Research (SCAR) and the International Arctic Science Committee (IASC). The SCAR meetings, the ASSW and the Open Science Conference were hosted by the Swiss Federal Institute for Forest, Snow and Landscape Research WSL under the patronage of the Swiss Committee on Polar and HighAltitude Research. The meeting was attended by a large representation of BNCAR members and associate members, as well as a large contingent of Belgian Early career researchers, who are members of APECS (Association of Polar Early Career Scientists). For two years, BNCAR has two Belgian APECS representatives amongst the associate members.

Since the POLAR2018 is a major event in Polar (and more specifically Antarctic) sciences and well attended by the Belgian Antarctic community, there were no other major events organized in 2018.

4. Future perspectives

[a] Antarctic climate symposium

The establishment of the Belgian Princess Elisabeth Station ten years ago has substantially advanced climate research in Queen Maud Land. With this symposium we aim at bringing together climate researchers working in this region on Antarctica to exchange their experiences. Both observationally-based and modelling studies are welcome. The symposium will take place on May 10, 2018 in the new BELSPO premises (WTC III - adjacent to Brussels North station).

[b] ISMASS session at EGU2019

An ISMASS (Ice Sheet Mass balance and sea level – SCAR/IASC/CliC) session will be organized at the upcoming European Geosciences Union (EGU) General Assembly in April 2019.

[c] SCAR2020

The next SCAR open Science Conference will be held in Hobart (Australia) in 2020.

The current representation in the various SCAR bodies is

- SC-ADM: A. Van de Putte
- SC-AGI: J.Y. PirLOT
- Life Sciences: A. Wilmotte
- Physical sciences: J.L. Tison and H. Goosse

- Geosciences: P. Huybrechts and N. Bergeot
- ISMASS: F. Pattyn

[d] 2020 :200 years of discovery

BNCAR is envisaging organising a multi-day symposium on Belgian Antarctic science. Details will be worked out during the upcoming spring.

NATIONAL COMMITTEE FOR ASTRONOMY

INTERNATIONAL UNION: INTERNATIONAL ASTRONOMICAL UNION (IAU)

1. Introduction, mission, goals

The formal basic goal of the committee is to coordinate the participation of Belgian astronomers in the activities of the International Astronomical Union (IAU), and in the triennial IAU General Assembly in particular. The committee also serves a role in the dissemination within the Belgian community of developments within other international organisations to which our country participates, such as ESA, ESO, and the journal *Astronomy and Astrophysics*. Finally, the meetings also offer opportunities to react together on matters affecting various astronomical activities in Belgium among which access to new research facilities and public outreach.

2. Meetings of the Committee

The BNCA gathered twice in 2018: on 29 January 2018 and on 13 June 2018. Both meetings took place at the Palace of the Royal Academies for Science and the Arts of Belgium in Brussels. Recurrent topics of discussion during these meetings were ESO matters, ESA matters, the Astronomy & Astrophysics Board, which are addressed in the sections below.

3. General Assembly of the Scientific Union

The IAU General Assembly took place in August in Vienna. The BNCA president attended the first week, whereas Anne Lemaître replaced him as our national representative during the second week. One particularly noteworthy decision at the GA (afterwards confirmed through membership-wide vote), is to acknowledge the scientific contributions of Belgian astronomer George Lemaître to the scientific theory of the expansion of the Universe. To honour the intellectual integrity and the supremely significant discovery by Lemaître, the IAU recommends renaming the Hubble law as the Hubble- Lemaître law (see press release³).

4. Other activities

[a] UAI matters

In response to the call late 2017, the BNCA received 6 applications for IAU membership: 4 regular memberships

³ <http://www.iau.org/news/pressreleases/detail/iau1812/>).

and 2 junior memberships. After their review, the BNCA decided to validate all the applications and has requested IAU the membership of D. Defrère (regular), L. Mahy (regular), T. Merle (junior), E. Mossoux (junior), A. Tkachenko (regular), and S. Triana (regular).

2019 marks the 100th anniversary of the IAU, and the BNCA president was contacted for the preparation of a meeting to take place at the Palace of the Academies in Brussels, where IAU was created. A scientific meeting and an exhibition are planned. The meeting is expected to last for three days. The first two days are intended for high-level scientists, politicians and decision makers, while the last day is intended for amateur astronomers. R. Alvarez attended the IAU outreach meeting in Japan, where he discussed the practical organisation. The 100th anniversary is a good occasion to highlight public astronomy events, several of which are already planned. R. Alvarez acts as a liaison for the different initiatives.

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To honour the intellectual integrity and the supremely significant discovery by Lemaître, the IAU recommends renaming the Hubble law as the Hubble-Lemaître law.

[b] ESO matters

During the two meetings in 2018, the ESO representatives were absent, and nothing was reported on the matter. The BNCA was informed that S. Pireaux, one of our BELSPO/ESO representatives, does not attend the BNCA meetings anymore as she received new responsibilities within BELSPO.

[c] ESA matters

ESA matters were reported to the BNCA by W. Verschueren (Belgian representative at the ESA Science Programme Committee, BELSPO). The main points discussed are the following:

- Günther Hasinger has been appointed as new ESA Director of Science for a period of two years. He has launched an ambitious proposal to increase by 20 percent the budget of the Science Programme. This would enable additional elements in the Science Programme, including a permanent call for smaller and more rapidly developed F-class missions, and an additional M-class mission.
- ARIEL has been confirmed as the M4 mission, and started the B1 study phase. KU Leuven and CSL Liège contribute substantially to this mission.

- Three M5 missions have been selected for phase A: Theseus, SPICA and EnVision. All of these missions have planned contributions from Belgian institutes.
- Several space agencies proposed a collaboration from ESA to one of their missions: WFIRST (NASA), Einstein Probe (China), LiteBIRD (JAXA). The Einstein Probe has been adopted as a Mission of Opportunity (MoO) in the ESA Science Programme.
- The development ESA's flagship mission ExoMars 2020 is continuing with the LaRa instrument from ROB on the landing platform. On the ExoMars 2016 Trace Gas Orbiter, the nominal science operations of the NOMAD instrument (BISA) have started in the spring of 2018.
- Discussions within ESA and with other space agencies are continuing to elaborate an international space exploration programme with broad participation. The focus is on Mars with a Mars Sample Return mission as an intermediate step and a human mission to Mars as the ultimate goal.

[d] Astronomy and Astrophysics (A & A)

Matters related to A&A were reported by R. Van der Linden, our Belgian delegate in the A&A Board. The last board meeting was held at ESO Garching, on 15 May 2018. This meeting was also the kick-off of the anniversary events of A&A: the journal was created in April 1968 and its first issue was released in January 1969. The main topics related to A&A are:

- There is a new style for A&A letters available, aiming to speed up the publication of high impact papers.
- Serbia has been approved as an A&A member.
- The editorial board has been increased to 13 associated editors, but ideally should go up to 15–16. Calls have therefore been issued.
- The impact factor stays above 5, which places A&A now among the 10 most highly ranked astronomical journals. The A&A “return factor” for Belgium is above 10.
- The total budget was increased amongst other things due to the higher number of editors and additional fees for the historical archive of the journal. Fortunately, there will be no impact on national contributions which will only increase to match the inflation. This is possible thanks to the higher share-over paid by the publisher.

[e] Miscellaneous matters

Responding to a call from the Belgian National Committee for Pure and Applied Physics, a report on Astrophysics in Belgium was put together. It is available, amidst similar reports on other branches in physics⁴.

The BNCA encountered some difficulties with the board renewal, and in view of this, it was decided that the statutes and internal rules of the committee need to be reviewed. In the June 2018 meeting, amendments are discussed on articles 4.1, 4.3, 5 and 16.2. The amendments will be discussed and approved at the January 2019 BNCA meeting.

⁴ <https://sites.google.com/site/physbel/Physics-in-Belgium/reports>

NATIONAL COMMITTEE BELQUA (QUATERNARY RESEARCH)

INTERNATIONAL UNION: INTERNATIONAL UNION FOR QUATERNARY SCIENCE (INQUA)

1. Introduction, missions, goals

BELQUA is the Belgian contact for INQUA, the International Union for Quaternary Science. The purpose of BELQUA is to support and increase the visibility of Belgian research on various aspects of the Quaternary period, either conducted in Belgium or by Belgian scientists abroad. BELQUA also aims to encourage young researchers and to promote scientific communication. It covers all research fields related to Quaternary science.

2. Meetings of the Committee

[a] Meeting of 16/3/2018 in Brussels

The BELQUA meeting in March 2018 was organized prior to the yearly BELQUA workshop.

The main achievements and conclusions of the meeting were as follows:

- A new NC and board for the period 2018-2020 were elected.
- The organization of the yearly workshop was evaluated. About 25-30 Quaternary scientists attended the workshop (see also below).
- The organization of a training course for PhD and MSc students on *Quaternary dating techniques and its potentials and pitfalls* was further discussed. It will be a 4-day training course organised in October 2019. The first three days will involve training on geochronological techniques and age-depth modelling given by experts in the field. The theoretical part will be followed by a field excursion, during which sampling techniques for C-14, OSL, ESR, and CRN dating will be presented and discussed. MSc and PhD students in geosciences and archaeology, as well as early career and advanced researchers and professionals can attend the training course. The full course will qualify for 30 contact hours or 4 ECTS (see also below).
- The upcoming INQUA conference (July 2019) was discussed.

[b] Meeting of 12/11/2018 in Brussels

The main achievements and conclusions of the meeting were as follows:

- The organisation of the BELQUA 2019 workshop was discussed. Similar to the previous editions, in particular young scientists will be encouraged to contribute and give an oral presentation, but senior scientists are most welcome as well to present their ongoing research (see also below).'
- The attendance of the Belgian delegates to the INQUA conference was discussed. The conference will be organized in Dublin in July 2019. The BELQUA NC elected the president (N. Fagel) and vice-president (V. heyvaert) of BELQUA as the Belgian delegates for the INQUA 2019 meeting that will take place in Dublin from 25 to 31/07/2019. According to the regulations for travel grants, N. Fagel will send a request to RASAB to cover the travelling expenses to attend the meeting. A budget estimate will be joined to this request.

3. General Assembly of the Scientific Union

There was no general assembly of INQUA in 2018. The next general assembly will be organised in 2019 in Dublin (Ireland) during the INQUA conference. Information from INQUA (e.g. the Newsletter, and the table of contents of its journal 'Quaternary International') are distributed via the BELQUA e-mail list. The call for abstracts for the INQUA conference closed on the 9th of January 2019.

4. Other activities

[a] BELQUA annual workshop on 16/03/2018

The BELQUA workshop of 16 March 2018 was a one-day (10:00-17:15u) event hold in the Ockeghem room of RASAB in Brussels. Vanessa Heyvaert (RBINS) and Elie Verleyen (UGent) organized and convened the workshop. About 25-30 people attended the meeting. Prof. Dirk Verschuren (Ghent University) was invited as a key-note speaker on the topic *Reconstructing ~250,000 years of climate change and environmental history on the East African equator*. His lecture was programmed at the beginning of the workshop. In addition to the keynote lecture, abstracts were received for eight oral presentations, covering a wide range of topics and disciplines.

5. Future perspectives

[a] Annual BELQUA workshop

The BELQUA 2019 workshop will be organised by Marc De Batist and Elie Verleyen (both Ghent University) on the 22th of February 2019 at RASAB. The invited lecture will be given by Prof. Vincent Gaffney (University of Bradford, UK). His presentation is entitled *Not drowning but waving! Doggerland and the Lost Frontiers Project*.

[b] First BELQUA training course

The first BELQUA training course on Quaternary dating techniques will be a 4-day event organised in October 2019. The first three days of the training course will take place at RASAB in Brussels. During the field excursion relevant soil sections, outcrops and fluvial terraces will be visited in the Belgian loess plateau and the Campine Plateau. The following dating techniques will be covered: radiocarbon dating, dendrochronology, varve chronology, speleothem dating (including U/Th dating), cosmogenic nuclide dating, fusion-track dating and electron spin resonance dating. The workshop will also contain a lecture and practical hands-on course dealing with developing age-depth models. There will be a small registration fee to cover the catering (coffee breaks, lunch) during the first three days of the training course: a reduced fee of €20 for MSc, PhD and early career researchers, and a full fee of €40 for advanced researchers and professionals.

NATIONAL COMMITTEE FOR BIOCHEMISTRY AND MOLECULAR BIOLOGY

INTERNATIONAL UNION: INTERNATIONAL UNION OF BIOCHEMISTRY AND MOLECULAR BIOLOGY (IUBMB)

1. Introduction, mission, goals

The goal of the National Committee is to promote research in the field of Biochemistry and Molecular Biology, by organizing meetings and inviting outstanding internationally renowned scientists. Because of the increasingly interdisciplinary nature of the biological sciences, often symposia are organized together with other societies and other National Committees.

Because of the common goals, the members of the National Committee on Biochemistry and Molecular Biology are also member of the board of the Belgian Society of Biochemistry and Molecular Biology and as such are actively involved in the preparation and organization of all the activities of this Society and of the National Committee.

2. Meetings of the committee

The National Committee organizes its meetings together with the board of the Belgian Society for Biochemistry and Molecular Biology. In 2018 the board met on the 16th of January at the UNamur (Carine Michiels) and the 13th of December in the ULB, Building J, Campus Erasme, Brussels (Jason Perret).

In these meetings, the overall organization, financial status, membership list of the society are reviewed as well as discussion of the organization of meetings in the coming year. Further organization and exchange of information and ideas was done by email.

3. General Assembly of the Scientific Union

No General Assembly in 2018.

4. Other activities

[a] All members of the National Committee participated in several international scientific events, either as participant or as an invited speaker. However it would be impossible to provide an extensive list of all these activities.

The BSBMB participated at the

1. Structural Dynamics in Cellular Communication meeting, held by VIB at Brussels on 20-21 sept. The society paid for travel expense of one of the speakers (1475\$ for flight and 440€ for accomodation);
2. Oxidative Stress in Subcellular Compartments, hold by the FNRS contact group « Oxidative process and antioxidants ».

5. Future perspectives

Meetings for the coming year and forthcoming meetings/symposia need to be proposed and organized.

During the last board meeting the need to redefine the Societies missions and services to the biochemical community were discussed to adapt to the evolution of the scientific community; these discussion are ongoing along several lines of thought.

A board meeting is being scheduled for March or April 2019 and a date will then be set for a general Assembly of the Belgian Society.

NATIONAL COMMITTEE FOR BIOMEDICAL ENGINEERING

INTERNATIONAL UNION: INTERNATIONAL UNION FOR PHYSICAL AND ENGINEERING SCIENCES IN MEDECINE (IUPESM).

1. Introduction, missions, goals

Biomedical Engineering is the multidisciplinary field concerning Engineering research, developments and applications in (bio)medicine.

The Belgian National Committee on Biomedical Engineering aims to bring together the Belgian academics, students, researchers and professionals, active in the broad field of biomedical Engineering.

The aims of the National Committee are:

- Stimulating scientific and educational interactions
- Linking with international organizations and societies
- Representation of the Belgian academic point of view
- Setting up a forum for interested students and professionals.

2. Meetings of the committee

Dates: The Committee met on: February 7th, March 13th, May 8th, September 27th, November 30th

Main conclusions

- Continuing efforts for a yearly Contact Forum in the Academy
- Involving young scientists and professionals, alumni of our master programs Biomedical Engineering
- Streamlining communications (updated informative website)
- Increasing attention to Medical device Technology and entrepreneurship
- Contacts with industry: mostly via the association MedTech Flanders and beMedTech
- Continuing liaison efforts with European, world-wide associations
- Need for continuing efforts in promoting research and development and an awareness of the community of the social impact of the BME field.
- Encouraging a shift of Biomedical Engineering teaching topics into the bachelor programs in engineering

- In 2018-19 we should pay attention to the alumni who became the first “biomedical engineers” via the master programs, started in Belgium, some 10 years ago; this will be the main theme of the next “National Day”, planned on December 1st 2019.

3. General Assembly of the Scientific Union

The International Union IUPESM held its last General Assembly in June 2018 during the World Congress on Biomedical Engineering and Medical Physics in Prague (June 7th – 13th 2018), during which event the Federation's officers were elected. Marc Nyssen becomes IFMBE treasurer during the 2019-2021 period and liaison with the ISC's data committees: World Data System (WDS) and Co-data.

