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EN KUNSTEN

BELGIAN NATIONAL SCIENTIFIC COMMITTEES

RASAB vzw/asbl

BELGIAN NATIONAL SCIENTIFIC COMMITTEES
ANNUAL REPORTS 2016

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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 the RASAB's website: www.rasab.be.

¹ www.academieroyale.be

² www.kvab.be

NATIONAL COMMITTEE FOR ANTARCTIC RESEARCH

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 29 April 2016 (Palace of the Academies)

During the Symposium that was jointly organized with BNCGG (see below), we held a lunch meeting of BNCAR. This short meeting was mainly an update of the last meeting of 2015 where only the appointments for attendance of the upcoming SCAR meeting were discussed. Given the participation of several scientists at the conference, we also reviewed the associate member list, and proposals were made (such as potential APES membership).

[b] Meeting of 28 November 2016 (Palace of the Academies)

Membership: The board has undergone some changes. A new secretary was appointed and the position of vice-chair was filled in. In order to be able to join the board, Dr. A. Van de Putte was made full member. We also appointed two APECS (Association of Early Career Polar Scientists) delegates as associate member. APECS is deeply involved in SCAR on all levels and having a presentation of that community will help in keeping BNCAR as an active advisory body. Reports: A full report on the SCAR biannual meeting held in Malaysia in August 2016 was given by members of BNCAR that attended the meeting and were representing different bodies, i.e., F. Pattyn, A. Van de Putte and N. Bergeot.

Commissions: A Belgian Antarctic place name commission was established. The need for this arises from the increased Belgian activities in the region.

3. General Assembly of the Scientific Union

SCAR OSC and delegate meeting, Kuala Lumpur, Malaysia, 20-30 August 2016. The Open Science Conference was attended by several BNCAR members, F. Pattyn (delegate), A. Wilmotte, A. Van de Putte, and N. Bergeot. F. Pattyn also attended the delegates meeting.

Vande Putte was observer in this meeting. New associate memberships came from Colombia, Austria, Thailand and Turkey, while Czech Republic and Portugal expressed the desire to become full member. As for the elections of the board, S. Chown was elected new SCAR president for the next four years.

Several research programmes currently running under SCAR were very positively reviewed and all programmes were conducted for the next term. A wiki bomb was organized at the beginning of 2016 in order to promote Antarctic women scientists. A new strategic plan was endorsed for the next coming years (2017-22). The main points of this SCAR mission are:

- To amplify its leadership in Antarctic research by further strengthening and expanding high-quality collaborative and visionary Antarctic research;
- To offer independent scientific advice to Antarctic Treaty Consultative Meetings and other bodies dealing with Antarctic and Southern Ocean matters;
- To enhance and grow research capacity in SCAR member countries;
- To enhance public awareness and understanding of Antarctic issues through communication of Antarctic research results in a timely and accessible manner;
- To facilitate unrestricted and free access to Antarctic research data.

BNCAR will make sure to adhere to this new strategic update.

4. Other activities

Together with BNCGG (Belgian National Committee on Geodesy and Geophysics), BNCAR organized an Antarctic Symposium on 29 April 2016 at the Palace of the Academies. This is the first joint effort between both committees and was extremely valued. It showed the synergies between both committees, where several members serve both. The subject of the symposium was "*Unlocking a continent: scientific research at the Belgian Princess Elisabeth Station, Antarctica 2008-2016*" and presentations covered the wide range of scientific endeavours and results obtained at and around the Princess Elisabeth Station in Antarctica since its opening in 2008-09.

The symposium was opened by the Federal Secretary of State for Science Policy, Ms. Elke Sleurs and attended by about 100 people. The symposium started with a keynote by prof. Martin Siegert, a distinguished Antarctic researcher from the Imperial College London. In total, 45 presentations were given, of which more than half were poster presentations. The massive attendance and the wide range of presentations witnessed of the importance of organizing such events. The symposium was co-sponsored by BELSPO.

F. Pattyn represented SCAR at COP-21 in Paris with a briefing followed by a press conference on Antarctic tipping points in a warmer world.

5. Future perspectives

The next SCAR Biology meeting will be hosted by Belgium in July 2017. A. Van de Putte and B. Danis (members/associate members of BNCAR) are the co-chairs of the local organizing committee of this international and highly valued symposium.

The next SCAR Open Science Conference will be held in Davos (Switzerland) in 2018. Given the proximity of the event, BNCAR has urged members to make attendance as large as possible.

Organization of a Belgian Polar Symposium (co-organized BNCAR) in 2018

NATIONAL COMMITTEE FOR ASTRONOMY

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 Committee gathered three times in 2016: on 11 January, 27 June, and 30 November. In addition, it also had a joint meeting with the BNEC (National ESO Committee) on 11 March. All these 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, and the ARIES telescopes under construction in India, which are addressed in the sections below.

3. General Assembly of the Scientific Union

No General Assembly in 2016.

4. Other activities

[a] *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 in Prague at the end of April. From the main topics that were addressed it comes out that:

- The impact factor of A&A came above.
- The new agreement with ESO was validated by all participating countries. Belgium was the second last country to sign.
- Two new members joined A&A: Norway and, for 2 years without fee, Ukraine. EDP received an extension of its contract, which will give time to launch a new

call for tender to find a new publisher.

- The next A&A Board meeting will take place on 21 April 2017.

[b] ESO matters

ESO matters were reported to the BNCA by J. Surdej (Chairman of the Belgian National ESO Committee, BNEC), S. Van Eck (secretary of BNEC), C. Waelkens (Scientific member of the ESO council), S. Pireaux (Belspo, ESO council member), and R. Alvarez (ROB Planetarium, Belgian representative at the ESO outreach committee). Meetings of the BNEC were held on 11 March, 21 June and 21 November 2016, while ESO council meetings took place on from 7 to 8 June, on 7 October (extraordinary meeting), 3 November (extraordinary meeting), and from 7 to 8 December, 2016.