4. Other activities

[a] Belgian Day on Biomedical Engineering (November 30th, 2018)

Contact Forum with 5 invited speakers, a poster session presenting new research results and prizes for 3 posters by young researchers; This year's theme: *Medical data and data processing*.

Goals:

- Bring Belgian researchers in contact with internationally recognized speaker and allow Belgian researchers to present their work in a short presentation and posters (Belgian Day).

Attendance:

- 165 persons attended this event.

[b] Collaboration with beMedTech

Thanks to the collaboration with beMedTech, an evaluation of the complete biomedical engineering sectoral presence: in education, in research, and in the professional context has been continued. MedTechFlanders was founded in July 2015 and enlarged membership of start-ups and scale-ups in medical device industry (25 companies).

[c] Liaison with worldwide societies/activities

- Contacts between the National Committee, the World Federation IFMBE, the Union (IUPESM) and ICSU/ISC via Marc Nyssen.

- Contacts between the National Committee and EAMBES (European level umbrella organisation) via Jos Vander Sloten.
- Contacts between the National Committee and MedTech Flanders via Pascal Verdonck.
- Contact between the National Committee and beMedTech, the professional umbrella association, with industry members of the biomedical sector via Pascal Verdonck
- Contact between the National Committee and IEEE-EMBS (the IEEE Engineering in Medicine and Biology Society) and its Benelux chapter via Sabine Van Huffel.

5. Future perspectives

[a] The committee aims at expanding the involvement of students and of captains of industry in the Committee's future activities.

[b] New members of the committee are proposed and integrated: Liesbeth Geeris (Ulg) (replacing Jean Delbeke, retired)

[c] As there are now 5 “master in biomedical engineering” programs (UGent/VUB, KUL, ULB, UCL, Ulg), the Committee aims to become the meeting place for communication between these programs (also for Phd's linked to the masters), in order to strive to a full recognition of the title “Master in biomedical engineering”.

[d] Keeping in contact with the alumni. A “Youngsters Board” was set up successfully in 2010 and was fully operational since 2011 and renewed in 2015, 2016 and again in 2018. The youngsters group is consisting of:

- Gerlinde Logghe, coordination
- Annette Caenen
- Vincent Van Eeghem, finances
- Markos & Dries (KUL), companies
- Fan Xiao Ya (ULB), practical arrangements
- Florian Salmen (UCL), PR & IT
- Varun Manhas (ULG), registrations & invoices

6. Clarification of abbreviations

- IFMBE: International Federation for Biomedical Engineering: the “World Federation”

- IUPESM “International Union for Physics and Engineering Sciences in Medicine”, the UNION of which the IFMBE is 1 of the 2 components.
- EAMBES: European umbrella association, regrouping societies and teaching/research departments
- ESEM: European Society for Biomedical Engineering
- EAMBES: European Alliance for Medical and Biological Engineering and Science
- ICSU: International council of scientific unions (links with national Academies)
- IEEE: Institute of Electrical and Electronic Engineers
- EMBS: Engineering in Medicine and Biology Society

NATIONAL COMMITTEE FOR BIOPHYSICS

INTERNATIONAL UNION: INTERNATIONAL UNION FOR PURE AND APPLIED BIOPHYSICS (IUPAB)

1. Introduction, mission, goals

The goal of the National Committee is to promote research in the field of Biophysics, by organizing meetings and inviting outstanding internationally renowned scientists. Because of the increasingly interdisciplinary nature of the biological sciences, often symposia are organized together with other societies and National Committees. Because of the common goals, the members of the National Committee on Biophysics are also member of the board of the Belgian Biophysical Society and as such are involved in the preparation and organisation of all the activities of this Society.

2. Meetings of the Committee and the Belgian Society

Dates: 11 December 2018

Main conclusions:

- Positive evaluation of the activities organised in 2018 (vide infra). The meetings were highly appreciated by the participants and the speakers both scientifically and practically (also on budget).
- The Belgian Biophysical Society will launch a new website in the spring of 2019.
- Create more visibility and interaction with other National Committees.

3. General Assembly of the Scientific Union

No General Assembly in 2018.

4. Other activities

[a] Joint Meeting of the Belgian and British Biophysical Societies - 22 & 23 February 2018 at the Palace of Academies

- Goal:

With this two-day symposium we wish to highlight the outstanding research carried out in the field of soluble and membrane proteins in our two countries. We also want to promote the activities of our leading scientists and raise interest among young students and scientists.

The United Kingdom is a major force in Europe in science, and in the field of biophysics in particular. The joint organization of this event in Brussels is a unique opportunity for Belgian researchers, particularly but not exclusively young people, to enhance their skills and to raise their scientific level via valuable contact with UK scientists. It will also help them to expand their international contacts.

We believe that this meeting is timely to reaffirm the distress of the great majority of the scientific community to see the United Kingdom leave the EU.

There has always been a strong scientific connection between our two countries, with student exchanges and long standing collaborations. In a sense this meeting is a celebration of this connection and a meeting of friends.

- The meeting was attended by about 118 scientists from Belgium, the UK, Germany, France, Italy and the Tsjech Republic.
- We refer to the report on this meeting submitted to the RASAB (as this was organised as a contact meeting) for full details on the programme.

[b] School on X-ray and Neutron Diffraction Techniques - 28 May – 30 May 2018, VIB-UGent⁵

- Goal: The school provided an introduction to the vast range of X-ray and neutron diffraction techniques and their application to investigate biological structures and processes. Starting from an introduction of the basics of X-ray and neutron scattering we moved on to their application to proteins and their complexes with other proteins or nucleic acids, to lipid structures and studies of bacterial metabolism. The course also provided a glimpse of the international research facilities (such as XFEL) available. The school was organized as such that no prior knowledge of scattering techniques was required.
- The programme is attached.
- About 35 students and lecturers attended the lectures.

[c] 16th one-day symposium on Protein Folding and Stability - Friday the 31st August 2018 at the University of Liège⁶

- Goal: This annual meeting bring together the Belgian protein biophysics community with a strong focus on protein folding and stability, although the range of topics has evolved over time to reflect the interests of the field. As such, for example, protein misfolding has become

⁵ See page 76

⁶ See page 77

more topical. This year's speakers included Prof. Dr Sheena Radford of the Astbury Centre in Leeds. The full programme is attached.

- About 50 participants with a good mix of young and senior investigators.

5. Future perspectives

The following meetings will be organized in 2019:

- A 1-2 day school combining lectures and workshops on cryo-EM.
- Folding meeting on 31st August in Liège (organized by André).
- Symposium on current trends in membraneprotein biophysics on 6 December 2019 in Namur.
- A 1 or 2 day meeting at the Academy in February 2020. Topic: in vivo studies of cellular processes (methods to study cellular processes, new view on cytoplasm organization,...).
- Team up with some companies to offer hands on workshops on instrumentation of general interest.

NATIONAL COMMITTEE FOR CHEMISTRY

INTERNATIONAL UNION: INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY

1. Introduction, mission, goals

As reported previously, our goals remain unchanged and in line with our strategy guidelines: reconciliate the Public and Chemistry by

- Federate the messages of chemistry (Universities, Technical Colleges, Essenscia, CEFIC, SRC, KVCV, JSC, Teachers, etc.).
- Inform the public, improve and develop the image of chemistry in Belgium in all the aspects. Be the bridgehead of IUPAC in Belgium (input and output).
- Make the promotion of chemistry and sciences to the young generations at the early age, high schools. Encourage them to study sciences and technologies.

It is obvious that many in the network of organizations in Belgium share these issues and concerns.

Therefore, our wish is to be specific, and bring an efficient contribution to the common effort. Our actions must be complementary to others considering our limited budgets. The Comité National de Chimie/Nationaal Comité Scheikunde team is particularly well connected with the “chemical” network in Belgium. This allows a major impact and spread of its ideas and projects.

So, in 2018/9 again, we developed the above-mentioned items 2 and 3 by:

- Being very present (as much as possible) as representative of Belgium on the international scene as the “Ambassador of Belgium in the International Union of Pure and Applied Chemistry/IUPAC” and actors in their committees.
- Being a real actor in the promotion of science and encouragement of young students

It is obvious that these policies request financial support.

This point is particularly critical considering that the yearly budget allocated the National Committees is extremely small, and consequently does not allow us to set up projects.

In the last four years, we have been able to apply our policy in line with our goals with the support of the industry (see below).

2. Meetings of the committee

- 1 Feb 2018, 20 Feb 2018, 2 & 5 May 2018; at the Academy : meetings in preparation of the event *Science in Space and on Earth* (5 May 2018) together with “Les Jeunesses Scientifiques de Belgique”.
- 30 May 2018, 25 Oct 2018 at the Academy to review the main actions of the year, discuss new prospects and main events to come: emphasizing the centennial of the IUPAC in Paris in 2019, celebrating the Periodic Table and Mendeleev.
- 25 October 2018 at the Academy and on 12 Nov 2018, 3 Dec 2018 at Solvay as well as in January & February 2019, actions and contributions were set up to organize the “global” event Empowering Women in Chemistry: A Global Breakfast Event on February 12th, 2019. (See below)

3. General Assembly of the Scientific Union

No General Assembly in 2018.

4. Others activities

In Belgium:

[a] *Science in Space and on Earth*, at the Royal Academy of Sciences and Arts in Brussels on Saturday May 5, 2018⁷

Goal: encourage students (17/18 years of age) from the younger generation to pursue graduate studies in sciences, life sciences, earth sciences and all aspects of technology and make them understand through our action how sciences are connected to the real world. Our intention was to repeat the very successful previous event in 2016 by inviting Dutch and French-speaking top scientists/speakers together with students. The choice of the speakers appealed to the young audience. Exchanges during breaks and lunchtime were very successful.

200 participants, both from North and South Belgium attended. These high-school's students were chosen from the list of finalists of the Science Olympiads Contest (Physics, Biology, and Chemistry).

We showed the audience how science and technology in Belgium are the best tools to get exciting jobs later on. The event was a real success as the speakers stimulated the audience with exhilarating lectures.

⁷ See page 79.

5 lectures by:

- Dr. Frank De Winne: European Space Agency
- Dr Emmanuel Jehin: Institut Géophysique ULG
- Dr. David Dehenauw: Royal Meteo Institute Belgium
- Dr. Vincent Ginis: Vrije Universiteit Brussel and Harvard
- Dr. Laure Twyffels: Institut de Biologie Moléculaire Gosselies

In parallel, the participants got access to Xperilab at lunchtime. The Xperilab truck, sponsored by le Musée des Sciences Naturelles, and Solvay, crosses the country. It gives young people an opportunity to experience science and technology. It became very popular in Belgium. The hands-on chemistry and physics demonstration in the Xerilab-bus were another highlight of the meeting on 5 May 2018.

International

The list of Belgian Scientists who are active in IUPAC Divisions and Committees in 2018/2019 reads as follows:

Paul Baekelmans - *COCI Committee of Chemistry and Industry* **Titular Member**

Michael Berglund - *SIAM Subcommittee for Isotopic abundance measurements*

Rita Cornelis - *Division VII Chemistry and Human Health* **President** and member of the ICTNS of IUPAC and is active in reviewing manuscripts

Edmond Differding - *COCI*

Jan Heeres - *Division VII, Subcommittee Drug Delivery ad Discovery*

Brigitte Van Tiggelen - *IUPAC 100, Chemistry & History*

This list emphasizes the voluntary input by Belgian Chemists to IUPAC.

[b] IUPAC 101st Board Meeting, Bratislava, Slovakia 7-8 April 2018: Rita Cornelis.

[c] IUPAC Division VII meeting in Boston on August 25 – 26 August 2018: Rita Cornelis.

[d] IUPAC Committee Chemistry Meeting (COCI) Bratislava, Slovakia 7-8 April 2018: Paul Baekelmans.

[e] IUPAC-Solvay International Prize for Young Chemists. The prize rewards every year a selection of 5 PhD thesis students from around the world! Solvay supports this prize. Paul Baekelmans acts as a selection committee member, representing Solvay and the National Committee:

5. Future perspectives

[a] Preparation to the 100yrs of existence of the IUPAC at the General Assembly in Paris 2019.

2019 is the 100th anniversary of the founding of IUPAC. IUPAC organises a yearlong celebration highlighting its contributions. They created an interactive website platform to encourage participation in global activities and to organize local events. Use the hashtag #iupac100 on Twitter (@IUPAC) and Instagram. Email: iupac100@iupac.org ; Website: www.iupac.org/100.

2019 is also the 150th birthday of the Periodic Table and was proclaimed International Year of the Periodic Table (IYPT) by UNESCO and IUPAC.

The Belgian Delegation (Paul Baekelmans and Rita Cornelis) will participate as NAO representatives and committee/division members/president in Paris (July 2019)

[b] Empowering Women in Chemistry: A Global Breakfast Event on February 12th, 2019

Rita Cornelis supervised and managed the event, in collaboration with the team of Solvay and of Conceptum.

Upon the invitation of IUPAC 100, the NCS/CNC joined the *Round the world* breakfast. More than 200 organizations participated. The first breakfast began in New Zealand at approximately 07:00 local time, initiating a global hand wave around the world ending in Hawaii.

The Global Women's Breakfast entitled *Empowering Women in Chemistry* aimed at assisting female chemists to expand their network of contacts, both locally and internationally. Another goal was to bring together female scientists at different stages of their individual careers so that they can learn from each other

In Brussels, the joint event of the National Committee Chemistry together with Solvay, the host and supporter, gathered 120+ women from Belgian Universities, Industry, Essenscia, ... at the Solvay Campus, the Headquarters of Solvay in Brussels.

After an introduction by Rita Cornelis and the welcome by Ilham Kadri (CEO of Solvay), followed contributions by University Deans and Heads of Departments from the Industry. Next the 150 guest (essentially women) were invited to 3 separate workshops to debate about the main issues women in science are facing in their career, family... The programme is added as an attachment⁸.

⁸ See page 81.

6. Financing

It goes without saying that the various actions taken by the National Committee of Chemistry of the RASAB in their endeavour to promote science, sustainable chemistry, education etc.. request a budget.

It should be emphasized, that in the year 2017 and again in 2018/19 the financial contribution by Solvay has been quite significant. The close relationship of the committee with the industry paved the way to the necessary funding. Following investments and donations substantiate this statement:

- Participation at meetings: 2.000 €
- Science in Space end on Earth: 1.000 €
- Support to Science in Space and on earth: 8.000 € (Fonds Ernest Solvay)
- Xperilab at the Academy: for free
- Contribution to the IUPAC 100 yrs: 30.000 € + International Olympiads Paris 15.000 €
- International IUPAC-Solvay Prize for Young Chemists 20.000 €
- Health and Safety Programme: total costs (not included allocated time) in 2017: 5.500 €
- Empowering Women in Chemistry Breakfast 25.000 €

Total contribution: 106.500 €

NATIONAL COMMITTEE FOR CRYSTALLOGRAPHY

INTERNATIONAL UNION: INTERNATIONAL UNION OF CRYSTALLOGRAPHY (IUCr)

1. Introduction, mission, goals

Crystallography is the study of the atomic and molecular structure of diverse substances using microscopy and diffraction techniques in order to understand the relationship between atomic structure and properties of these materials.

The objectives of the National Committee of Crystallography are to promote cooperation in crystallography, to contribute to all aspects of crystallographic research, to catalyze the relations of crystallography to other sciences, to promote crystallography for the general public, and to represent Belgian crystallographers in international associations.

The committee has its own web site⁹, which are administered by Johan Wouters, and organizes a annual crystal growing competition for pupils at secondary schools and biannual Belgian Crystallography Symposium BCS.

2. Meetings of the Committee

[a] The first meeting took place on 14 March 2018 in Brussels (Academy Palace). During this meeting the program and organisation of the tenth edition of the Belgian Crystallography Symposium BCS-10 organized by the National Committee of Crystallography in the Academy Palace in Brussels was discussed (date: 17 October 2018, list of speakers was finalized, organisation of poster session, exhibition, catering and flash presentations). An overview of the inscriptions and preparations of the Belgian Crystal Growing Competition was given and the date of the prize awarding ceremony in the Academy Palace was fixed at 9 May 2018. During the ceremony Dr. Yves Kerremans (WTOCD Lier) will deliver a lecture about "Diamond". The committee has decided to maintain the new initiative 'Invite a crystallographer' also during the next school year. This lecture is also useful for a more general public (a powerpoint presentation is available) . Vouchers for free lectures will be given as prize for the Belgian Crystal Growing Competition. Tom Leysens has reported on the activities of the Subcommittee for Crystal Growth. The Belgian representation for the Council Meeting of the European Crystallographic Association (ECA) in Oviedo was discussed. Finally, the new composition of the committee was discussed and the Board was elected.

⁹ www.sites.google.com/site/xallobe and www.iycr2014.be

[b] Some members of the Committee were present at the judging (Namur, 21 April 2018) and prize awarding ceremony (Brussels, 9 May 2018) of the Crystal Growing Competition.

[c] The second meeting in the Academy Palace in Brussels on 17 October 2018 was opened with a short evaluation of BCS-10, after which a report of the ECA Council Meeting was presented by Yaroslav Filinchuk (Belgian representative in ECA Council). The first preparations and preliminary timing of the 2018 edition of the Belgian Crystal Growing Competition were made. One request by a school in Brussels for a lecture in the framework 'Invite a crystallographer' was handled further. The request of the Subcommittee on Crystal Growth to organize the congress Crystal Growth of Organic Materials (CGOM) in 2020 was approved by the committee members. The duration of the meeting is three days with about 150 participants. Eventually the meeting can be combined with BCS-11 in Brussels at the end of September 2020.

3. General Assembly of the Scientific Union

The next General Assemblies will be held during the IUCr Meetings in Prague (2020) and Melbourne (2023).

4. Other activities

[a] The National Committee of Crystallography has organized in 2018 with support of both academies and sponsor Acros Organics a successful eighteenth edition of the Crystal Growing Competition for pupils of the secondary schools (see web site <http://www.chem.kuleuven.be/bcc/>). For this edition borax has been chosen as crystallizing compound. The judging of the submitted crystals took place on 21 April 2018 in Namur. During the proclamation on 7 May 2018 in the Academy Palace in Brussels also a small number of geodes have been exposed and evaluated.

[b] The National Committee of Crystallography has organized on 17 October 2018 the Tenth Belgian Crystallography Symposium BCS-10 at the Academy Palace in Brussels. The detailed program is given in appendix¹⁰.

[c] Yaroslav Filinchuk has represented the Committee at the Council Meetings of the European Crystallographic Association ECA in Oviedo (22-27 August 2018). Joke Hadermann was Officer of the ECA Executive Committee until end August 2018. Frederic Hatert is co-chair of the Special Interest Group on Mineral and Inorganic Crystallography. Yaroslav Filinchuk is co-chair of the Special Interest Group on Crystallography under Extreme Conditions.

¹⁰ See page 83.

[d] Frederic Hatert and Joke Hadermann are active members of respectively the IUCr Commission Inorganic and Mineral Structures and the IUCr Commissions Aperiodic crystals and Electron Crystallography. L. Van Meervelt has participated as General Secretary and Treasurer to the meetings of the IUCr Finance Committee in Leuven and IUCr Executive Committee in Oviedo. As councillor D. Maes has participated to the meetings of the International Organization for Crystal Growth.

[d] As a continuation of the IYCr2014 activity 'Invite a crystallographer' several (honorary) members have delivered lectures in secondary schools.

5. Future perspectives

- Organisation of the nineteenth Belgian Crystal Growing Competition in 2019 (see chem.kuleuven.be/bcc).
- Participation by Belgian schools at the International Crystal Growing Competition.
- Organisation of the 11th Belgian Crystallography Symposium BCS-11 in Brussels (September-October 2020).
- Participation at Council Meeting of the European Crystallographic Association (Vienna, 18-23 August 2019).
- Organization of congress Crystal Growth of Organic Materials CGOM in September 2020.



Laureates Belgian Crystal Growing Competition 2018 - Academy Palace - 7 May 2018

NATIONAL COMMITTEE FOR GEODESY AND GEOPHYSICS

INTERNATIONAL UNION: INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS (IUGG)

1. Introduction, mission, goals

The BNCGG serves as a link between IUGG and the Belgian scientists working in the fields of Geodesy and Geophysics. This activity reaches a climax every four years at the IUGG general assembly. The BNCGG is then charged to propose to the Academy the national delegates to IUGG and to its eight Associations:

- International Association of Cryospheric Sciences (IACS);
- International Association of Geodesy (IAG);
- International Association of Geomagnetism and Aeronomy (IAGA);
- International Association of Meteorology and Atmospheric Sciences (IAMAS);
- International Association of Hydrological Sciences (IAHS);
- International Association of the Physical Sciences of the Ocean (IAPSO);
- International Association of Seismology and Physics of the Earth Interior (IASPEI);
- International Association of Volcanology and Chemistry of the Earth Interior (IAVCEI).

In the meantime, the BNCGG organizes regularly conferences by known Belgian or foreign scientists.

The BNCGG tries also to encourage the participation of young scientists to the IUGG General Assemblies by attributing grants.

Belgium was among the 9 countries that established the International Union of Geodesy and Geophysics (IUGG) on July 28, 1919 in Brussels. The Belgian National Committee for Geodesy and Geophysics (BNCGG) was created shortly after in 1921. The running expenses were covered until 1950 by the National Cartographic Institute and later on by Royal Academy of Belgium, now split into the "Koninklijke Vlaamse Academie van België voor Wetenschappen en Kunsten" and the "Académie royale des Sciences, des Lettres et des Beaux-Arts de Belgique".

In parallel with the BNCGG, exists since 1955 an "Association sans buts lucratifs de droit belge" called "Comité National Belge de Géodésie et de Géophysique, Bruxelles". It is charged to administrate the finances of the Committee.

2. Meetings of the Committee

The traditional annual BNCGG General Assembly has been held on January 19 in the Nicolet room of the Royal Belgian Institute for Space Aeronomy (BIRA-IASB). The presentation by Dr. S. Dewitte foreseen that day had to be postponed on Jan 25, 2018.

Title: Measurement of the Earth Radiation Budget - A review and future perspectives

The Earth Radiation Budget (ERB) at the top of the atmosphere quantifies how the earth gains energy from the sun and loses energy to space. It is of fundamental importance for climate and climate change. In this presentation the current state of the art of the satellite measurements of the Earth Radiation Budget is reviewed. Combining all available measurements, the most likely value of the Total Solar Irradiance at solar minimum is 1362 W/m^2 , the most likely earth albedo is 29.8 % and the most likely annual mean Outgoing Longwave Radiation is 238 W/m^2 . A link exists between long term changes of the Outgoing Longwave Radiation, the strengthening of El Nino in the period 1985-1997 and the strengthening of La Nina in the period 2000-2009. The current ERB measurements have sufficient stability to track the temporal variability of the Earth Energy Imbalance (EEI) driving climate change, but they can not measure its absolute value with sufficient accuracy. I introduce the Low Earth Orbit Novel Advanced Radiation Diurnal Observation (LEONARDO) concept which aims at making the first ever significant measurement of the EEI from space, and which will be submitted to the currently open ESA call for ideas for a new Earth Explorer mission.

3. General Assembly of the Scientific Union

No scientific Assemblies of the IUGG Associations held during 2018.

The BNCGG participated to the voting procedure to accept Serbia, Algeria, Macedonia, and Uruguay as new Associate Member states.

The BNCGG submitted two candidates to the IUGG Early Career Scientist Award: Dr. Qiuzhen YIN and Dr. Arnaud MAHIEUX. Dr. Qiuzhen YIN received the Award.

4. Others activities

[a] Preparation of the Centennial IUGG in 2019.

A meeting was held on 19 October 2018 to discuss the preparation of the Centennial Meeting to be organized in 2019.

Were present Kris Vanneste, Thierry Camelbeeck, Johan De Keyser, Steven Dewitte, and Ann C. Vandaele. Discussion on the format of the meeting as well as when to organize it were held. A 3 day meeting was proposed, with Day 1 being an Academic session with invited international speakers, followed by at least 2 days more focused on Belgian contributions through talks and posters. The Palais des Academies or the UB were proposed for potential locations. ACV inquired to the RASAB for the possibility to rent one room at the Academies at least for Day 1 and for the reception. Grégory VAN AELBROUCK des Académies responded, proposing either the Albert II room (236 places) or the 'Trône' room (250 places) for Day 1 (potentially on the 24 Sept), and the Patio with additional smaller rooms (between 25 and 140 places) for the 25-26 Sept. The price for the location is 7500 E.

For Day 1, the following format was proposed: 8 talks, one per Association, of 45 min each; each talk would be (1) a first presentation by an official representative of the Association (international), followed by (2) the Belgian representative focusing on Belgian activities.

Potential Belgian representatives:

- Cryosphere : Philippe Huybrechts
- IAG: Véronique Dehant
- IAGA: Johan De Keyser
- Hydrology: Ann Van Griensven
- IAMAS: (Steven Dewitte) Martine De Mazière [Steven would do the general introduction]
- Oceans : J.M. Beckers
- Seismology + Volcanology : Thierry Camelbeeck (+ P. Delmelle)

The amount of the fee should be decided.

If possible, announce the meeting early (end of the year)

Steven Dewitte would check with the President of the IUGG for the selected dates, and ask who has to be officially invited.

5. Future perspectives

[a] The next BNCGG General Assembly is planned on Thursday January 17, 2019

[b] The next European Geophysical Union (EGU) conference will be held from 7 to 12 April 2019 in Vienna, Austria.

[c] The next American Geophysical Union (AGU) meeting is planned in December 2019 in San Francisco, USA.

[d] The next IUGG General Assembly will be held in Montreal, Canada in 2019 (9-18 July). We need to appoint the National Delegate to the IUGG GA 2019 to be held in Montreal 2019. Three sessions of the IUGG Council Meeting will be held on 9, 12, and 16 July 2019.

NATIONAL COMMITTEE FOR GEOGRAPHY

INTERNATIONAL UNION: INTERNATIONAL GEOGRAPHICAL UNION (IGU)

1. Introduction, mission, goals

The National Committee for Geography represents Belgian scientists working in the field of Geography in the work of IGU (International Geographical Union). This Committee is a forum for exchanging views on the landscape of Geography in Belgium.

2. Meetings of the committee

The National Committee for Geography met three times in 2018: 3 February, 5 May and 29 September. The themes discussed were at the meetings:

[a] Position of geography in society, secondary schools and the academic world.

In the framework of both Dutch- and French communities program reform, as well as the reform of the initial training of French-speaking teachers, the committee has been particularly attentive to developments. It has constituted a place of information and exchange, but also a relay for various mobilizations aiming to maintain a sufficient contribution of geography in the training of young people. The involvement of committee members in the various consultative bodies set up as part of these reforms has to be noted, but also the many mobilizations (carte blanche, petitions, press kits) that had to be put in place at the initiative of the teachers associations (VLA and Fegepro) to influence debates and political decisions.

[b] Organization of Belgian Geographers Days in 2019

The Belgian Geographers Days are an initiative of the CNG, organized by the different universities. This is an opportunity for Belgian geographers to present their research and exchange ideas and results. It is especially aimed at young geographers who can present their research to researchers from other Belgian universities. This is an important opportunity to get to know each other better. The BGDs will be organized in 2019 by the UGent. The teaching part could focus on new learning outcomes in secondary education. The proposed dates are October 18 and 19, 2019.

[c] Doctoral schools

The situation of the doctoral schools is clearly different for the Dutch-speaking and French-speaking universities. For the first, the doctoral schools are organized by university, the

geographers being most often found in natural science schools. In the French community there is a transversal structure organized by discipline and not by university.

In 2018, at the request of the Committee, French-speaking colleagues set up a doctoral school to have a training offer, but also to increase the visibility of geography at the FNRS. The case will be handed over in 2019 to the FNRS. The activities of the school will include the Belgian Geographers Days and an annual seminar. These activities will also be open to non-francophones.

[d] Enrollment of students in geography and the evolution of the training offer

Figures for 2018-19 are encouraging, with numbers of students similar to previous years (VUB, ULB, ULg) or slightly higher (UGent, KUL). The committee was informed of the reforms made by the different Universities in the Geography curus. It is also attentive to the development of masters in the framework of "topic studies", some mobilizing the departments of geography (Urban Studies, Master in English ULB-VUB, Smart Rurality UCLouvain, Uliège and Unamur).

[e] Participation in IGU activities (International Geographic Union)

Benjamin Wayens and Philippe De Maeyer attended the various meetings of the Quebec City Congress in August 2018 and reported to the Committee. The IGU celebrates its 100th anniversary congress in 2022 in Paris with the theme "Times for Geography". The Chairman of the French Committee contacted the CNG to seek the direct participation of Belgium in this organization. Two of the CNG members will follow these preparations, Benjamin Wayens and Mathieu Kervyn.

[f] BeGeo Annual Geographical Information Congress

The National Geographical Institute organizes annually BeGeo, national congress with exhibition dedicated to geographical information gathering at the same time the public authorities, the private sector and the world of the research. Via the cartography and GIS subcommittee, the National Committee is asked both to contribute to the conference program and to promote the participation of university students, and possibly with specific modalities, students from the end of secondary school).

[g] Geography magazines published in Belgium

Belgeo magazine is co-published by the national committee. It is more and more consulted and submissions of articles allow to publish serenely and without delay. From the administrative point of view, it is an "association de fait" between the Geography Committee and the Belgian Royal Society of Geography. The FNRS and the University Foundation finance the journal. Etienne Van Hecke, who had been providing financial oversight for many years, handed the treasurer to Christian Vandermotten and Mathieu Kervyn, assuring a balanced presence of the national

committee and the Royal Belgian Society of Geography and the presence of members attached respectively to a French-speaking and Dutch-speaking institution.

All issues of the historical journals of the Royal Belgian Geographical Society, SOBEG and De Aardrijkskunde have been scanned for 2-3 years. The files have been entrusted to the Royal Library, which is responsible for putting them online in their search and consultation tool. However, there is a significant delay on the side of the Royal Library.

The newsletter of the Geographical Society of Liège has put all its numbers online since 1988.

3. General Assembly of the Scientific Union

No General Assembly in 2018.

4. Subcommittees

[a] Subcommittee National Atlas

The large 'Atlas' project subsidized by the Federal Science Policy allowed the development and publication of 5 of the 6 volumes. Only the Atlas of Cities manuscript has not been issued. However, Lannoo's takeover of Academia Press has negatively influenced the distribution and marketing of the Atlas.

Annual subsidies from the Federal Science Policy Office are used for the Digital Atlas. Without these subsidies, this project can not be operational and updated. The year 2018 is a pivotal year in which the current system was adapted to the new version of Geoclip. There was intense communication between Emc3 (Geoclip) and the Geomatics Unit of the University of Liège. The new software presents new possibilities, among others the use of the breakdown at the statistical sector level for Belgium. The subsidies of 2016 have largely allowed the purchase of the new version, those of 2017 the commissioning of the new version of the software used (in other the recovery of the current cards in the new system) which will be finalized with the subsidies 2018 which will also be used for the uploading of new data.

[b] Subcommittee for Cartography – SIG & Subcommittee on Geomorphology

See page 84 & page 86.

NATIONAL COMMITTEE FOR GEOLOGICAL SCIENCES

INTERNATIONAL UNION: INTERNATIONAL UNION OF GEOLOGICAL SCIENCES (IUGS)

1. Introduction, mission, goals

The National Committee of Geological Sciences forms part of the "Classe des Sciences de l'Académie royale de Belgique" and the "Klasse der Wetenschappen van de Koninklijke Academie van België". The mission of the committee is to promote geology and to co-ordinate at a national and international level, the activities of the geological departments that are present in the different Belgian academic and scientific institutions. Members of the committee also act as representatives of Belgium in the International Council of Scientific Unions (ICSU). At present, the national committee co-ordinates the activity of a number of commissions and working groups such as the National Commission on Stratigraphy (sub-divided in specific sub commissions) and the Working group on Structural Geology. The National Committee of Geological Sciences of Belgium has close relationships with the International Union of Geological Sciences (IUGS), which is also a member of ICSU. The IUGS is a non-governmental organization that promotes and encourages the study of geological problems, especially those of worldwide significance.