- During a joint BNCA/BNEC meeting held on 11 March, an update of the list of rules has been discussed. At its meeting in November the BNEC office was finally renewed. M. Groenewegen was elected President, while H. Sana was chosen as Secretary. C. Waelkens was renewed in his role of Belgian representative at ESO council.
- The La Silla Paranal Observatory in Chile will not close. The 3.6 m telescope and the New Technology Telescope (NTT) will be upgraded and adapted to the search and study of exoplanets and of transit phenomena (e.g. supernovae). The main instrument at the NTT will be a low resolution spectrograph. In the future, the consortium that will build an instrument will also operate it (lower costs for ESO). In return, it will be granted guaranteed observing time.
- The Paranal site has been chosen as the southern site for the Cherenkov Telescope Array (CTA). CTA will be considered in the same way as the national instruments which are currently operational on the ESO sites. ESO will receive 10% of the observing time; management costs incurred by ESO will be fully covered by the CTA consortium. Implementation of CTA will start once 60% of the construction costs are guaranteed.
- European Extremely Large Telescope: It is becoming less and less likely that Brazil will join ESO. So far, 80% of the construction contracts have already been awarded. The spending profile is such that it is expected that money will have to be borrowed during some phases of the project.
- On 1st of July, ESO launched a call for a new Director General (5 years mandate, starting in 2017). Meanwhile, the ESO Council has appointed Xavier Barcons, 57, as the next Director General of ESO. He will take up his position on 1 September 2017, when Tim de Zeeuw, the current Director General, completes his mandate. Press release and impact statistics are similar to previous years. The building and preparation of the Supernova

Planetarium is going well. Its inauguration should happen at the end of 2017.

[c] ESA matters

ESA matters were reported to the BNCA by W. Verschueren (Belgian representative at the ESA Science Programme Committee, BELSPO).

- Three missions are in phase A preparation:
 - Ariel (Atmospheric Remote-Sensing Infrared Exoplanet Large-survey) in which ULg and KUL are involved;
 - Thor (Turbulence Heating Observer) to which the Royal Belgian Institute for Space Aeronomy is contributing;
 - Xipe (X-ray Imaging Polarimetry Explorer).
- LISA Path finder mission: launched and first results are successful. ESA plans now to proceed with the preparation of the large gravitational wave observatory mission. Belgian involvement is being prepared and led by KUL.
- The last "M5" call (deadline 5 October) for medium-size missions resulted in 25 proposals (for 36 Lols initially received). There is a considerable Belgian participation in a great number of these proposals.
- The ESA Ministerial Council took place on 1st and 2nd December and decided on the budget to dedicate to the Science Programme from 2017 to 2021. The budget essentially remains at 508 MEUR per year without inflation compensation. A cumulative total of 16 MEUR is added to the budget over the five years. This increase represents much less than the inflation compensation, and therefore the Science Programme loses buying power in the next 5 years. The reason for not increasing more substantially the budget is that a transfer was decided of 97 MEUR, out of the total Level of Resources (Science Programme plus Basic Activities), to the EXOMARS Programme in order to cover shortages. A new "European Exploration Envelope Programme" was subscribed by 1444 MEUR (2017-2019), it comprises all the ISS activities, exploration technology development activities and the EXOMARS programme. Finally, it was decided not to fund the AIM mission (Asteroid Impact Mission).
- ESA released a "Call for new science ideas" and 26 proposals were received. We are aware of three Belgian participations: ROB (an in-situ mission to Venus), CSL (a mission to study the Sun), and ULg (an interferometric mission aimed at characterizing habitable rocky planet atmospheres and search for bio-signatures). One or two proposals will be selected for a study phase funded by ESA. The purpose is to facilitate the involvement of new communities in the ESA Science Programme. The study phase should enable the team to

later write a competitive proposal when calls for missions are released.

[d] ARIES telescopes

J. Surdej regularly reported on the construction of the ARIES telescopes.

- Status of the 3.6m DOT and 4m ILMT facilities at the end of 2016: the mirror of the 3.6m needs to be re-coated. This will very likely happen at the end of February 2017. ARIES astronomers should then start the science verification program with that telescope and write manuals reporting on the performances of the different instruments accessible at the Cassegrain focus of the 3.6m DOT. The ILMT building is now ready and the construction of the telescope will begin in March 2017, with the help of AMOS, ARIES engineers and technicians and ULg astronomers.
- ARIES hosted a meeting on June 7 between D^{rs} M. Gopinathan, B. Kumar, and J. Surdej. J. Surdej was informed that the Indian astronomers have already set up their TAC (no Belgian member). BNCA therefore sent a mail to several representative institutes to define the Belgian ARIES Time Allocation Committee (TAC). It results in a committee that will be formed by:
 - ULB: A. Jorissen, S. Van Eck (substitute);
 - ROB: P. de Cat, P. Lampens (substitute);
 - UGent: S. De Rijcke, M. Baes (substitute);
 - ULg: J. Surdej, M. De Becker (substitute);
 - UAntwerp: K. Kolenberg.
- The first BINA workshop took place in India from 15 to 18 November. It was a success. Among the participants, 10 were Belgian, 80 were Indian scientists (half from ARIES), and 10 foreigners.
- During 2016 several concerns were raised about the availability of the instrumentation at the 3.6m DOT telescope. It was decided at our last meeting to send a joint BNCA letter to share these concerns with the head of ARIES.

[d] A&A FNRS contact group meeting

R. Alvarez organized at the Planetarium of the ROB the FNRS A&A contact group meeting on October 11, 2016. 57 participants attended the meeting, 11 talks and 3 posters have been presented.

[e] Miscellaneous matters

COSPAR: For saving reasons RASAB has decided to not renew its financial contribution to COSPAR. D. Fonteyn and P. Simon from BIRA proposed to revive the national committee for space research (CNRS/NCRO), as it was inactive for several years. Two members of the BNCA, C. Waelkens and V. Dehant, are now members of the committee whose first action will be to understand its position relatively to the future Inter-federal Space Agency of Belgium (ISAB). Therefore, during the first (public) meeting of the CNRS/NCRO held on 7 June, E. Beka presented a rapid overview of the goals and aims of ISAB.

5. Future perspectives

Progress was achieved during 2016 towards the creation of the Interfederal Space Agency of Belgium (ISAB). The first legal texts were approved by the federal Council of Ministers in November. ISAB should become operational during 2017 and will take over (and extend) the responsibilities of the current Space Department of BELSPO which will cease to exist.

NATIONAL COMMITTEE BELQUA (QUATERNARY RESEARCH)

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 4/03/2016, in Brussels

BELQUA meeting in March 2016 was open to all attendees of the BELQUA workshop (see below). G. Verstraeten gave a presentation of BELQUA, its activities (e.g., field trip and workshop) and its embedment in INQUA. Main achievements and conclusions:

- An unanimous vote in favour of Veerle Vanacker (UCL) to become a member of the BELQUA NC;
- A discussion and brainstorming session was organised to further encourage more scientists to attend the workshop and the yearly field trip (see below);
- Preparation to publish a book providing an overview of Quaternary science in Belgium

(b) Meeting of 28/11/2016, in Brussels

Main conclusions:

- Evaluation of the fieldtrip and 2016 workshop;
- Discussion concerning the forthcoming BELQUA activities. It was decided to organise a BELQUA workshop following the concept of the previous years (see also below). It was also decided to organise a one-day training event in 2017 for young scientists working on the Quaternary or MSc students following courses relevant to Quaternary science in general. The idea was raised to focus the first training day on dating techniques. The session would start with a number of general lectures by keynote speakers aimed at giving a state-of-the-art of some dating techniques. During the afternoon more specific lectures with some case studies would follow. This one day training event will replace the field excursion in 2017.

3. General Assembly of the Scientific Union

There was no General Assembly of INQUA in 2016. The next general assembly will be organised in Dublin (Ireland) in 2019. 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.

4. Other activities

[a] BELQUA annual workshop

The BELQUA 2016 workshop was a one-day event in Brussels and coincided with the BELQUA NC meeting. The workshop is an opportunity to meet colleagues working in Quaternary Sciences in Belgium and abroad. It is also an opportunity for students to present their PhD research and post-doc projects. Vanessa Heyvaert (RBINS) and Gert Verstraeten (KU Leuven) organized and convened the workshop. Prof. Kim Cohen (U Utrecht) was invited as a keynote speaker on the topic of “Palaeogeography and Sediment Budgets of the Low Countries: 2.7 ka, 27 ka, 270 ka”. In addition to the keynote lecture, abstracts were submitted for 9 oral presentations, covering a very wide range of topics and disciplines. The workshop was attended by 30-35 scientists.

[b] Annual BELQUA fieldtrip

The field trip was co-organised with BLUG/UBLG and Geologica Belgica on the 10th of September 2016. The excursion included a visit to the Kikbeek Quarry and the Nationaal Park ‘Hoge Kempen’. During the field trip some exposed deposits were discussed including silversand, Kikbeek lignite, pedogenetic quartzite, cryoturbations and polygonal soils, and Usselo and Bolling soils, as well as some surrounding geosites. The field trip was attended by c. 12 scientists of which 3 were affiliated to BELQUA.

(c) Participation in international meetings and conference

BELQUA members took part and convened sessions in several international meetings

- Co-conveners of symposium ‘Quaternary continental climate archives: tracking spatial and temporal changes through robust multi-proxy records’ (N. Fagel, M.F. Loutre, S. Verheyden), ‘Stochastic and scaling fluctuations in marine, freshwater and atmospheric sciences: physical, chemical and biogeochemical studies’ (N. Fagel), Ice-sheet and climate interactions (Philippe Huybrechts) and ‘Limnogeology - reading the geological record of lakes’ (Marc De Batist) at the EGU General assembly, Vienna, April 2016.
- M.F. Loutre is member of the scientific committee of ‘Central and Eastern Europe Paleoscience Symposium: From Local to Global’, Cluj-Napoca, Romania, May 2016.

- M.F. Loutre was co-convener of PAGES TownHall meeting during the CLIVAR Open Science Meeting, Qingdao, China, September 2016.

5. Future perspectives

[a] BELQUA annual workshop

The BELQUA 2017 workshop will be organised by Nathalie Fagel and Elie Verleyen on the 10th of March. The workshop will be open to all scientists interested in Quaternary research and will provide young scientists, including advanced MSc students, PhDs, and post-docs, the opportunity to present their work.

[b] BELQUA annual Fieldtrip

A one-day training event will be organised in the fall of 2017 regarding dating techniques. The NC will decide on the exact date and program during the BELQUA NC meeting in March.

NATIONAL COMMITTEE FOR BIOCHEMISTRY AND MOLECULAR BIOLOGY

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 2016 the board met on the 23rd of January in the Palais des Academies in Brussels. In this meeting 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 2016.

4. Other activities

The Society/National Committee has organized in 2016 the following two scientific meetings:

[a] 213th meeting of the Society.

The 213th BSBMB meeting took place on Monday June 20, 2016 at Erasme Campus Anderlecht (ULB) (local organizer Jason Perret). The theme of the meeting was New insights in molecular mechanisms of neurodegeneration. Originally this meeting was planned in the fall of 2015 but because of the lockdown situation in Brussels during that time, the meeting had to be postponed. The Society's 65th general assembly was held at this meeting during the lunch break, and confirmed the composition of the current board. Also, Yves Engelborghs remains treasurer but he indicated that the society needs to find someone who can take over his task, after serving the

society for so many years. Jan Gettemans (secretary) presented an overview of the new website www.biochemistry.com, hosted by one.com.

[b] Other activities

Most members of the National Committee participated in many 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.

All members of the National Committee participated in many 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 National Committee for Microbiology and the National Committee for Biochemistry and Molecular Biology co-organized a meeting on the 28th of October 2016 in the Palace of the Academies in Brussels. On several occasions, in March and April 2016, representatives of the BSBMB (Carine Michiels, Jason Peret, Jan Gettemans) held a meeting with representatives of the Belgian society for Microbiology to arrange all the practical details (invited speakers, posters session, attendance fee, abstract book, sponsors, poster awards). This meeting was further supported by FNRS, FWO and Belspo. There was a general consensus that the meeting was a great success.

NATIONAL COMMITTEE FOR BIOLOGICAL SCIENCES

1. Introduction, mission, goals

The national Committee of Biological Sciences is representing the Royal Academies (RASAB) towards the International Union of Biological Sciences (IUBS) and brings representatives of the Belgian biological research and research groups together. The Committee organizes contact fora and develops in collaboration with other organisations research projects towards the larger public.

2. Meetings of the Committee

Non-specified.

3. General Assembly of the Scientific Union

No General Assembly in 2016.

4. Other Activities

It was planned to organise an activity bringing citizens to science by developing a project on air quality through studying the distribution of some easy recognisable lichen species. The project portfolio (already existing in Dutch) has been translated to French. However it turned out that the administrative load and follow up needed in manpower was not available to develop the programme as it should be. The programme has been put on hold.