2. Meetings of the committee

[a] 3 May 2018, Palace of Academies

The board members are unanimously elected. Tim Debacker is officially appointed as Committee member. There are currently 15 members in the Committee, of which 8 are French-speaking and 7 are Dutch-speaking. Preferably a Dutch speaking member is sought. Steven Goderis (VUB) have submitted his cv and application letter. His accession will be voted on at the next meeting.

Discussions are being held on how to make geology more popular among the public. Geology has acquired a somewhat negative image in the past (mining, extraction and burning of fossil fuels,...) and now there is the opportunity to adjust this image (e.g., geothermal energy, subsurface spatial planning ,...). Proposed ideas for this, where NCGW can play a role: Geoparks – geosites, Roland Dreesen and Sophie Verheyden will be invited to give a presentation on the next meeting.

[b] 20 December 2018, Palace of Academies

As there was less than half of members present the appointment of Steven Goderis as new member, is postponed to the first meeting of 2019. Two external experts were invited to present their experiences with promotion of Geology in Belgium:

- GEOPARK Famenne-Ardenne – Sophie Verheyden The Famenne-Ardenne UNESCO Global Geopark, is the only one in Belgium and awarded the label in April 2018. Main goal for the creation of the park is the valorization and protection of the geological heritage. Geopark encourages tourism and collaboration between scientists and the touristic sector and local people. The label is valid in the period 2018-2023, then UNESCO experts will evaluate the performance and realizations. The main problem for the moment is that there are too few experienced guides to cover the fieldtrip/other requests.

- Geopark in Limbourg - Roland Dreesen

Context: On the basis of a group of volunteers, Likona, is dedicated to Geology valorization and protection. They already published an atlas of the building stones of Limbourg. They organize fieldtrips and developed geological cycling tours and geological walking trails. The main objectives for LIKONA are “Urban geology” and promotion and protection of the geological outcrops in Flanders. Challenges are the absence of regulation on protection of geological outcrops and that education on Geology in high school is often very limited. Following Roland’s opinion: The authorities of these regions don’t care about the geology – sometimes a site can be protected because of the occurrence of a specific ecosystem, but the geological arguments seem to be inefficient.

Main conclusions:

The National Committee wants to play a supporting role in the development of Geoparks in Belgium. Therefore, we try to attend the International Geoscience Programme (IGGP) council in Paris on 21 February 2019.

3. General Assembly of the Scientific Union

No General Assembly in 2018.

4. Others activities

- New President of the National Commission for Stratigraphy (NCS). The board of NCGS received the request from prof. em. Noël Vandenberghe to accept Bernard Mottequin of RBINS as Noel's successor as chairman of the National Committee on Stratigraphy (NCS). After consultation of the board of NCGS and its members, no objections were raised against the proposal to appoint Dr. Bernard Mottequin as new chairman of the NCS.
- Election for the open position: IUGS Councillor: we vote for Dr. M Calderon from Chile. Our choice was based choice is based on the fact that South America is currently not

represented in the council and, based on the documents, among the three candidates from this part of the world, he gives the best impression to us.

5. Future perspectives

- Attending the the International Geoscience Programme (IGGP) council in Paris on 21 February 2019.

NATIONAL COMMITTEE FOR LOGIC, HISTORY AND PHILOSOPHY OF SCIENCES

INTERNATIONAL UNION: INTERNATIONAL UNION OF HISTORY AND PHILOSOPHY OF SCIENCE (IUHPS)

1. Introduction, mission, goals

According to the mission of the National Committees, as stipulated in the Royal Decree of 2 April 1979, the National Committee aims to promote and coordinate research activities on Logic, History and Philosophy of Science in Belgium, primarily with regard to the international representation of Belgian scholarship in the International Council of Scientific Unions.

The National Committee is the Belgian member of the International Union of History and Philosophy of Science (IUHPS), both of its Division for History of Science and Technology (DHST) and its Division of Logic, Methodology and Philosophy of Science (DLMPS).

In practice, the main goals of the National Committee include:

1. To represent Belgian scholarship on the international level by being present as a member or spokesperson with international organizations (IUHPS, European Society of History of Science).
2. To coordinate Belgian scholarship by setting up collaborations and joint projects with other institutions (National Centre for the History of Science [KBR], Gewina [Belgian Dutch Society for the History of Universities and Science], BSLPS [Belgian Society for Logic and Philosophy of Science]).
3. To promote the integration of historical and philosophical studies of science.

In addition to these goals, the National Committee also acts to promote general interest in the history of (Belgian) science, and to disseminate the results of contemporary scholarship to a wider audience.

2. Meetings of the Committee

The Committee met on 21/12/2018.

Main points on the agenda included: report BESTOR 2018; financial report; report on YRD6 [see below]; projected initiatives for 2019.

3. General Assembly of the Scientific Union

No General Assembly in 2018.

4. Other activities

[a] Young Researcher's Days VI

On 20 & 21 September 2018, the NC organised the *Sixth Young Researcher's Days in Logic, Philosophy of Science and History of Science*, once again in faithful collaboration with the BSLPS (www.bsllps.be). Coordinators were Steffen Ducheyne (VUB, BSLPS), Steven Vanden Broecke (UGent, NC) en Peter Verdée (UCL, BSLPS). As with the last edition (2016), the quality of paper proposals was rather high, allowing a total of 20 young researchers to present their work.

To maximize the attractiveness of YRD6, three keynote speakers were invited, each addressing one of the three core sub-disciplines of YRD6: Nick Hopwood (Cambridge) for history of science, Christina Chimisso (Open University) for philosophy of science, Hans Van Ditmarsch (Nancy) for logic of science. The keynote speakers actively participated during most of the papers and question rounds.

In total, some 35 people attended YRD6. Participants appeared to share the feeling that the NC's YRD's respond to a real need in the *science studies*-community of Belgium and beyond. Two critical remarks are in order as well:

- (1) The latter sentiment appears to be shared by philosophers and logicians of science, rather than historians.
- (2) Active participation by NC members was significantly limited this year. Despite repeated calls by Steven Vanden Broecke, NC members also failed to recruit any young researchers. While probably being a contingent phenomenon, in light of the more proactive role of the NC in YRD5 (2016), it remains regrettable.

[b] One-day Workshop *Literary cultures and the sciences in the Low Countries*, projected for the autumn of 2019

One of the historically most important traditions in Low Countries history of science, the study of vernacular science traditions of the late middle ages and Renaissance periods ("arteslitteratuur") has become significantly less visible over the past decade (mostly for contingent reasons of researcher's career paths). At the same time, new local scholars of literary cultures, urban culture, and early modern philosophy, have been developing fascinating alternative approaches, methodologies and interpretations for dealing with the same source materials. This workshop

seeks to pool scholarly resources in Belgium and the Netherlands so as to make both groups interact in a mutually productive fashion, and to help reinvigorate the tradition of scholarship on the “arteshliteratuur”.

[c] One-day Workshop *When doctors travel overseas. Colonial medicine and the Low Countries*

Along with GEWINA and the research group “Cultuureschiedenis na 1750” (K.U. Leuven), the NC is one of the co-organizers of the 2019 Gewina spring meeting, to be held on 5 April 2019 at the Royal Museum for Central Africa, Tervuren.

[d] CLMPTS XVI (Prague, 5-10 August 2019)

The NC will be represented at the 16th International Congress On Logic, Methodology And Philosophy Of Science And Technology: “Bridging across academic cultures”

Prague, 5–10 August 2019 (<http://clmpst2019.flu.cas.cz/>).

5. BESTOR

In 2019-2020, creative and original inventory projects, as well as translations remain important in order to allow the creation of new records. Keywords here will be originality, creativity and popularity. Bestor will seek collaboration with volunteers, especially young researchers. As in 2018, we will continue our special efforts on the disclosure of the available information to readers and on tapping into new reader audiences, with a strong focus on reaching young researchers and widening our audience to include amateur historians. Bestor will also further develop its role as information and news platform. Action words here will be ‘networking’ and ‘following up on ongoing research’.

[a] Projects to create new records

New records as part of four thematical inventory projects will be made in 2019. For 2020, we foresee two projects. In our choice of topics we focus on the originality of the approach and the potential popularity.

Women scientists and their networks will be the topic of the first inventory project (March-June 2019). Bestor has already carried out a project on this topic in 2015-6. However, new material and discoveries call for a reopening. To this end, Bestor will collaborate with scholars, in particular with doctoral researcher Sarah Erman (KULeuven/UNamur/Université Paris Diderot), who studies Belgian women biologists and plant biologists (1875-1940) and who will create and update Bestor records as a part of her Inspire Fellow-mandate. The total output will consist of some 15 new records, while some existing records will be revised. The new records will be brought to the

public's attention, amongst others in the newsletters of October 2019 and January 2020, the *Nationaal Biografisch Woordenboek* and third party websites and blogs. Experience shows that the topic of women scientists attracts wide interest, not only of historians of science, but historians in general as well as lovers of history and the broader lay audience.

From July to September 2019 and from January to March 2020, Belgian scientists and Darwinism will be in the limelight. Central is this project will be the creation of a portal (see further). Also 3 Science Stories will be created. Existing records will be update and possibly new records will see light.

A third project, The birth of the Belgian scientific policy, was already launched in November 2018 (to Aug 2019). This project makes Bestor enter a new time, as it is devoted the postwar period. We will study the National Commission for Sciences (1957-1970), an important meeting between scientists and policymakers which made Belgium enter the era of Big Science and state-lead scientific policy. The output will consist of 2 Science Stories and 9 new records. The first Science Story, about the Commission itself, will come out in May 2019. 50 years earlier, on the 5th of May 1959, King Baudouin held a historical discourse in the Academies Palace calling for a "National aid for science". The second story will deal with the institutional power struggle that lead to the birth of Belspo in the aftermath of the National Commission. Promotion will be done through: Newsletter April-May-June 2019, Newsletter October-November-December 2019, Facebook...

Under the title The world of agricultural engineers, the fourth project deals with a new field of historical research for Bestor: engineering history (January to June 2019). Engineers played a very active part in the history of sciences in Belgium, at the intersection of society and academia. They deserve a better representation in the Bestor database. Firstly, we will focus on the agricultural engineers, by studying the scientific journals edited by the alumni associations of the three agronomic high schools of Belgium: Leuven, Ghent and Gembloux. In this way we study the most important protagonists, their networks, organizations, prizes and institutions. We also address the issue of the development of the profession of agricultural engineer during the Interwar Period: their struggle for recognition as a scientist and for the protection and distinguishment of their degrees, and their social engagement on behalf of farmers in a time of crisis. The output will consist of 1 Science Story and about 15 records. Promotion: Newsletter Juli-Augustus-September 2019, Facebook...

Furthermore, an excellent promotional opportunity calls for the reopening of our project on Congo en de wetenschappen/Le Congo et les sciences (Jan-March 2019). We will publish some remaining planned records, while adding important new ones - projects on Bestor are by definition never completed. The goal is to present the portal during the Colloquium 'When

Doctors travel overseas' (April 5, Tervuren). There, we will also launch a call for contributions to the portal by hosting a Wiki writing marathon on colonial science. We will invite scholars (especially doctoral and master students) to create a short entry on Bestor that draws from their personal expertise (e.g. a biography). By means of contact forms and information leaflets we will follow up on the completion of the record after the colloquium.

For 2020, we foresee two projects. The first (April-July) will introduce the Bestor audience to a selection of the Belgian inventions that changed the world. The output will consist of 5 (or more) records. With this low-threshold topic we aim especially for a lay audience. Goal is to make them acquainted with history of science and Bestor. We will promote through our newsletter and sites, blogs and Facebook pages of non-professional history lovers.

The second project will shed light on the place of religion in the work of Belgian scientists and scientific organisations (Aug-Dec 2020). Through a subdivision into subthemes such as 'Catholic science' and 'liberal science', we treat those scientists and societies who in one way or another explicitly addressed a theme of faith or a belief-free theme.. In the pillarized Belgium, rather than engaging in debate, each group wrote mainly for its own supporters. Some further development of this project is needed So far, we plan an output of 10 records and possibly 2 new categories.

Bestor will continue its fruitful collaboration with other volunteers – students, (young) researchers as well as amateur historians and exact scientists – for the extension or revision of existing records and the creation of new records. Bestor is committed to support especially young researchers who volunteer. This is why we offer them the possibility to upload their original, inadaptatable, signed text in the database, so they can refer to these publications.

[b] Projects to disclose website content and increase user friendliness

In 2018-9 Bestor will continue its efforts to disclose the riches of the database. Two more **portal pages** will be created. The first portal will deal with the very topical subject of Belgian scientists and Darwinism. Amongst other things, the reader will have an overview of the 'Who's who' in Belgian evolutionist, fixist or (neo-) Lamarckian research, of institutions dealing with these questions, of zoological and other collections, of traces of Charles Darwin in the Belgian public space etc. The portal will be up and running in October 2019 (following the 160th birthday of *Origin of Species* in November). The second portal, as mentioned above, will group all records, in other words, all sites and places in the public sphere that are reminiscent of important moments in the history of Belgian scientific activity or discovery. The aim of this portal is to have an easy tool at hand to introduce the history of Belgian science into the local communities. The portal can thus serve as a guide and stimulus for local teachers, journalists or simply tourists to visit places of

interest concerning Belgian science. The project will be presented, amongst others, in the January 2020 newsletter

Our focus will also be on increasing the user friendliness of the website. We will continue our web design update operation, in cooperation with the ICT team at Faculty of Arts KU Leuven. Upon its finishing, certain wiki-content will have to be adapted accordingly. It is not yet clear what workload this will represent for the Bestor collaborators. To finalise, Search Engine Optimisation will be implemented. It will be necessary to hire a trainee for the execution of these projects. She or he would then be supervised by both the ICT team at KU Leuven and by Bestor. For the financing and supervising of this trainee - who would work for Bestor on the KU Leuven database and amongst KU Leuven staff - we need to work out a solution that is agreeable for all parties.

[c] Translations

In the past, the French and Dutch record lists were very unequal. Bestor is convinced of the importance of offering articles to readers of both languages. Therefore in 2019-20 we will continue our translation efforts. Halftime collaborator Royen will be responsible for carrying out the Dutch to French translation. Priority will be given to recent inventory projects, so that they can be introduced to the newsletter readership (*Congo en de wetenschappen*, *Plaatsen van wetenschap*), followed by ongoing projects of 2019-20 (especially *Vrouwen en wetenschap*), newsletters and related records, Facebook posts... Furthermore, the collaboration with National Committee member Anne Staquet of the Mons University to present Bestor Science Stories as an exercise in the 'ateliers' of linguistics students will be continued.

Diser will take care of the French-to-Dutch side of translations of ongoing projects, of Facebook posts etc.

[d] Developing Bestor as information and news platform

Bestor remains committed to developing its function as information and news platform, to become a reference for those seeking information on current events and publications on the history and technology of science. In 2019-20 we wish to offer more regular news of ongoing research projects (MA thesis, doctoral, postdoctoral) in Belgium. The members of the National Committee will report about such research in their universities on a regular basis.

[e] Promotion and dissemination

Promoting Bestor so as to gain more visitors, volunteers, newsletter subscribers and followers, remains a prominent mission in 2019-20. In our promotional efforts two questions will be central:

Firstly, through which channels? We will work in four channels where improvement can be achieved, according to analysis of statistical information. And secondly, what target groups? Students and young scholars are and should remain our most important target group, following the mission of the National Committee to support young researchers by providing them information, seeking collaboration and making them visible in the scholarly world. However, the community of scholars and amateurs of history of science being rather small, we will make efforts to tap into new audiences of lay amateurs of history.

1) Social media: We will continue to tap into new Facebook audiences, by grasping every opportunity to share messages with other organisations and being active on their pages. We will make special efforts to track down organisations, groups and initiatives of ‘fans of history’ in Belgium, and be active on their pages, promoting website and newsletter.