This year a number of direct discussions took place between the president and members or non-members of the Committee. The topic of these discussions are the future of the Committee. The main conclusions from the discussions are:

- The actual composition of the committee does not reflect the evolution of biological sciences of the last decades. E.g. genomics are not represented at all.
- In order to get an active committee it is advised that the actual members should step down, making place for younger partners, better representing what is going on in the biological research world.
- The question has been posed as to the actual significance of a National committee and its activities, given the evolution of scientific collaborations during the last decades with the

development of the anywhere presence of internet and easy contact possibilities through different media. It has been suggested to have an activity in 2017, dealing with the implication and contribution of research institutes not linked to a university and their possible contribution to university student's curricula.

5.Future perspectives

- Inform the word of biological academia on the existence of a National committee and its possible role.
- Discuss the future of the Committee to come to or an active Committee or to stop the Committee's activity.
- Invest the support for a symposium (last trimester 2017) on the possible role of scientific institutes' (not university bound) in the curriculum development of biology students.

NATIONAL COMMITTEE FOR BIOMEDICAL ENGINEERING

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: March 3rd, August 22nd, November 7th, November 25th.

Main conclusions:

- Continuing efforts for a yearly Contact Forum.
- Involving young scientists and professionals, alumni of our master programs.
- Streamlining communications (updated informative website).
- Contacts with industry: mostly via the association UNAMEC.
- Continuing liaison efforts with European, worldwide associations.
- Need for continuing efforts in promoting research and development and an awareness of the community.

3. General Assembly of the Scientific Union

No General Assembly in 2016.

4. Other activities

[a] Belgian Day on Biomedical Engineering (March 4th, 2016)

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: "Nanotechnology" had to be postponed to March 4th 2016 due to the terror-menace level 4 in Brussels.

Goals:

- Bring Belgian researchers in contact with internationally recognized speakers (this year's theme: Bridging the gap between Engineering and Medicine) and allow them to present their work in a short presentation and poster (Belgian Day).
- Evaluate the future activities of EAMBES.

Attendance:

- 270 persons attended the "Contact Forum": 14th National Day on Biomedical Engineering.

[b] Belgian Day on Biomedical Engineering (November 25th, 2016)

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: "Advances in Medical Imaging"

Goals:

- Bring Belgian researchers in contact with internationally recognized speakers (this year's theme: Bridging the gap between Engineering and Medicine) and allow them to present their work in a short presentation and poster (Belgian Day)

Attendance:

- 195 persons attended the "Contact Forum": 15th National Day on Biomedical Engineering on November 25th 2016, of which 128 students, 45 Phd students, 6 post-docs, 16 professors, others: professionals in the field.

[b] Collaboration with UNAMEC

Thanks to the collaboration with UNAMEC, an evaluation if the complete biomedical engineering sectorial presence: in education, in research, and in the professional context has been realized in 2013. Major contributions were made to the UNAMEC report concerning medical devices (in final stage): *Medical technology in Belgium* and MedTechFlanders was founded in July 2015.

[c] Liaison with worldwide societies/activities

- Contacts between the National Committee, the World Federation IFMBE, the Union (IUPESM) and ICSU via Marc Nyssen.
- Contacts between the National Committee and EAMBES (European Level umbrella organisation) via Jos Vander Sloten.
- Contacts between the National Committee and ESEM (the European Scientific Society) via Pascal Verdonck.
- Contacts between the National Committee and UNAMEC (the professional umbrella association), with industry members of 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.

[D] Youngsters Board

A “Youngsters Board” was set up successfully in 2010 and was fully operational in 2011 and renewed in 2015 and again in 2016.

[E] EAMBES /IFMBE

A European meeting with the EAMBES /IFMBE members was held at the European Parliament 31st May 2016.

5. 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

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

- 20th of December 2016: finalization of the 2017's Belgian Biophysical Society program (meetings, workshops, ...).
- 2nd of September 2016: presentation and approval of the committee's activities and of the financial balance by the General Assembly.

3. General Assembly of the Scientific Union

No General Assembly in 2016.

4. Other activities

- Seminar Series on "Protein Purification", 10-12 May 2016, University of Liège
- Seminar Series on "Protein Folding and Protein Stability", 29 & 30 August 2016, University of Liège
- Thirteen one-day symposium on "Protein Folding and Stability", 2 September 2016, University of Liège
- Mini-Symposium on "Microcalorimetry of Biological Macromolecules", 22 November 2016, University of Liège

NATIONAL COMMITTEE FOR CHEMISTRY

In Memoriam

The Past President of the National Committee Chemistry Belgium, Paul De Bièvre passed away on April 14th, 2016 at the age of 83. He was recognized internationally for his expertise in metrology and analytical chemistry. He was extremely motivated by the National Committee role in Belgium and the image of Belgian Chemistry in the world. He was a figure as a senior member of the IUPAC and as family man, a proud father and grandfather. We will remember him as a colleague and friend and certainly mention his name quite often in the future.

1. Introduction, mission, goals

As reported in 2015 and 2014, our goals remain unchanged and in line with our strategy guidelines: reconcile 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 these issues and concerns are shared by many ones (all) in the network of organization in Belgium.

So our wish is to be specific, and bring an efficient contribution to the common effort and 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, can impact and spread our ideas and projects.

2. Meetings of the committee

- a. Regular meetings: February 25, 2016; October 26, 2016
- b. Project Meetings Feb 2nd, 2016 (with The Olympiads and Jeunesses Scientifiques); March 2nd, 2016 (Leuven)

3. General Assembly of the Scientific Union³

No General Assembly in 2016.

3. Others activities

[a] In Belgium

In order to illustrate many aspects of chemistry in the development of “high Tech” applications , and Sciences and more particularly Chemistry is an essential tool in our modern life, a “one day event” dedicated to the youth was organized on Saturday April 16th.

In order to stimulate their interest for Science and Technology, The" National Committee Chemistry, the Science Olympiads, the" Scientists Youth of Belgium" invited the Science Olympiads /Belgium (age 17/18) young finalists (250) to a one-day event: “Science and Technology, the Future, My Future”. Since the Auditorium at the Academy was reserved, the Event took place on Saturday 16th April 2016, at the Solvay Campus, with the courtesy of Solvay SA, 310 rue de Ransbeek Neder-over-Heembeek , 1120 Brussels from 10 am to 4 pm.