2) Newsletter: In the following years Bestor will continue its newsletter. Extending the mailing list of the newsletter will be a primary goal. In 2019 our focus will be to increase readership in the French speaking community.

3) Third party websites and events: we will increase our presence on related websites and blogs about history, sciences, biographies, Belgium, etc, such as Historiek.net, cultuurgeschiedenis.be and Shells and Pebbles. Every newsletter and finished project will if possible be paired with an online publication/promotion elsewhere. Being mentioned and linked by other websites is an important strategy for websites to gain more views. Analysis of the origin of our visitors still show a lot of growth potential in this channel.

Offline, we will continue our efforts to be present in magazines and publications. Bestor will also be present at important events related to history of science, science communication and scientific heritage, as well as scientific conferences. We will participate at the Conference When Doctors travel overseas (April 5, 2019) and other events concerning the history of science and technology in Belgium. We will assist at the events and activities hosted by the National Committee.

We will create a new information folder to distribute at events.

5) Search engines: we will further improve our findability on search engines such as Google by encrypting Search Engine Optimisation in our web code. We will sit together with the ICT team at KULeuven to discuss the best strategies.

NATIONAL COMMITTEE FOR MATHEMATICS

INTERNATIONAL UNION: INTERNATIONAL MATHEMATICAL UNION (IMU)

1. Introduction, mission, goals

The National Committee aims at stimulating and coordinating in Belgium research in mathematics, both in *pure mathematics* and *applied mathematics*, including *education in mathematics*. In fact, the distinction between pure and applied mathematics is not always easy to make and there are increasingly many interactions. Speaking of pure mathematics, we think of algebra, geometry, analysis, logic, combinatorics, topology, set theory...

and often applications to mathematical physics! Applied mathematics consist among others of numerical analysis, statistics, treatment of signals; the use (and the necessity of creating new) advanced mathematics is currently expanding and covers areas such as econometrics and finance, theoretical informatics, bio-mathematics...

One of the main goals of the committee is to form a bridge between the International Mathematical Union (IMU) and the Belgian scientists who work in the area of Mathematics. As such we choose the delegates that represent Belgium at the General Assemblies of the IMU and suggest their names to both Academies. Together with the Belgian Mathematical Society we take care of informing the Belgian mathematical community by means of the "Newsletter of the Belgian Mathematical Society and the National Committee for Mathematics".

The National Committee consists of 16 members, with linguistic parity. Its members are chosen, taking into account a good gender representation, a well-balanced participation of the different universities, and a good representation of the different important mathematical domains

3. Meetings of the Committee

Dates: March, 14, 3pm, Salle Bordet (in the Ecuries) at the Academies.

Main conclusions: The new board was established. It was also decided that Stefaan Caenepeel and Freddy Dumortier would be our delegates at the general assembly of the IMU in Sao Paulo at the end of July. Finally, only Freddy Dumortier could participate. Besides representing Belgium he was also appointed chair of the Finance and Dues Committee. For the most important decisions taken at the GA 2018 we can refer to "<https://www.mathunion.org/imunet/archive/2018/imu->

net-91". Following the intention of the GA to organize annually an UNESCO International Day of Mathematics, the different Belgian organizations of

Mathematicians and of Teachers of Mathematics were contacted so that Belgium would be

ready to fully participate at the initiative.

The members of the Committee have been regularly informed, by e-mail, about initiatives of the IMU or about the proposals of the IMU for which the opinion of the NCM was requested. All members and honorary members of the NCM received the Electronic IMU-Newsletter and the IMU-Bulletin.

3. General Assembly of the Scientific Union

IMU General Assembly in Sao Paulo, July 2018 (see above).

4. Other activities

There were no other activities besides the Newsletter which appeared five times in 2018 and was distributed both electronically and in a paper version.

5. Future perspectives

The committee plans to work together with the Belgian Mathematical Society to prepare and organise activities on the International Day of Mathematics (first time March 14, 2020).

NATIONAL COMMITTEE FOR MECHANICS

INTERNATIONAL UNION: INTERNATIONAL UNION OF THEORETICAL AND APPLIED MECHANICS (IUTAM)

1. Introduction, mission goals

The Committee aims at promoting the Mechanical Engineering through inter-university Students and Staff exchanges, organization of a bi-annual National Congress of Theoretical and Applied Mechanics, organization of a Doctoral School (GrasMech), development of relationships with European and International Mechanical Engineering non-profit associations or initiatives (ECCOMAS, EURASEM, IUTAM, IACM...) and awarding the (Belgian) “best thesis” in Mechanical Engineering on an annual basis.

2. Meetings of the Committee

[a] February 6, 2018

Main conclusions: Establishing a short list of 5 candidates for the Best Thesis Award

[b] March 6, 2018

Main conclusions: The “Best Thesis Award 2017” is granted to Joost Geeroms (VUB). Matthias Faes (KU Leuven) is the Belgian candidate for the ECCOMAS best thesis award.

[c] December 17, 2018

Main conclusions: Our colleague Jan Vierendeels passed away on May 15, 2018. Prof. J. Vierendeels (UGent) has been replaced by Prof. P. Verleysen (UGent). Official letter has not been sent to RASAB yet. We are still waiting for one new member from UGent in replacement of Prof. B. Verhegge who retired. A new website has been developed (www.nctam.be) and a LinkedIn network has been created to give more visibility to NCTAM.

3. General Assembly of the Scientific Union

General Assembly of IUTAM in Boston, USA - Dates: 23 and 24 July 2018.

Main conclusions:

The Secretary-General reported that Professor Wim Desmet (Belgium) had decided to step down from the Solid Mechanics panel and should be replaced. The General Assembly unanimously agreed to maintain the Congress Committee at the size of 34 members.

The General Assembly voted in favor of the following amounts for the units of dues (no increase): US \$ 810 in 2020, US \$ 810 in 2021.

The General Assembly agreed to hold its next meeting during the 25th ICTAM in Milan, Italy, on Tuesday, August 25, and on Wednesday, August 26, 2020.

4. Future perspectives

- Election for the “Best (Belgian) Thesis in Mechanical Engineering” for 2018 (February and March 2019)
- Proposal of an ECCOMAS price winner Belgian candidate from the NCTAM for 2018 (scheduled March 2019)
- Organisation and improvement of the doctoral school for Mechanical Engineers (GRASMECH)
- Organisation of the National Conference for Theoretical and Applied Mechanics (Brussels 2019)
- Electing new Deputy Secretary

NATIONAL COMMITTEE FOR MICROBIOLOGY

INTERNATIONAL UNION: INTERNATIONAL UNION OF MICROBIOLOGICAL SOCIETIES (IUMS)

1. Introduction, mission goals

The Committee for Microbiology represents Belgian scientists conducting research in the field of biological sciences in the work of the International Union of Microbiological Societies (IUMS).

2. Meetings of the Committee

The meetings of the NCM were joint meetings with the board of the Belgian Society for Microbiology (BSM), of which some members are also member of NCM and all members of NCM are involved in the advisory board of BSM.

[a] March 19th 2018

Minutes of the March 19 meeting

1. The Royal Academies for Science and the Arts of Belgium Academy Palace
Hertogsstraat 1 rue Ducale: Meeting room: Leeszaal
B-1000 BRUSSELS
Welcome and notice of excused and absent members NaCoMi
2. Approval of the minutes of the September 9th 2017 meeting
Minutes were approved without remarks
3. Next joint Symposium with BSM: Update – program,
The program has been presented as far as it is now, the NaCoMi members present, expressed their appreciation of the program of which the draft is added at the end of the minutes
4. Joint Symposium 2019 with BSM : no further information at current
5. Formal appointment of X. De Bolle as new NaCoMi member
Xavier De Bolle is nominated unanimously to become member of NaCoMi in replacement of Jacques Mainil. In this way the connection with the BSM is also reinforced.
6. Relationship with BSM – New bylaws- evolution towards a VZW
7. The bylaws of BSM are being rewritten. In these, the link between BSM board and NaCoMi is reinsured because the NaCoMi will be able to propose at least two BSM board members that take then part of the BSM board. At this moment the situation is such that

three NaCoMi members (N. Boon, E. Peeters and X. De Bolle) are also member of the BSM board. This development is unanimously accepted by the NaCoMi members at the meeting.

8. NaCoMi and development of the present and future memberships: replacement of H. Favoreel.

The secretary received the message that H. Favoreel wants to step down from the NaCoMi. The Committee members want to thank H. Favoreel for his commitment, especially concerning the organization of the yearly symposia for which he often has played a very important role to propose excellent speakers and motivate Belgian virologists to attend the meeting. The NaCoMi agrees to contact (via the President) Rob Lavigne (KU Leuven) to replace H. Favoreel. R. Lavigne is a microbiologist with a major interest in bacteriophages. The NaCoMi agrees that this field of research and knowledge is not represented now, and from both angles – the medical and general microbiology- this field of research is becoming more and more an important topic. J. Anné will contact R. Lavigne ASAP and invite him to become member of NaCoMi

9. AOB and Next meeting

M. Mergeay repeats his remark that the chair/secretary of NaCoMi is not composed at the moment according to the accepted language parity. In brief, when the president is Dutch speaking, the secretary should be of the French speaking community while the vice-chair is then again French speaking and vice Secretary Dutch speaking. The members present propose that the first step to be taken is to ask the French speaking members to apply for the election of the position of Secretary. The plan is to have the candidacies at the next meeting (September, exact date will be communicated as a back to back meeting with the BSM board).

J. Anné proposes to organize an extra NaCoMi meeting in June and combine the meeting with a visit to a company with bio economic activity. In this respect, Spiros Agathos will contact Galactic which has an innovation campus in Anderlecht. Galactic is regarded as being one of the world's leaders in biotechnology serving the food, feed, personal & health care, and industrial markets. Based on Galactic's valuable experience in lactic acid fermentation and the development of many other derivatives, it continuously creates sustainable, innovative and health-friendly solutions in the field of food safety, nutrition and green chemistry.

The meeting was adjourned at 5.10 PM

[b] November 20th 2018

Minutes of November 20th meeting

1. The president opens the meeting at 16:10 PM and welcomes Rob Lavigne. Prof. Rob Lavigne is based at the KU Leuven and is member of the 'Division Animal and Human Health Engineering'. He is professor in the Faculty of Bioscience Engineering. A major emphasis of his research work is on Bacteriophages. Notice of the excused and absent members.
2. The minutes of the March 19 meeting were approved (one correction: E. Peeters was present).
3. Update of the present membership and attitude to 'silent members'. Members are expected to send notice of the absence. The statutes indicate that 'when members do not excuse three times for consecutive meetings, they are supposed to resign from the Committee and their resignation will be reported to allow their replacement.
4. Evolution of the Belgian Society for Microbiology (BSM) in relation to the NaCoMi. Future role of NaCoMi in BSM according to BSM bye laws. The BSM board will change regularly (according to the statutes board members can be once renewed for three years). However, NaCoMi will be represented by at least two members in the BSM Board. Of course this might have an effect on the composition of NaCoMi as well. But not immediately. The matter will be discussed in due time. In practice it means that the advisory board will be abrogated from 1/01/2019, which affects the position of J. Anné, P. De Vos, M. Mergeay, S. Agathos (A. Billiau recently resigned). As a consequence, it is proposed that E. Peeters will be the liaison member of NaCoMi in the BSM board. Apart from representing NaCoMi in the board (together with X. De Bolle and N. Boon), she will replace J. Anné to take care of all necessary handlings, room reservations etc. via D. Brossé for the meetings and symposia in which NaCoMi is involved.
5. How to make the NaCoMi board meetings more interesting/attractive? This is a subject that has been discussed at various occasions. Two ideas will be worked out namely i) NaCoMi meetings are organized at different locations (a company of which the products are linked to microbiology and the NaCoMi meeting will then be combined with a visit to the Company) ii) when NaCoMi meets in the Palace of the Academies, one of the NaCoMi members will give a short overview of her/his research work or illustrating an important evolution in the field of microbiology. For the next meeting, the secretary will contact S. Agathos whether a meeting at 'Galactic' would be possible. If not, the secretary and the president will look for an alternative (KBIN?, the lab of Rob Lavigne).
6. AOB. The international Microorganism day will be organized for the second time (via the Portuguese Society of Microbiology) on September 17 in 2019. It is the purpose of the initiative, to

bring the general public in a closer contact to microbiology. The item has also been discussed at the BSM Board, who will contact the media (TV) at the Walloon site and the Flemish side in order to find out if this international 'Microorganism day' can fit into one of their programs for young students/children. It was decided that NaCoMi members can forward other ideas to the BSM board via our representative members. Therefore, ideas are invited to be communicated before December 10 to the secretary/president who will bundle the suggestions for the BSM board meeting of December 20 via E. Peeters, X. De Bolle and N. Boon.

Next meeting is planned for February 27 2019

The meeting is adjourned at 17:30 hours.

3. General Assembly of the Scientific Union

No General Assembly in 2018.

4. Other activities

The 2018 Symposium of the Belgian Society for Microbiology, organized jointly with the National Committee for Microbiology and supported by the Royal Academies for Science and the Arts of Belgium (RASAB) and the Royal Flemish Academy of Belgium for Science and the Arts (Vlaams Contact forum), took place on Friday October 19th in the Palace of the Academies in Brussels.

The Symposium included contributions from each of the four BSM sections: General Microbiology (section A), Applied and Environmental Microbiology (section B), Medical and Veterinary Microbiology (section C) and Host and Microbes interactions (section D). By fostering interactions between microbiologists of different specialties and by presenting major inspiring achievements, this Symposium aimed at cross-fertilizing the different disciplines and fields of Microbiology.

The one-day event consisted of five sessions of oral presentations and four parallel poster sessions. The first four sessions, contributed by the sections are kicked off with a plenary lecture given by a high-profile international scientist and followed by two short talks given by scientists selected among the submitted abstracts. The fifth oral session consisted of a lecture given by a prominent Belgian microbiologist (Christine Jacobs-Wagner), elected by the BSM Board of Governors and the BSM Advisory Board, in recognition of an exceptional achievement. The posters presentations were also organized in four sessions matching the BSM sections. Four poster prizes, one per section, as well as the best oral presentation were awarded at the end of the Symposium

NATIONAL COMMITTEE FOR PHYSICS

INTERNATIONAL UNION: INTERNATIONAL UNION FOR PURE AND APPLIED PHYSICS (IUPAP)

1. Introduction, mission, goals

The Belgian National Committee on Pure and Applied Physics has been created by the Royal Academies for Science and the Arts of Belgium (RASAB). It contributes to the promotion and coordination of Belgian activities concerning Pure and Applied Physics. At the international level it ensures Belgium's representation in IUPAP, the International Union for Pure and Applied Physics. Its activities can be followed on its website¹¹.

2. Meetings of the Committee

Meetings were held on March 6 and October 12. The main interest points of these meetings were:

- a. Welcoming of Marie Rassart (IBA) as new member representing the French speaking Industry.
- b. The Colloquium 2019.
- c. "Research in Physics in Belgium".

3. General Assembly of the Scientific Union

No General Assembly in 2018.

4. Other activities

[a] 2019 colloquium of the NCPAP

The NCPAP will organise its 8th bi-annual colloquium on March 30, 2019 in the Palace of the Academies on the theme "Quantum Information: the second Quantum revolution? ».

Quantum information is a multi-disciplinary field that steadily gains in importance. What it entails and how Quantum Information may possibly lead to a second quantum revolution, is the theme of this new colloquium. The timeliness of the theme was recently accentuated by the awarding of the Francqui Prize 2018 to Prof. Frank Verstraete, flag-bearer of the discipline in Belgium.

Quantum physics has taught us the foundations of the behavior of the "very small" (atoms, electrons, light) and has hereby led to a true technological revolution in many aspects of our daily

¹¹ <https://sites.google.com/site/physbel/>

life. Most current information is stored in relatively large systems - books, text messages, DNA, computers. Quantum information is contained in very small structures called qubits. These qubits can be made from a quantum system with two states. Due to the superposition principle, qubits, in contrast to the "classic bits" in our computers, can be simultaneously in both of the possible states. This creates many new possibilities in information technology with potential dramatic improvements in the acquisition, transfer and processing of information. Teleportation of information, unbreakable codes and very powerful quantum computers are some of the exciting examples. Also in basic physics disciplines, such as solid state physics and theoretical high-energy physics, quantum information is now becoming a central issue.

A Scientific Committee, composed of Yves Caudano (UNamur), Ben Craps (VUBrussel), Wojciech De Roeck (KULeuven), Nathan Goldman (ULBruxelles), John Martin (Uliège), Juliana Radu (Imec), Jacques Tempere (UAntwerpen), Frank Verstraete (UGent) and Roger Weynants (NCPAP), proposed the following program:

1. Introduction of Quantum Information, by Prof. David DiVincenzo, Juelich.
2. Quantum Computing, conceptual aspects and the practical challenges, by Prof. Dorit Aharonov, Jerusalem.
3. Aharonov, Jerusalem.
4. Quantum Communication and Encryption, by Prof. Anton Zeilinger, Vienna.
5. Quantum simulations for Condensed Matter Physics, by Prof. Immanuel Bloch, München.
6. Combining High Energy Physics and Quantum Information theory, by Prof. Vijay Balasubramanian, Univ. Pennsylvania.

As is customary, a poster session by the Belgian research groups working in the domain will be held during the Lunch break. The best presentation will be honoured with a Best Poster Award.

[b] Research in Physics in Belgium:

The NCPAP started in 2005 to compile short reports on 15 different physical research topics in Belgium, both theoretical and experimental, and regular updating has since occurred. Hitherto some thirty prominent Belgian researchers have contributed to this series. The updated texts (135 pages, containing more than 350 (web)addresses)¹². The most recent entries are "Astrophysics 2018" by Dr. Y. Frémat (ROB) and Prof. S. Van Eck (ULBruxelles), "Computational Physics 2018" by Profs. X Gonze and G-M Rignanese (UCLouvain) and "Hard Condensed Matter and Semiconductor Physics 2018" by Profs. E. Janssens and Y. Bruynseraede (KULeuven). All new updates are also published in BPhyMagazine, the online magazine of the Belgian Physical Society. Recently, a second initiative was started in this context: a successful events calendar allowing the Belgian

¹² <https://sites.google.com/site/physbel/Physics-in-Belgium/reports>

research groups to advertise their upcoming events, was added to our website¹³.

5. Future perspectives

- In 2019, a central activity will be the 2019 Colloquium and NCPAP will continue its efforts for promoting the Physics Research Activities in Belgium.
- Changes in the Board composition are in preparation.
- The NCPAP will also support the EPS Historic Site Award Ceremony honouring Georges Lemaître, scheduled for May 23, 2019 and organised by the Belgian Physical Society together with the universities of Leuven and Louvain-la-Neuve.

¹³ <https://sites.google.com/site/physbel/Physics-in-Belgium/calendar>

NATIONAL COMMITTEE FOR PHYSIOLOGY AND PHARMACOLOGY

INTERNATIONAL UNION: INTERNATIONAL UNION OF PHARMACOLOGY (IUPHAR)

& INTERNATIONAL UNION OF PHYSIOLOGICAL SCIENCES (IUPS)

1. Introduction, mission, goals

The goal of the Committee is to organize national and international scientific meetings in which Belgian Physiologists and Pharmacologists (and eventually their guests) can present and bring up for discussion the results of their recent research in the fields of Physiology and Pharmacology.

2. Meetings of the Committee

Not-specified.

3. General Assembly of the Scientific Union

No General Assembly in 2018.

4. Other Activities

[a] *The National Spring meeting of the Belgian Society of Physiology and Pharmacology*, April 27th in Brussels (Palace of the Academies), aiming to bring together the physiologists and pharmacologists from Belgian laboratories. About 40 scientists attended the meeting. Prof. Prof. Dr. Julien Hanson (Uliège) hosted the meeting. Programme and abstracts available online¹⁴.

[b] *The National Autumn meeting of the Belgian Society of Physiology and Pharmacology*, October 19th in Brussels (Palace of the Academies), aiming to bring together the physiologists and pharmacologists from Belgian laboratories. About 50 scientists attended the meeting. Prof. Dr. Geert Bultynck (KULeuven) hosted the meeting. Programme and abstracts are available online¹⁵.

¹⁴ See: <http://users.ugent.be/~jvdvoord/physiology&pharmacology>

¹⁵ See: <http://users.ugent.be/~jvdvoord/physiology&pharmacology>

NATIONAL COMMITTEE FOR PSYCHOLOGICAL SCIENCES

INTERNATIONAL UNION: INTERNATIONAL UNION OF PSYCHOLOGICAL SCIENCE (IUPSYs)

1. Introduction, mission, goals

The goal of the Committee being to undertake, promote and coordinate psychological scientific research, focusing in particular on long term, intercollegiate or interdisciplinary projects and to serve psychological scientific interests in Belgium from a national as well as an international point of view.

2. Meetings of the Committee

The Committee held two meetings in 2018: The first took place on May 7th, 2018; the second on November 24th.

Minutes of May, 7th:

1. Approval of the draft minutes of the Meeting of November 25th, 2017 Approved.
2. Annual Report. The annual report is briefly discussed and approved with thanks to the Secretary-General. It is noted that one of the members who left the committee (Dirk Hermans) is mentioned to be affiliated to UGent while this should be KULeuven.
3. Best Thesis Award. The jury report is accepted and the jury is thanked for their efforts. After communication with the president of BAPS (Olivier Luminet), the President brings some issues to the table:
 - The president of BAPS is ex officio committee member, but was not invited this time. Axel Cleeremans will apologise to Olivier for this oversight.
 - BAPS raises some concerns about the composition of the jury: a broader range of committee members could be involved, they should be spread more over the subdisciplines of psychology, and they should not belong to different universities. In the discussion of these issues, several points are being made by the committee. The following summarises this discussion and will be the answer to BAPS:

The National Committee has been acting as a jury for the selection of the best thesis for several years. The National Committee considers that the management of this mission is its responsibility. It carries out its tasks with serenity, with a concern

for the greatest inter-university conviviality and respect for sub-disciplines. This is a heavy and time-consuming job that our members see as a service they graciously provide to BAPS. This service can only be maintained if trust continues to reign.

- André Vandierendonck has chaired the jury for many years now, and has asked the President to be released of this duty in the years to come. This is confirmed.
4. Symposium 2018. As the meeting is held during the lunch break of the symposium, it is already clear that the symposium is running well. The organiser (Philippe Peigneux) is congratulated with this and with the high scientific level of the invited speakers.
 5. ICP2020 (Prague) & IUPsyS general assembly (follow-up). The president reports on his contacts with RASAB: the IUPsyS fees for 2017 are paid and 2018 will be paid as soon as this year's budget is available. It is confirmed that one representative, a committee member, will be funded by RASAB. The shortlist was agreed in the previous meeting of the National Committee, namely Frank Van Overwalle and Arnaud Szmalec. Care has to be taken that the information regarding the upcoming ICP conference is received in time (will be checked with BAPS).
 6. Varia. The President raises one point: At the previous meeting it was agreed that Serge Brédart is leaving the committee and would be replaced. It is noted that the universities are not equally represented in the committee and it is decided to expand the committee so that each university has three representatives. As a consequence four members will be added, one for each of the following universities: KULeuven, VUB, UCL and ULg. Committee members are invited to formulate suggestions to the President or the Secretary-General before the next meeting.

Minutes of November, 24th:

1. Approval of the draft minutes of May 7, 2018. Approved.
2. New members The National Committee decided in his last meeting to expand the committee so that each university has three representatives. Therefore, representatives of each university with currently less than 3 members proposed an additional candidate:
 - KULeuven: Batja Mesquita (social & cultural psychology)
 - VUB: Sara De Gieter (work and organization psychology)
 - UCL: Moira Mikolajczak (clinical psychology)
 - ULg: will be proposed next meeting

These three new members are approved.

3. Best Thesis Award. The new president of the jury for the Best Thesis Award is Arnaud Szmalec. This week, the final shortlist of the BAPS will be forwarded, so that prospective members of the jury can be invited by Arnaud based on language and scientific discipline. With respect to potential conflicts of interest, the only reason jury members appointed by the National Committee were not withheld to judge a particular thesis in the past was when the candidate was supervised by this member, or worked together in close collaboration (e.g., came from the same lab). University adherence was never considered as a conflict of interest, as this would make the composition of the Best Thesis jury very difficult. The National Committee considers that the management of the Best Thesis Award is a task that it carries with serenity and respect for interuniversity conviviality and all sub-disciplines in psychology.
4. Symposium 2020. The new members of the committee will be invited as first to propose a topic for the next symposium.
5. ICP2020 (Prague) & IUPsyS general assembly (follow-up)
 - The delegate of BAPS will be Jan De Houwer (also proposed as keynote speaker)
 - The delegate of the committee (via funding of RASAB) will be Frank Van Overwalle (also proposed as state-of-the-art speaker or as chair of an invited symposium)

There is some uncertainty as to which organization is actually member of IUPsyS, since now the IUPsyS informs the federation, which is then channeled to BAPS and then to the National Committee. But it is actually the National Committee (via RASAB) who is paying IUPsyS membership fees. The National Committee is not against this current gentlemen's procedure, but would like to receive clarification from IUPsyS whether this is how they actually want to communicate with Belgian scientific delegates / organizations. Bernard is going to seek clarification.
6. Varia. The next BAPS meeting will be held at 14-15 May 2019. BAPS also launches a set of new initiatives:
 - BAPS best PhD award
 - BAPS early career reward (first 6 years after PhD)

3. General Assembly of the Scientific Union

The next IUPsyS meeting will be held in Prague, July 19-24, 2020. Belgium has two representatives in the general assembly: One nominated by the Belgian Association for Psychological Science, the other by the National Committee. BAPS, after discussion with the National Committee, has nominated Pr. Jan De Houwer (UGent) both as a keynote speaker and as its representative. The

National Committee has nominated Pr. Frank Van Overwalle, its vice-president, as the second representative and as a State-of-the-Art Address speaker.

4. Other Activities

The committee organizes bi-annual symposia. In 2017, the next symposium was planned, under the supervision of Pr. Philippe Peigneux. It took on May 7th, 2018 at the Academy, and was titled “Windows on brain plasticity”. The full program can be consulted on the symposium’s website¹⁶.

The symposium was again very successful, attracting over 200 international participants.

The committee also assists, every year, the Belgian Association for Psychological Science in selecting the recipient of its “Best Thesis Award”. The 2018 competition is underway. A jury composed of committee members and presided by Arnaud Smolecz will make the final selection. A similar scheme will be adopted for next year.

3. Future perspectives

No new initiatives are currently planned beyond the continued involvement of the committee in its current activities, namely (1) communicating with the IUPsyS and with the Belgian Association for Psychological Science (BAPS), (2) organizing the next symposium, planned for 2020, and (3) handling the final stage of the BAPS Best Thesis Award.

¹⁶ http://pbrain.ulb.be/Windows_on_Brain_Plasticity/Intro.html

NATIONAL COMMITTEE FOR RADIO-ELECTRICITY (URSI)

INTERNATIONAL UNION: INTERNATIONAL UNION OF RADIO SCIENCE (URSI)

1. Introduction, mission, goals

The activities of the Belgian URSI Committee pertain to radio-electricity. The main goal of the committee is to promote and to help coordinating for Belgium the scientific activities of its members in this field. The committee meets regularly at the Academy and organizes yearly, in collaboration with the Netherlands URSI committee, an 'URSI Benelux Forum' where young *doctorandi* have the opportunity to present their research and to exchange their scientific and technical experience. Members of the committee represent Belgium in different instances and scientific commissions of the international URSI union, the secretariat of which is hosted in Ghent, with Peter Van Daele replacing Paul Lagasse as Secretary-General since the General Assembly in August 2017.

2. Meetings of the Committee

The Belgian URSI Committee has met on 19 March and 12 November 2018 at the Palace of the Academies. At these occasions, 2 scientific presentations were made:

- 19 March 2018: "Quantification and modelling of periodic breathing instabilities" by Hélio Fernandez (Electrical Engineering Department, Royal Military Academy).
- 12 November 2018: "Novel antenna design paradigms for sustainable wireless communication" by Hendrik Rogier (IMEC - Ghent University)

The remaining part of the meetings focused on:

- Meeting 19 March 2018:
 - De-briefing (19 March 2018) of the URSI General Assembly, 20-26 August 2017, Montreal)
 - Preparation of the 2nd URSI Atlantic Radio Science Conference (AT-RASC 2018), 28 May - 1 June 2018, Gran Canaria, Spain
 - De-briefing of the Benelux URSI Forum, Delft in January 2018. There were more participants from the Netherlands than from Belgium, most probably due to the short notice at which the forum was organized by our colleagues from the Netherlands.
- Meeting 12 November 2018:
 - de-briefing (12 November 2018) of the 2nd URSI Atlantic Radio Science Conference (AT-RASC 2018), 28 May - 1 June 2018, Gran Canaria, Spain

- Preparation of the URSI Asia Pacific Radio Science Conference (AP-RASC 2019), 09-15 March 2019, New Delhi, India.

3. General Assembly of the Scientific Union

The 2nd URSI Atlantic Radio Science Conference (AT-RASC 2018) will take place in Gran Canaria, Spain, during the period 28 May - 1 June 2018.

- In total 672 papers were submitted to AT-RASC 2018 from 44 countries of which 14 papers originated from Belgium (in the list below, only the 1st author is mentioned)
 - Inter-hemispheric comparison of the ionosphere-plasmasphere system; Bergeot, Nicolas; Royal Observatory of Belgium, BELGIUM
 - Ionospheric disturbances due to the 2017 American solar eclipse detected at a European observatory; Verhulst, Tobias; Royal Meteorological Institute, BELGIUM
 - A stable representation of the transmittance between identical aperture antennas; Gueuning, Quentin; Université Catholique de Louvain, BELGIUM
 - Climatological behavior of the topside ionospheric-plasmaspheric electron content above Antarctica; Bergeot, Nicolas; Royal Observatory of Belgium, BELGIUM
 - Study of meteor echoes with the BRAMS radio interferometer; Lamy, Herve; Royal Belgian Institute for Space Aeronomy, BELGIUM
 - Exploring the Feasibility of Indoor Human Positioning by Using Radio Channel Properties of a Single Link; Miao, Yang; Ghent University, BELGIUM
 - On the worst case trajectories of microwave links above Belgium; Van Lil, Emmanuel; KU Leuven, BELGIUM
 - Some techniques for mass production of textile wireless systems; Rogier, Hendrik; Ghent University, BELGIUM
 - Radio observations for space weather: space applications from the solar corona to the inner magnetosphere; Pierrard, Viviane; Royal Belgian Institute for Space Aeronomy, BELGIUM
 - Faint Coronal Radio Bursts Generated by Alfvén Waves; Voitenko, Yuriy; Royal Belgian Institute for Space Aeronomy, BELGIUM
 - A Dual-Band Wearable Exposure Meter for Personal RF Exposure Assessment in Indoor Environments: On-body Calibration in a Reverberation Chamber; Aminzadeh, Reza; Ghent University/IMEC - INTEC - WAVES, BELGIUM
 - Air-Filled Substrate-Integrated-Waveguide Cavity-Backed Slot Antenna with Optical Feeding; Caytan, Olivier; Ghent University - Imec, IDLab, BELGIUM

- Heterogeneous Silicon Photonic Devices for Wireless Communication Systems; Van Gasse, Kasper; Ghent University, BELGIUM
 - Improving Signal-to-Noise Ratio in Oblique Ionosonde Soundings Using New Hardware Capability of the DPS4D Ionosonde; Verhulst, Tobias; Royal Meteorological Institute, BELGIUM
- The total numbers of attendees was 531 of which 14 participants came from Belgium.
 - In total 42 countries were represented.
 - At the occasion of AT-RASC 2018, URSI also ran a Young Scientists program in which 103 applications were received of which 48 were accepted. None of the applications originated from Belgium.

4. Other activities

[a] Homage to Professor Jean Van Bladel

Professor Jean Van Bladel, former Secretary General of URSI international, and Honorary member of URSI Belgium, passed away in January 2018. Peter Van Daele said a few words to honor his memory at the occasion of the meeting on 19 March 2018.