It is an opportunity to thank Solvay S.A. for their support, organization, exhibition, catering and their financial support at 100% (about 15000 €).

- 210 students (high Schools) selected in the finalists of the Olympiads (Physics, Chemistry, Biology) from the three regions attended and listened with enthusiasm the speakers of the day.
- to stimulate the students, the programme (in Fr and NDL) was focused on technologies where all the sciences and technologies can contribute. Two lectures by “senior” scientists and two presentations by PhD’s students from ULB and VUB.
 - Claude Michel and Michel Dubois: “Solare Impulse”
 - Seppe Terryn (VUB) Self-Healing Robots no longer Science Fiction
 - Prof Philippe Claes: Meteorites in, Dinos Out
 - Sophie Bauduin: Sounding Air Pollution from Space

This “Science Day” was unanimously appreciated by the participants. The quality, and subjects covered by the lecturers were very stimulating.

³ See full report on page 98.

[b] International

- COCI (Committee for Chemistry and Industry/ IUPAC). Participation at the meeting (Montreal/ April 2016) - Paul Baekelmans as Titular Member - with two main items to be reported:
 - Growing interest for the health and safety training programme (see below)
 - Preparation of a Regional workshop in Beijing

- COCI (Committee for Chemistry and Industry/IUPAC). Participation at the meeting (Beijing/September 2016) - Paul Baekelmans as Titular Member - with items to be reported
 - Seminar organized by SINOPEC. The IUPAC Regional workshop with the theme “Chemical Industry of Sustainable Development” featured 12 technical presentations on development of green chemical technology, biomass energy and chemicals, and Responsible Care.
 - IUPAC is starting a new interdivisional committee on Green Chemistry and Sustainable development.

This seminar emphasizes a real move in the Chinese Industry towards “clean” products and environmental concerns.

- Attendance at IUPAC Division VII meeting, Chemistry and Human Health, in Copenhagen from September 3rd till 6th, 2016 – by Rita Cornelis as Vice-President of the Division.
- All through the year participation with Tom Perun, President, and Mike Schwenk, secretary, in all matters concerning the management of Division VII - Rita Cornelis as a member of the Interdivisional Committee on Terminology, Nomenclature and symbols reviewing papers submitted for publication in the IUPAC Journal PAC (Pure and Applied Chemistry).
- In 2016, the “Safety Training Programme” dedicated to the training of developing countries technicians in the Chemical Industry in laboratories and production plants was introduced to Solvay. The programme will be implemented in 2017 (May)

NATIONAL COMMITTEE FOR CRYSTALLOGRAPHY

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 site⁴, 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 16 March 2016 in Brussels (Academy Palace). During this meeting the program of the Ninth Belgian Crystallography Symposium BCS-9 organized by the National Committee of Crystallography in the Academy Palace in Brussels on 26 October 2016 was discussed (list of speakers, poster session, exhibition and flash presentations). The committee has decided to maintain the new initiative 'Invite a crystallographer' during the next school year and to give vouchers for this event as prize for the Belgian Crystal Growing Competition. 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 18 May 2016. Proposed speakers were Frank De Winne and Philippe Claeys. Finally, the Belgian representation for the Council Meeting of the European Crystallographic Association (ECA) and nominations for the IUCr Executive Committee and Commissions have been discussed.

Some members of the Committee were present at the judging (Namur, 23 April 2016) and prize awarding ceremony (Brussels, 18 May 2016) of the Crystal Growing Competition.

⁴ sites.google.com/site/xallobe and www.iycr2014.be

[b] The second meeting in the Academy Palace in Brussels on 25 October 2016 was opened with the reports of the ECA Council Meeting in Basel by the Belgian representatives (Y. Filinchuk and F. Hatert). The final preparations for the Belgian Crystallography Symposium BCS-9 in 26 October 2016 and the preliminary timing of the 2017 edition of the Belgian Crystal Growing Competition were made.

The status of the initiatives 'Invite a crystallographer' was discussed further. Finally, the Committee has discussed and approved in the presence of T. Leyssens (UCL, invited for this agenda item) the possibility to install a sub-committee on crystal growth in order to become member of the International Organization for Crystal Growth.

3. General Assembly of the Scientific Union

The next General Assemblies will be held during the IUCr Meetings in Hyderabad (2017) and Prague (2020).

4. Other activities

[a] The National Committee of Crystallography has organized in 2016 with support of both academies and sponsor Acros Organics a successful sixteenth edition of the Crystal Growing Competition for pupils of the secondary schools (see web site <http://www.chem.kuleuven.be/bcc/>). For this edition sodium thiosulphate has been chosen as crystallizing compound. The judging of the submitted crystals took place on 23 April 2016 in Namur. During the proclamation on 18 May 2016 in the Academy Palace in Brussels also the geodes grown for the new item of the competition have been exposed and evaluated.

[b] Yaroslav Filinchuk and Frederic Hatert have represented the Committee at the Council Meetings of the European Crystallographic Association ECA in Basel (28 August - 1 September 2016).

[c] Frederic Hatert is co-chair of the Special Interest Group on Mineral and Inorganic Crystallography. Yaroslav Filinchuk is secretary of the Special Interest Group on Crystallography under Extreme Conditions. 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 Denver.

[d] As councillor D. Maes has participated to the meetings of the International Organization for Crystal Growth. As a continuation of the IYCr 2014 activity 'Invite a crystallographer' several (honorary) members have delivered lectures in secondary schools.

5. Future perspectives

- Organisation of the seventeenth Belgian Crystal Growing Competition in 2017 (see chem.kuleuven.be/bcc).
- participation by Belgian schools at the International Crystal Growing Competition.
- Organisation of the 10th Belgian Crystallography Symposium BCS-10 in Brussels (October 2018).
- Belgian membership of International Organization for Crystal Growth.

NATIONAL COMMITTEE FOR GEODESY AND GEOPHYSICS

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 21 in the Nicolet room

of the Royal Observatory of Belgium. The introductory conference was given by Dr. Véronique Dehant, Royal Observatory of Belgium.

“Study of the rotation of the Earth and application to Mars”, by Véronique Dehant, Royal Observatory of Belgium - January 21, 2016

Our fundamental understanding of the interior of the Earth comes from geophysics, geodesy, geochemistry, and geomagnetism. Measurements in these fields have revealed the basic internal layering of the Earth, its thermal structure, its gross compositional stratification. In particular, the rotation and orientation of the Earth (precession and nutation) are used to obtain essential information on the deep Earth interior. They are subject to irregularities induced by global mass redistributions with time and external forcing such as the gravitational pull of the Sun and the Moon. The term ‘precession’ describes the long-term trend of the orientation of the axis of spin, while ‘nutation’ is the name given to shorter-term periodic variations. The rotation axis of the Earth is moving in space at the level of 1.5km/year due to precession (as seen from space in a plane tangent to the pole) and has periodic variations at the level of 600 meters. With the advance of observation precision, the causes of Earth orientation changes are progressively being identified by geodesists and geophysicists. The present observations allow scientists to measure these at the sub-centimeter level enabling them to identify further physics of the Earth’s interior to be taken into account in the Earth orientation models such as the coupling mechanisms at the boundary between the liquid core and the viscoelastic mantle, as well as many other factors (sometimes not yet definitely identified). The existence of a liquid core inside the Earth and all the coupling mechanisms at the core-mantle boundary play indeed an important role in nutation amplitudes. An everyday example of the influence of the physical state of the interior on the rotation is that raw (liquid) and cooked (solid) eggs rotate differently.

This brings us to the idea of using observation of rotation and orientation of Mars for obtaining information on its core, and in particular on its dimension, composition, and physical state. In 2016 and 2018, there will be two missions, the NASA InSIGHT mission and the ESA ExoMars mission involving landers at the surface of Mars that contain a direct-to-Earth radio system and this will allow us to performed radioscience. These future observations will allow us to perform measurements of Mars deformation, rotation and orientation with an unprecedented accuracy.

3. General Assembly of the Scientific Union

No General Assembly in 2016.

4. Future perspectives

[a] The next BNCGG General Assembly is planned on Thursday January 19, 2017.

[b] At a TBD date probably in the beginning of May a number of grouped conferences is planned on the theme of climate change in the polar regions.

[c] At a TBD date in the autumn of 2017 an international workshop is planned on the climate of tropical regions.

[d] The next European Geophysical Union (EGU) conference will be held from 23 to 28 April 2017 in Vienna, Austria.

[e] Next Scientific Assemblies of the IUGG Associations are

- IACS, 13-17 February 2017 Wellington, New Zealand
- IAG/IASPEI, 30 July-4 August 2017, Kobe, Japan
- IAGA/IAMAS/IAPSO, 27 August-1 September 2017 Cape Town, South Africa
- IAHS, date on discussion, Port Elizabeth, South Africa
- IAVCEI, 14-18 August 2017, Portland, USA

[f] The next American Geophysical Union (AGU) meeting is planned from 11 to 15 December in New Orleans, USA.

[g] The next IUGG General Assembly will be held in Montreal, Canada in 2019.

NATIONAL COMMITTEE FOR GEOGRAPHY

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 four times in 2016: 19 March, 3 September, 1260 November. The themes discussed were at the meetings:

[a] Promotion of Geography

The promotion of geography has evolved into one of the tasks of the Committee. Therefore, the Committee shall include the task of drawing up an email address list of Belgian scientists to better distribute information in this way.

A dedicated website which promotes Belgian scientific geography also seem essential.

Several causes are identified for the low number of students in geography, even if the evolution from university to university may differ. There is also a plethora of new programs that compete with the geography.

The Committee notes that a pressure prevails in some universities and researchers van FWO / FNRS to unite physical geography with geology and human geography social sciences, which undermines the holistic nature of geography. This vision is forced on geography and is certainly not the position of the geographers.

The Committee will take measures to make the other players in the secondary education more closely in the recruitment for undergraduate programs.

There are tools in the choice of study where the geography apparently not well-positioned / is defined. Here, the Committee will intervene in three areas where necessary: students, education and society. These initiatives are eligible: the organization of a Geo-week; the creation of training modules for teachers in secondary education, geo-dating, movies on Youtube, a geotamtam (mailing list), lessons in secondary education and a leaflet on the poster.

The content of the initiatives will be prepared a questionnaire for former students to know their exact geography working areas and to explain the low unemployment rate. In addition, existing data will be collected, for example on the basis of the results of evaluation committees.

Another successful initiative may be beneficial for the promotion of geography, the International Map Year. The site could be acquired by the site of the Committee. Finally, there is the site Geography Belgium funded by Ghent University.

[b] Participation to the Festival Internationale de Géographie (Saint-Dié)

The festival is organized in Saint-Die (France) on 29, September 30 and October 1, 2016 with the theme Belgium.

There was a large delegation of Belgian geographers who participated in the exhibitions and debates. There are also exchanges between geographically secondary education in France and French-speaking Belgium.

One of the round tables was devoted to the future of Belgium. This included four people including two Belgian and two French. BELGEO 2017/1 on the contributions of Belgium would issue a special number associated with the FIG. There were more than 30 communications proposals related to Belgium. The brochure 'A concise geography of Belgium 'was distributed to the speakers.

[c] BeGeo

The initiative was a success. In future they will have to provide better communication and involve the CNG in the preparation of the event along with the IGN and Agoria.

[d] Geo-Olympiade

On December 12 a meeting was held with the French National Committee, Fégépro and the VLA to the activities - including discuss Geo-Olympiades - in anticipation of the next IGU congress in Paris.

[e] Doctoral school of Geography

The Committee would like to start the doctoral school of geography in French-speaking Belgium. To this end, the Chairman of the Committee contact the chairmen of the jury of any francophone university to evaluate the possibilities.

[d] Belgian Geography Days

Geography The Belgian Days are organized in Liège and take place on 17 and 18 November 2017.

3. General Assembly of the Scientific Union

No General Assembly in 2016.

4. Other activities[a] Subcommittee National Atlas

Regarding the third atlas of Belgium, the situation unchanged. The sixth section dedicated to the city is still not issued as coordinators their texts and cards have still not passed to the editor.