[b] URSI Benelux Forum 2018

The URSI Benelux Forum 2018 has been organized by Dr. Faruk Uysal on January 25 in Delft at the Delft University of Technology, The Netherlands on the theme "From EM waves to information". There were 6 invited talks and 20 posters, three of which were distinguished by a Best Poster Award, The URSI Benelux Forum aims at encouraging doctoral and young postdoctoral researchers. The Forum was well attended, both by URSI members and by other participants, however mainly from the Netherlands, most probably as a result of the very late announcement made by the organizers.

[c] Celebration of the 100th anniversary of URSI

URSI was established in 1919, at a meeting of the pre-runner of ICSU. The URSI Board has decided to take advantage of this anniversary to advertise URSI to a wider public using different tracks. Specific scientific sessions will be organized at the occasion of the next 3 Flagship meetings APRASC 2019, GASS 2020 and AT-RASC 2021. Besides these, more scientifically oriented tracks, there is also a decision to organize a specific symposium in Brussels addressing a topic of wider interest on "the impact of radio science on the development of a sustainable future for humans and environment" at which occasion the King of Belgium will also be invited as was the case for the 75th anniversary.

5. Future perspectives

- 2019: URSI Asia Pacific Radio Science Conference (AP-RASC 2019), 09-15 March 2019, New Delhi, India. In total 952 papers are submitted from 40 countries of which 7 papers originate from Belgium. The paper review process is still going on at the time of writing this report.
- 2020: The next General Assembly will take place in Rome in 2020.
- Besides the celebration of the 100th anniversary of URSI, the 29th BENELUX URSI Forum will be organized by the Peter Van Daele, Ghent University in the period 20 – 23 May 2019.

NATIONAL COMMITTEE FOR SOIL SCIENCES

INTERNATIONAL UNION: INTERNATIONAL UNION OF SOIL SCIENCES (IUSS)

1. Introduction, mission, goals

The NCSS was set up in 2002, following long lasting activities of the Soil Science Society of Belgium (started in 1924) and with the purpose to bring soil science to the attention of the broader public with particular focus of the young people. This original mission of SSSB/NCSS is more relevant now than ever: soil and soil suitability comes daily in the media and in the public debate: soil as an ultimate powerhouse and store for carbon sequestration to check climate change; trade-offs between food production versus agro-fuels; the preservation of our pristine soils; the conservation of our soil heritage; the rehabilitation of marginal lands and the remediation of polluted soils. The NCSS is the representative organization for all soil scientists active in Belgium and is the official Belgian representative into the International Union of Soil Sciences (IUSS).

Executive summary of activities in 2018:

Continuation of our special annual activities, planned to mark the International Decade of the Soil under the IUSS:

- Committee meeting on February 27, 2018 at RASAB, Followed by the National Assembly of the SSSB/NCSS
- Day of Young Soil Scientists on February 27, 2018 at RASAB: 27 participants contributed by bringing either an oral or a poster presentation
- International excursion to Germany from 21 – 25 May 2018: Soils and land use in the upper Rhine graben and cuesta landscapes. Number of participants: 32
- Thematic Day on 21 November 2018: Biogeochemical cycles and their role in the Earth system. Number of participants: 44
- Communicating through our dedicated website where anything happening in the field of soil science, e.g. a PhD defense, is timely announced so that interested people can participate.
- Organization of IUSS elections: <http://www.bbv-sbss.be/?cat=361>
- The executive Committee had numerous ad hoc meetings so as to make a close follow-up on the National Committee's agenda with particular attention to:
 - Its mission and goals statement
 - Meeting with RASAB to evaluate past performance and to discuss on the future status of SSSB-National Committee of Soil Science

- Professionalize SSSB by establishing a VZW

Moreover, the society made special efforts to reach out to the general public:

- Contribution to the Global Partnership (FAO, Rome).
- Contributions to the EGU conference 2018 at Vienna with numerous papers
- Representation in the annual BAG (Belgian Association of Geomorphologists) excursion
- Co-publishing with FAO of the 2015 French edition of the World Reference Base for Soil Resources (WRB), the international soil classification system for naming soils and creating legends for soil maps
- Attending the IUSS – organized World Congress of Soil Science at Rio from August 12 – 17th 2018, hence representing Belgium in all the Board meetings.

2. Meetings of the committee

- Committee meeting on February 27, 2018 at RASAB, Followed by the National Assembly of the SSSB/NCSS
- Day of Young Soil Scientists on February 27, 2018 at RASAB: 27 participants contributed by bringing either an oral or a poster presentation
- International excursion to Germany: International excursion 2018: Soils and land use in the upper Rhine graben and cuesta landscapes. Number of participants: 30
- Thematic Day on 21 November 2018: Biogeochemical cycles and their role in the Earth system. Number of participants: 44

To be noted that all supporting documents on these meetings such as reports, book of abstracts etc... are available upon request. For security reasons we can no more refer to the website as we used to do in our previous annual report.

Main conclusions: the NCSS has successfully organized 4 activities which were well attended by numerous scientists from all member universities. It was encouraging to note that the number of young scientists is on the increase

3. General Assembly of the Scientific Union

- A delegation of the NCSS attended the IUSS – organized World Congress of Soil Science at Rio de Janeiro in Brazil from August 12 – 17th 2018, hence represented Belgium in all the Board meetings.
- IUSS elections were organized in 2018: <http://www.bbv-sbss.be/?cat=361>
- Preparations of the next EUROSIL meeting which will be held in Geneva, Switzerland in 2020.

Main conclusions: K. Vancampenhout is member of the IUSS Board and also a key person in the European Confederation of Soil Sciences which is organizing next Eurosoil meeting in 2020. She is also acting as secretariat with FAO in the co-publication of the French version of WRB. Stefaan Dondeyne and Seppe Deckers are in the Board of the IUSS Working Group WRB on international soil classification, which organized an international meeting and excursion on Soil Classification in Latvia. Seppe Deckers is also chairing the Ad-Hoc Selection Committee of the bi-annual IUSS-Guy Smith Medal Award, the latest Medal Award (2018) was given to Dr. Dick Arnold from the USA. A new call for the IUSS Guy Smith Medal Award is due for early 2020.

4. Other activities

- Participation to the EGU at Vienna, Austria in April 2018
- Co-publishing with FAO of the 2015 French edition of the World Reference Base for Soil Resources (WRB), the international soil classification system for naming soils and creating legends for soil maps

5. Future perspectives

NCSS will organize 5 core activities in 2019:

- 2 board meetings (January 16th & in November, 2019) at RASAB
- A general assembly and Day of the Young Soil Scientist on January 28, 2019 at RASAB
- An national excursion on 'Soil in the city' on 24 May 2019 at Gent, organized by Prof. Ann Verdoodt
- A Thematic Day on 'Soil and wine quality' on November 2019:, organized by Prof. Bruno Delvaux (UCLouvain)

INTERNATIONAL SCIENTIFIC UNIONS

The conditions for the foundation of a National Committee is the existence of an international scientific union which is a member of ICSU or a member of a scientific institution of ICSU (scientific committees, special committees, etc.) in the same scientific discipline.

All Belgian national committees are members of one or more international organizations in which they represent Belgium.

National Committees	Internationale unions
1) Antarctic Research	Scientific Committee on Antarctic Research www.scar.org
2) Astronomy	International Astronomical Union (IAU) http://www.iau.org
3) Biochemistry and Molecular Biology	International Union of Biochemistry and Molecular Biology (IUBMB) www.iubmb.org
4) Biological Sciences*	International Union of Biological Sciences (IUBS) www.iubs.org
5) Biomedical Engineering	International Federation for Medical and Biological Engineering (IFMBE) www.ifmbe.org International Union for Physical and Engineering Sciences in Medicine (IUPESM) www.iupesm.org

6) Biophysics	International Union of Pure and Applied Biophysics (IUPAB) www.iupab.org
7) Chemistry	International Union of Pure and Applied Chemistry (IUPAC) www.iupac.org
8) Crystallography	International Union of Crystallography (IUCr) www.iucr.org
9) Geodesy and Geophysics	International Union of Geodesy and Geophysics (IUGG) www.iugg.org
10) Geography	International Geographical Union (IGU) www.igu-net.org
11) Geological Sciences	International Union of Geological Sciences (IUGS) www.iugs.org
12) Logics, History and Philosophy of Science	International Union of History and Philosophy of Science (IUHPS), <ul style="list-style-type: none"> • Division of History of Science and Technology (IUHPS-DHST) • Division of Logic, Methodology and Philosophy of Science (IUHPS-DLMPS) www.dlmeps.org
13) Mathematics	International Mathematical Union (IMU) http://www.mathunion.org
14) Mechanics	International Union of Theoretical and Applied Mechanics (IUTAM) www.iutam.net

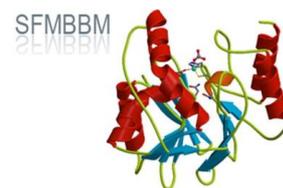
15) Microbiology	International Union of Microbiological Societies (IUMS) www.iums.org
16) Oceanology*	Scientific Committee on Oceanic Research (SCOR) www.scor-int.org
17) Physiology and Pharmacology	International Union of Physiological Sciences (IUPS) www.iups.org International Union of Pharmacology (IUPHAR) www.iuphar.org
18) Physics	International Union of Pure and Applied Physics (IUPAP) www.iupap.org
19) Psychological Sciences	International Union of Psychological Science (IUPsyS) www.iupsys.net
20) Quaternary Research (BELQUA)	International Union for Quaternary Research (INQUA) www.inqua.org
21) Radio-electricity	International Union of Radio Science (URSI) www.ursi.org
22) Soil Sciences	International Union of Soil Sciences (IUSS) www.iuss.org

- *Committees are currently inactive.*

APPENDIXES



fnrs
LA LIBERTÉ DE CHERCHER



The BELGIAN BIOPHYSICAL SOCIETY
Further supported by the Graduate School
“Structure and Function of Biological
Macromolecules, Bioinformatics and Modelling”
ORGANIZES THE 16th ONE-DAY SYMPOSIUM
PROTEIN FOLDING AND STABILITY

ON FRIDAY THE 31st OF AUGUST 2018

AT THE UNIVERSITY OF LIEGE
AMPHITHEATRE 204, “Amphithéâtres de l’Europe”
DOMAINE UNIVERSITAIRE DU SART TILMAN
BATIMENT B4



09:45-10:00 WELCOME

Chair : Carlo van Mierlo (Univ. of Wageningen, The Netherlands)

10:00-10:45 Sheena Radford (Astbury Cte Struct. Mol. Biol., Univ. Leeds, U.K.)

“Exploiting protein-protein interactions to ameliorate amyloid disease”

10:45-11:15 COFFEE BREAK

11:15-12:00 Camille Goemans (de Duve Institute, U.C.Louvain, Belgique)

“The uncommon strategy of a chaperone to protect its substrates from over-oxidation”

12:00-12:45 Karen Stroobants (University of Cambridge, U.K.)

“Interacting with proteins, from artificial enzymes to amyloid fibrils”

12:45-13:45 LUNCH

13:45 –14:30 Mireille Dumoulin (Centre for Protein Engineering, University of Liège, Belgium)

“Use of Nanobodies to study protein misfolding and aggregation”

14:30-15:15 Kerensa Broersen (University of Twente, The Netherlands)

“On the transmission of tau and aggregation of amyloid beta in Alzheimer-affected cellular interactions”

15:15-16:00 Stefan Rüdiger (Bijvoet Center Biomol. Res., Utrecht University, The Netherlands)

“Mechanism of action of molecular chaperones in protein folding”

16:00 General assembly of the BBS and RECEPTION

Contact: Prof André Matagne (amatagne@ulg.ac.be). **Registration is required via www.biophysics.be** . Admission is free for members; non-members of the Biophysical Society (<http://www.biophysics.be>) should pay their membership (10 EUR to be paid to the account of the Belgian Biophysical Society, IBAN BE73 0000 1463 3660, BIC BPOTBE1, P/A Yves Engelborghs, Celestijnenlaan 200 G-box 2403, B3001 Leuven).

Belgian Biophysical Society

School on Biomolecular X-ray and Neutron Diffraction Techniques

Programme

Day 1 Introduction and trends

09.00 – 10.45 Prof. Federico Forneris (University of Pavia)

Understanding X-ray and Neutron scattering - an experimental scientist's perspective

11.00 – 12.45 Dr. Thomas Schneider (EMBL Hamburg c/o DESY)

Taylor-made X-ray beams for extracting the most from macromolecular crystals

12.45 – 13.30 lunch break

13.30 – 15.15 Dr. Leonard Chavas (Synchrotron SOLEIL)

Gearing of in vivo crystallography in modern integrative biology at new x-ray synchrotron sources

15.30 – 17.15 Prof. Isabelle Daniel (Université Claude Bernard Lyon1)

Use of XANES to measure microbial metabolic activity

**latest trends: interface with EM, serial crystallography, in vivo crystallography*

Day 2 SAXS/SANS

09.00 - 10.45 Lise Arleth (The Structural Biophysics Group, University of Copenhagen)

Small-Angle Scattering of X-rays and neutrons and their application to studies of biomacromolecular structures in solution - Part 1. The small-angle scattering technique and Instrumentation

11.00 – 12.45 Lise Arleth (The Structural Biophysics Group, University of Copenhagen)

Small-Angle Scattering of X-rays and neutrons and their application to studies of biomacromolecular structures in solution – Part 2. Examples of contrast variation small-angle scattering to investigations of complex biological molecules

12.45 – 13.30 lunch break

13.30 – 15.15 Dr Paul Bernado (Centre de Biochimie Structurale, Montpellier)

Protein Dynamics. A SAXS perspective

15.30 – 17.15 Dr. Nicholas Brooks (Imperial College London)

Using SAXS and WAXS to explore structural changes in lipid membranes

18.00 – ... Dinner and social evening

Day 3 Dynamics and liquids

09.00 - 10.45 Prof. Ian Robinson (University College London)

Coherent Imaging Methods with XFELs

11.00 – 12.45 Prof. Arwen Pearson (Center for Free-Electron Laser Science)

XFEL Applications: Studying macromolecular structure and dynamics

12.45 – 13.30 lunch break

13.30 – 15.15 Dr. Giorgio Schiro (Institut de Biologie Structurale, Grenoble)

Probing protein structural dynamics by neutron scattering

15.30 – 17.15 Prof. Roland Winter (TU Dortmund)

Phase transitions of biological systems explored by scattering methods

17.15 – 17.30 Concluding remarks



KONINKLIJKE VLAAMSE ACADEMIE VAN BELGIE
VOOR WETENSCHAPPEN EN KUNSTEN



ACADÉMIE ROYALE DES SCIENCES, DES LETTRES
ET DES BEAUX-ARTS DE BELGIQUE

THE ROYAL ACADEMIES FOR SCIENCE AND THE ARTS OF BELGIUM
&
NATIONAAL COMITÉ SCHEIKUNDE – COMITÉ NATIONAL DE CHIMIE

SCIENCE IN SPACE AND ON EARTH

Samedi 5 mai 2018

Palais des Académies – rue Ducale 1 – 1000 Bruxelles

PROGRAMME

À partir de 08h30	Accueil – café - thé	13h15-13h30	Présentation du programme Christian Vandercammen Luc Van Meervelt
09h00-10h00	XperiLAB.be (2 sessions de 30 min.- 40 personnes par session)	13h30-14h30	The science behind science fiction – Can we make ourselves invisible ? Vincent Ginis (VUB/Harvard)
10h00-10h15	Présentation du programme Rita Cornelis - Paul Baekelmans	14h30-15h30	La magie de la science – une expérience de partage Laure Twyffels (ULB)
10h15-11h30	Six mois à bord de la station spatiale internationale Frank de Winne (ESA)	15h30-16h00	Pause – café - thé
11h30-12h15	The study of planetary systems with Trappist and Speculoos Michael Gillon – Emmanuel Jehin (ULg/FNRS)	16h00-17h15	Revivre les aventures de Jules Verne : 5 vols autour du monde grâce à la science David Dehenauw (KMI)
12h15-13h15	XperiLAB.be (2 sessions de 30 min.- 40 personnes par session)	17h15	Conclusies (R. Cornelis, P. Baekelmans, G. Cobut)
12h15-13h15	Lunch		

NOS INTERVENANTS

FRANK DE WINNE



Born in Gent, Engineer Polytech from the Royal Military Academy Air Force and Test Pilot at Edwards (Cal/USA). In 2000 in the European Astronaut Corps. Two missions in the International Space Station respectively 9 days and 6 months when he served as Commander. To-day he serves as the Head of the European Astronaut Centre of the European Space Agency in Cologne/Germany (Köln)... Honorary doctorates from Universities of Antwerp, Hasselt, Mons, Liege, Gent. In 2002 ennobled as Viscount.