On the digital atlas of Belgium, it is supplemented in the course of 2016, recent figures / maps. 321 tickets are now online, spread over the five main themes of the Third Atlas. The atlas and its possibilities were presented at the 'Festival international de la Géographie' at Saint Dié in France on September 29, 2016

[b] Subcommittee for Cartography - SIG

- International Map Year: The period between the International Cartographic Conference (ICC 2015), held in Rio in August 2015 and the end of December 2016 was declared by the International Cartographic Association 'International Map Year (IMY). The activities of the subcommittee in the second half of 2015 and 2016 were therefore largely linked to it. As already mentioned a website on the International Map Year was established in last year's report, which a announcement and additional information on all activities of the subcommittee was recorded, and this in the two national languages and in English. Also, activities of other organizations that are announced on the site were placed under the heading of IMY.

Since January 2017 the web link to the IMY site is no longer active. The information on the site about the IMY however, was transferred to a sub-page of the new website being under construction by the National Committee (<http://ncgeografie.be/imy/>) and can still be consulted.

- BeGeo Day: On March 3, 2016 was the first time the event BeGeo place, with a geocongres fair, organized by the Belgian geo-sector. The event took place at The Egg (Brussels). BeGeo is a meeting place for government, business and research community to transfer knowledge and share experiences with geo-experts, users of geo-information,

and providers of services and products. During this event Kristien Ooms kept on behalf of the subcommittee Cartography and GIS presentation in which the International Map Year and the planned initiatives were explained.

- Nationale Mapathon 2016: On Saturday, April 16th organized by the Subcommittee on Cartography and GIS, in collaboration with the Departments of Geography 7 Belgian universities (VUB, ULB, KULeuven, UCL, Ghent University, Ulg and Unamur) OpenStreetMap and Belgium, a national Mapathon. This event was part of the Missing Maps initiative, which aims to provide cartographic basics for crisis-prone areas with a view to a more efficient organization of humanitarian missions. More than 200 volunteers participated in one of seven locations to identify areas in Kivu and Swaziland. Perhaps it was the largest operation of this type ever - all involved were very pleased with the turnout. The call for do-it-yourself humanitarian attracted not only students, researchers and professors from the participating universities, but also many other enthusiasts of all ages. Technical knowledge in the field of cartography and computer use was therefore not required to participate.

During the event was created a short video conference on the afternoon when Pete Masters of MSF UK clarified that the new cards Kivu would be deployed immediately on the ground, within the framework of organizing a vaccination campaign to combat a measles epidemic had just broken out in the region. Thanks to the work of the many volunteers who participated in the Mapathon one possession after the event on a

dataset of more than 23 244 buildings in the region, while virtually nothing was previously mapped. In the afternoon, another 25,000 buildings were mapped in Swaziland. This is to help the Global Health Group at the University of California with the support of local government in the eradication of malaria in the country.

Thanks to a well-organized promotional campaign prior to the event, the Mapathon was broad recognition behalf of the media, in addition to mentioning the event in some regional editions of newspapers and an interview with F. Canters in Bonus on Radio 1 on Saturday, just before the start of the event, an entry in the 12h news on Studio Brussel, and extensive reports in the Journal of one and the VTM News.

- Barbara Petchenik exhibition "My place in today's world": As part of the 2015 edition of the Barbara Petchenik children's drawing contest, which took place at the International Cartographic Conference in Rio, with the theme "My place in today's world" the end of 2015 were 30 drawings selected by the jury, including the six Belgian laureates, incorporated into a mobile exhibition, which opened at the university during the Belgian

Geographers Day 2015. from late november 2015 to late January 2016 were admiring the drawings Oefenplein Campus of the university. In May and June 2016, the drawings were exhibited at the Mercator Museum in Sint-Niklaas.

- Barbara Petchenik drawing competition 2017 edition: The subcommittee is currently busy with the preparations for the Belgian participation in the new edition of the Barbara Petchenik international drawing competition for children, which takes place at the International Cartographic Conference in Washington in July 2017. For this edition were, after an appeal by the Subcommittee schools and academies mark the end of 2016, sent a total of 154 drawings. The jury selected here five drawings by age group, which will be posted on the new website of the Subcommittee (see below). The general public will be here in spring 2017 through voting by category to choose a winning design. These drawings will, together with a drawing by age group selected by the jury to participate in the international competition in Washington in July 2017.
- Activities planned:
 - Given the success of the first edition, affects the subcommittee Cartography and GIS currently already preparations for the organization of a new national Marathon event, which will take place on Saturday, March 25, 2017. Through collaboration with MSF is developed a promotional campaign at this time an event place than in the spotlight.
 - During spring 2017, the subcommittee will take on the coordination from the entries for the International Cartographic Exhibition, which will take place at the second-annual ICA conference, this year held in Washington (2-7 July).
 - Recently, also started the development of a new website for the subcommittee Cartography and GIS, which organized all the events will be announced by the subcommittee, which also will include a report of past events. This will be further developed in the coming months, so that the website can be placed as soon as possible online. The build-in web pages will be part of the new website of the National Committee, which is also under construction. The pages will be available in Dutch, French and English, so that the website can also be used to report an overview of the activities of the subcommittee to the International Cartographic Association.

[c] Subcommittee for Geomorphology - BAG

BAG is the Belgian chapter of the IAG (International Association of Geomorphologists).

Report on the BAG Administrative Session, 10 June 2016.

a. BAG is the Belgian chapter of the IAG

Morgan De Dapper (UGent) is Treasurer of the IAG (2013-2017), Alain Demoulin (ULg) is president (2013 to 2017; to be replaced by the vice president in 2017 at the time of the IAG conference in New Delhi). Jan Nyssen (UGent) is vice-president 2013-2017 (in principle, he will become the new president in 2017). Hence, in 2017 we have to appoint a new vice-president (from Wallonia, as Jan Nyssen is from UGent). Olivier Dewitte (RMCA) is BAG secretary and treasurer.

b. BAG activities in 2015-2016

- Last year's BAG excursion was co-organised by B. Notebaert (KU Leuven) and G. Houbrecht (ULg), who proposed an interesting review of fluvial geomorphology problems in the Amblève catchment, with point presentations by J. Poesen (work of H. De Brue), F. Petit, B. Notebaert, J. Van Campenhout, and G. Houbrechts.
- In August 2015, the Barnaul regional conference of the IAG was attended by some of us, and notably our vice-president and our secretary, M. De Dapper, O. Dewitte and H. Hanne Hendrickx. Additional information can be found in the IAG Newsletter published in *Geomorphology* and *Géomorphologie*.
- I'm also really happy to recall something that probably most of you already know, namely that in last April, during the annual EGU General assembly, our colleague Jean Poesen, from the KU Leuven, was awarded one of the highest Union Medals (if not the highest) of the Eur. Geophys. Union, the Alexander von Humboldt Medal 2016 for exceptionally significant work in developing regions in providing superb scientific expertise in managing pressures on land originating from producing food and fuel for growing populations.