MICHAEL GILLON et EMMANUEL GEHIN



Michael Gillon

Born in Liège. After seven years in the army, back to Science. Master in Biochemistry and BSc in Physics (ULg). PhD in astrophysics (ULG). Post Doc in Geneva. Discovery of exoplanets is his world. In 2017 seven new exoplanets !! Baizan Prize in 2017 and listed by Time magazine as one of the most influential people. To-day: researcher at the Institut de Géophysique et Astrophysique (ULg).

Emmanuel Gehin

Born in Spa, Masters and PhD in Physics (ULg). Post Doc and Research (7 years) in Chili. Participation in the exoplanets projects and team member of the Trappist project as the main investigator of the comet, and in their chemistry. To-day Speculoos Project Manager, FNRS Researcher and Professor. Participates in the "Groupe Astronomie de Spa" promoting astronomy to the Public.

VINCENT GINIS



Born in Mechelen, MSc in Photonics Engineering (VUB/UG), PhD in Applied Physics. Aspirant FWO (VUB). Solvay Award (2014), Vocatio Fellowship (2015). Elected at The Young Academy of Belgium. Professor at the VUB. Research and Visiting Professor at Harvard University (USA).

LAURE TWYFFELS



Born in Brussels, Master in Bioengineering ULB, Aspirant du FNRS, PhD in Biology (ULB) obtained in the Gene Molecular Biology Laboratory (ULB), Titulaire d'une Bourse l'Oréal, Solvay Awards 2013, Niko Image laureate. As a Gene Biologist, Deputy Director/Center for Microscopy and Molecular Imaging.

DAVID DEHENAUX



Born in Brugge, Engineer Chemistry and Metallurgy, Engineer Materials (VUB). National Weather Service USA-PhD in Engineering (VUB). Worldwide reputation/expertise in weather forecast and participation in major modern adventures... Today: Head of Meteo at the National Institute Meteorology Belgium and «Mister Meteo» at VTM and RTL-TV1.

INFOS PARKING

- Attention, c'est la Fête de l'Iris, Fête de la Région de Bruxelles-Capitale le weekend du 5 mai
- Parking Arts-Loi à Proximité – 3 à 5 min.
- Parking Albertine à proximité de la Gare Centrale - 15 min.
- Gare Centrale – 15 min.

Nous remercions nos partenaires



PROGRAMME

Empowering Women in Chemistry

09h00	REGISTRATION & WELCOME COFFEE		
09h30	OPENING by Rita Cornelis, Vice-President National Committee of Chemistry, RASA KEYNOTE SPEECHES <ul style="list-style-type: none"> • Ilham Kadri (new CEO Solvay) - video • Isabel Van Driessche, Dean Faculty of Sciences, UGent • An Nuytens, Solvay • Muriel Moser, Dean Faculty of Sciences, ULB • Sarah Tailly, Galapagos NV 		
11h15	DISCUSSIONS GROUPS		
	<i>«How to combine career and family»</i> Conducted by Annemie Bogaerts (UAntwerpen) & Francine Delplanque (Solvay). Reported by Carmela Aprile (Unamur)	<i>«Importance of role models and mentors for women in science»</i> Conducted by Tatjana Parac-Vogt (XUL) & Christine Malcorps (Solvay). Reported by Anne De Wit (ULB)	<i>«Importance of role models and mentors for women in science»</i> Conducted by Sophie Hermans , (UCL) & Karen Vercauteren (Agfa). Reported by Michèle Huart (Solvay)
12h00	PANEL & WRAP UP SESSION <i>«Added Value of Gender Diversity»</i> Carmela Aprile (Unamur), Anne De Wit (ULB), Michèle Huart (Solvay) & Frank Beckx (essenscia)		
13h00	NETWORKING LUNCH		

BE PART OF A GLOBAL NETWORKING EVENT



PROGRAMME

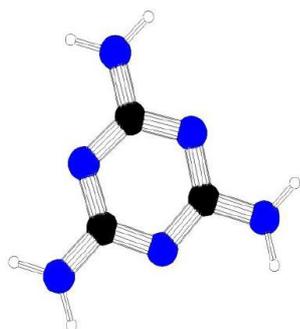
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Appendix 2



10th Belgian Crystallography Symposium

Organized by the National
Committee for Crystallography
October 17th 2018
Academy house- Brussels

Program

09.30 Registration

10.00 Welcome (Frédéric Hatert, President of National Committee of Crystallography)

10.15 **Francis Taulelle** (KU Leuven) – *NMR crystallography of polycrystalline powders – an overview*

11.05 Flash presentations

11.35 **Sebastiaan Godts** (KIK-IRPA) – *Thermodynamic modelling and influence of salts in monuments*

12.25 *lunch, session posters session, exhibition*

14.00 **Abel Garcia-Pino** (ULB) – *How to box a dynamic enzyme: lessons from the catalytic cycle of Rel/SpoT*

14.50 Flash presentations

15.20 **Véronique Gibon** (Desmet Ballestra Group), **Sabine Danthine** (ULiège) – *Microstructure and polymorphism of fats involved in industrial preparations*

16.10 Closing remarks, prizes (best posters, best flash presentation), reception

Sous-comité Cartographie et SIG



Rapport d'activités 2018

Ce rapport détaille les activités du sous-comité Cartographie et SIG du Comité National de Géographie pour l'année 2018. Plus d'informations sur nos activités actuelles et précédentes peuvent être consultés via notre site internet: <http://ncgeografie.be/fr/cartoSIG/>

Composition actuelle du sous-comité Cartographie et SIG

Membres: Frank Canters (président, VUB), Kristien Ooms (secrétaire, UGent), Yves Cornet (ULg), Jean-Claude Jasselette (SPW), Catherine Linard (Unamur), Chantal Roland (SPRB), Frédérique Spitaels (NGI), Anton Van Rompaey (KULeuven), Jo Van Valckenborgh (AIV), Sophie Vanwambeke (UCL), Eléonore Wolff (ULB).

Mapathon National 2018 / 2019

A la suite des deux premières éditions de 2016 et 2017, une nouvelle édition du Missing Maps Mapathon a été organisé le samedi 24 Mars 2018 par le Comité National de Géographie (sous-comité Cartographie et SIG), en collaboration avec Médecins Sans Frontières, la Humanitarian OpenStreetMap Team et OpenStreetMap Belgique. Le Mapathon était organisé dans huit universités Belges (ULB, VUB, KUL, UCL, ULg, UNamur, Umons et UGent), avec le soutien des organisateurs de chaque université et des "mappers" expérimentés, actifs au sein de OpenStreetMap Belgique.

Cet année, le mapathon s'est concentré sur le nord-est du Nigeria, une région exposé à des épidémies de méningite C. Depuis 2008, des milliers d'hommes, femmes et enfants sont affectés par la maladie chaque année. Médecins Sans Frontières fournit de l'aide aux autorités locales, afin d'éviter ou de réduire le déclenchement de nouvelles épidémies, de visiter des centres de santé et de fournir le matériel nécessaire. Médecins Sans Frontières aide également à la détection de nouveaux cas de méningite C, et informe la population afin de reconnaître les premiers symptômes de la maladie. Lors de ces actions, il est important que les zones les plus reculées soit atteint. Il n'existe cependant pas de cartes permettant d'accéder rapidement à ces zones en véhicule motorisé. Une cartographie de l'ensemble du nord-est du Nigeria est donc nécessaire afin de lutter efficacement contre les épidémies de méningites C.

L'édition 2018 du mapathon était à nouveau un succès. Grâce aux 263 personnes qui ont participé au mapathon, plus de 70 000 (!) bâtiments et 277 km de routes ont été cartographié.

Un débriefing de l'évènement a eu lieu le 17 mai à la VUB. Lors de ce debriefing, il a été décidé d'organiser une nouvelle édition du mapathon lors de la semaine du 25 au 31 mars 2019. L'édition 2019 du mapathon coïncidera dès lors avec les évènements du Printemps des Sciences, qui ont lieu dans chaque université francophone cette semaine-là. Frank Canters (VUB) et Catherine Linard (Unamur) s'occupent de la coordination générale de l'évènement pour le sous-comité. Par rapport aux éditions précédentes, l'édition de 2019 sera organisée à trois moments différents (mercredi soir, jeudi soir et samedi matin). Le choix est laissé à chaque université d'organiser une séance de mapping lors d'un ou plusieurs de ces moments. La tenue du mapathon à trois moments différents a pour but de permettre une plus grande participation des étudiants présent dans les différentes universités.

Préparation du concours de dessin Barbara Petchenik 2019

Tous les deux ans, l'Association Cartographique Internationale (ACI) organise le concours de dessin [Barbara Petchenik](#) pour des enfants âgés de moins de 16 ans. Le but du concours est d'inciter les enfants à représenter le monde d'une manière creative. Une présélection est organisée dans chaque pays. Six dessins (deux par catégorie d'âge) sont sélectionnés parmi les dessins obtenu, et participeront au concours international qui est organisé lors de la International Cartographic Conference, qui a lieu tous les deux ans. Cette année, la conférence aura lieu du 15 au 20 Juillet à Tokyo. Le thème du concours est "We love maps", comme l'édition précédente.

Le sous-comité Cartographie et SIG du Comité National de Géographie est responsable de la partie Belge du concours (présélection des dessins), en étroite collaboration avec l'Institut Géographique Nationale, qui participe également à l'organisation logistique de la présélection. Kristien Ooms (UGent) et Ellen Vandeputte (IGN) coordonnent l'édition de 2019.

Des invitations pour participer au concours ont été envoyées dans les écoles primaires et secondaire de Bruxelles, Wallonie et Flandre, et ce pour les trois catégories d'âge (0 – 8 ans, 9 – 12 ans et 13 – 15 ans). Le mardi 19 Février 2019, une présélection des dessins envoyés aura lieu (5 par catégorie d'âge). Le public pourra ensuite voter pour un de ces dessins via le site web du sous-comité. Les trois dessins qui recevront le plus de voix (une voix par catégorie d'âge) seront sélectionné pour participer au concours international qui aura lieu à Tokyo en juillet 2019. Les trois dessins qui reçoivent le plus de voix du jury national responsable de la présélection (les membres du sous-comité), et qui ne sont pas sélectionné par le public, seront également sélectionné pour participer au concours international (à nouveau un dessin par catégorie d'âge).

Frank Canters – président
Kristien Ooms – secrétaire

Activity report of the Belgian Association of Geomorphologists (2017-2018)

presented by Jan Nyssen, BAG President, during the administrative session, held on the occasion of the annual BAG excursion (Dijle basin, 8 June 2018) and approved by the assembly.

1 Reminder of our administrative structure

BAG is the Belgian chapter of the IAG. Jan Nyssen (UGent) is president (2017 to 2021). Geoffrey Houbrechts (ULiège) is vice-president (2017-2021). Olivier Dewitte (RMCA) is BAG secretary and treasurer.

2 BAG activities in 2017-2018

- Last year's BAG excursion was organised by Alain Demoulin (ULiège) and Gilles Rixhon (Köln) who led us in the Ourthe-Amblève basin, from Colonster up to the Trô Marêt river capture, revisiting Quaternary terraces and river profiles and updating their implications for our understanding of the incision history of the Ardennes drainage system.

- November 6-11, 2017: 9th International Conference on Geomorphology, New Delhi, India. Morgan De Dapper represented the BAG.

- April 8-12, 2018. EGU general assembly, including 12 sessions on Geomorphology. ~15 BAG participants (Elise Monsieurs (RMCA-ULg); Benoît Smets (RMCA); Olivier Dewitte (RMCA); Antoine Dille (RMCA –VUB); Jean-Claude Maki Mateso (UCL – RMCA); Fils Makanzu (RMCA); Arthur Depicker (KUL); Jente Broeckx (KUL); Matthias Vanmaercke (ULg); Gert Verstraeten (KUL); Benjamin Campforts (KUL); Veerle Vanacker (UCL); Laura Lamair (ULg))

- On May 16-20, 2018, the Romanian Association of Geomorphologists organised the 19th Joint Geomorphological Meeting (Italy-Romania-France-Belgium-Greece). Olivier Dewitte took part in the conference and represented BAG. The conference attracted 70 participants. Two days of field trip were organized in the Vrancea seismic region (Sub-Carpathian Mountains).

- Prizes and awards

- Matthias Vanmaercke (ULg) has been awarded the EGU 2018 Division Outstanding Early Career Scientist Award for the Soil System Sciences division
- Frank Pattyn (ULB) has been awarded the EGU 2018 Louis Agassiz Medal of the Cryospheric Sciences Division
- Antoine Dille (RMCA – VUB): Yola Verhasselt Prize for Tropical Geography awarded by the Royal Academy for Overseas Sciences of Belgium for his PhD research on “Characterizing the spatio-temporal dynamics of landslides in urban sprawling contexts: focus on Bukavu (DR Congo)”.

3 Springer book on "Landscapes and landforms in Belgium and Luxembourg"

- 42 printed copies sold (status December 2017).
- No clear information about number of e-books sold.
- More than 13 000 chapter downloads (status May 2018).

4 Upcoming activities

- EGU: 7-12 April 2019
- The 8th International Symposium on Gully Erosion will be held in Townsville, Australia on 21-27 July 2019. Townsville is Australia's largest tropical city and adjacent to the Great Barrier Reef.
- 2019 Regional Conference of the IAG will be held in Greece (Athens), first half of September 2019
- 2020 IAG Regional Conference in Iran (Mashhad)
- 2021 International IAG Conference in Portugal (Coimbra)

5 BAG excursion 2018

Thank you to Gert Verstraeten, Nils Broothaerts and Katrien Wouters (KULeuven) for organising this year's BAG excursion in the Dijle valley. During this field trip, we visited several places along the River Dijle (south and north of Leuven) to discuss the evolution in river channel morphology and the floodplain over timescales ranging from a few decades to millennia. In particular, we focussed on the relative role of climatic and anthropogenic driving forces on channel and floodplain development. Topics include the changes in channel planform and channel morphometry, changes in floodplain aggradation and floodplain geocology, and river management. The study area largely corresponds to what has been described in chapter 16 of the recently published book on Landscapes and Landforms of Belgium and Luxembourg. We were 30 participants.



In the confluence area of Dijle and Demer

6 The 2019 BAG excursion

In view of the usual alternation for the organisation of our annual field trip day, the 2019 excursion will be organised by our Walloon colleagues: “Unknown geomorphic phenomena in the Geopark Famenne Ardenne” (recently recognized by UNESCO), guided by Vincent Hallet (UNamur). Friday 7 June 2019.

7 Administrative news

There are 9 institutions, among which the annual BAG contribution to the IAG (1000 €) is shared. The 2016 and 2017 invoices were delayed because of late requesting by the BAG treasurer. We had then to do a rapid last-minute payment to IAG (before the 9th International Conference) and UGent could do this rapid payment. We have now sent out corresponding invoices to all partner institutions. The 2018 contributions will again be handled by Olivier Dewitte (RMCA) in the usual way.

Good to know, this is the administrative structure of IAG (2017-2021)

President: Prof. Mauro SOLDATI (Italy)
 Vice-President: Dr. Susan CONWAY (UK) – Communication, co-operation, outreach
 Vice-President: Prof. Sunil Kumar DE (India) – Working Groups
 Vice-President: Prof. Francisco GUTIERREZ (Spain) – National Scientific Members
 Secretary General: Dr. Mihai MICU (Romania)
 Treasurer: Prof. Emmanuel REYNARD (Switzerland), replacing our colleague Morgan De Dapper (UGent) who was treasurer of the IAG (2013-2017).
 Publications Officer: Prof. Kosmas PAVLOPOULOS (Greece)