c. Springer book on "Landscapes and landforms in Belgium and Luxemburg" I remind you that, in September 2014, I was contacted by P. Migon, member of the IAG executive committee and scientific coordinator for Springer of their new book series about "World geomorphological landscapes", with a proposal for editing a book devoted to the "Landscapes and landforms of Belgium and Luxemburg". As this was a wonderful opportunity to bring a modern reference work on the geomorphology of Belgium to a very large national and international audience, I accepted this task with pleasure as soon as I was sure of the participation of our community. Currently, most of the 26 chapters of the book, involving about 40 main authors plus many other coauthors are approaching completion. The complete book manuscript should be sent to P. Migon and Springer in due time, i.e. before mid-December, and we can hope publication of the book (in electronic and printed forms) in 2017. I would like to express here my warmest thanks to all of you who participated to this project, I'm not sure that there are many other countries where such a large team of authors

could have worked so friendly and efficiently towards this goal. I also want to stress how happy I'm that many chapters were occasions to joint writing between geomorphologists and geologists (F. Boulvain, N. Vandenberghe, J. Yans, V. Hallet, K. Beerten, etc).

d. Activities to come soon

- 18th Joint Geomorphological Meeting, Chambéry, June 27 - July 1, 2016. "SOURCE TO SINK FROM EROSION TO SEDIMENTARY ARCHIVES": our colleague Veerle Vanacker will give the Belgian invited talk about "Anthropogenic Disturbances to Geomorphic Processes. New insights from cultural landscapes in the Western Mediterranean". In addition, 2 of the 7 oral communications will be given by 2 young Belgian geomorphologists: Liesbet Jacobs (RMCA and VUB) and Jean Van Campenhout ULg . The Belgian contribution to this joint meeting is thus satisfying.
- August 23, 2016: invitation to a possible extra excursion under BAG Auspices. Vast site of archeological research at Kerkhove, along the middle Scheldt not far south of Oudenaarde – Precisions by Olivier. No direct BAG involvement, but I suggest we gather the names of people interested in this field visit and transmit this BAG list to the responsables.
- November 6-11, 2017: 9th International Conference on Geomorphology, New Delhi, India. This event also determines the time for renewing the BAG board. We will especially try to agree in the meantime on a new vice-president from the French-speaking side of our community to be submitted to your votes during our field trip day of next year.

e. Amaury Frankl and his team of co-organisers are thanked for having organized this year's BAG-excursion on "Geomorphology and flooding in the Aa basin (N. France)" and guiding us around in this region for the first international BAG field trip. Indeed, not only are we today outside Belgium, in northern France, but the excursion has also been coorganized by geomorphologists of the Universities of Ghent and Lille1 and people of the Syndicat Mixte pour l'Aménagement et la Gestion des Eaux de l'Aa. They show us the diversity of studies that can be carried out about the management of a small catchment, dealing with runoff and erosion control and monitoring, gully evolution, or still flood mitigation. So, I propose we thank them all warmly for this nice day.

f. The next excursion of the BAG. You know the usual alternation between Flanders and Wallonia to which we stick for the organization of our annual field trip day. This would imply that, next year, the excursion will be organized by a team of the French-speaking community. Nothing has been decided so far but two suggestions are currently evaluated, both proposed by the University of Liege. The first one is concerned with new data and new approaches to

the understanding of the Middle Pleistocene incision of the Ardennian drainage network, with the relative disadvantage that we would go again in the Amblève valley where we already were last year, the second is interested in the geomorphological monitoring associated to river hydro-morphological restoration projects, which might be coordinated by Alexandre Peeters. More details about the definitive choice will follow in due time. As for the date, as the traditional mid-June date seems to be an ideal time for this Jaarverslag NCG-2016 excursion, I suggest that you already tick in your diaries June 9 as the most probable date for the 2017 BAG field trip. Of course, this will also be confirmed later.

- g. Administrative news. We have been informed by S. Temmerman that he has chosen not to renew the BAG membership of his Department of the University of Antwerp from 2016 onwards. There remain thus 8 institutions among which the annual BAG contribution to the IAG will be distributed.

NATIONAL COMMITTEE FOR GEOLOGICAL SCIENCES

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

In 2016 the National Committee of Geological Sciences met in two sessions: on May 12th and December 8th. During the first meeting the National Committee has appointed the delegate of the National Committee of Geological Science to the coming general assembly of the International Union of Geological Science which will be held in Cape Town, South Africa, from 28th August till 2nd September 2016. The discussion on the internal roles and their application was continued. The significance of Geology in the Belgian secondary education was discussed.

During the second meeting the report of the National Committee of Stratigraphy was discussed (see further point 5). The two proposals for IGCP projects with Belgian participation were presented. The structure of the newly established IUGS full Heritage commissions was discussed. Under this commission two subcommissions will be erected: the subcommission 'Sites and Collections' and the subcommission 'Heritage stones'. The Belgian candidates for participation in each of these subcommissions were proposed. The report of the Belgian delegate to the General Assembly of the International Union of Geological Sciences was treated (see further point 4) and the discussion on the internal roles and their implementation was continued.

3. General Assembly of the Scientific Union

In 2016 the 35th International Geological Conference, organized by the IUGS, was held in Cape Town South Africa from 28th August till 2nd September 2016. This conference is the 4 yearly international scientific and business meeting of all committees affiliated to IUGS. The fourth ordinary session of the IUGS-IGC was held on 31th August and 1st September 2016. The report of the meeting was written by the national representative Noël Vandenberghe.

The report of the IUGS officers for the 2012-2016 period.

The first part of the Council meeting was devoted to the reports by the president, vice-presidents, secretary-general and the treasurer.

IUGS faced a major administrative challenge by changing the secretariat and the finances to China. Regarding membership, objective factors can explain the diminishing decline in contributing affiliated members and consequently in the financial capacity of IUGS. However it is also recognized that IUGS was not successful in clarifying the advantages of IUGS Membership. Attempts to remediate this situation, have been the involvement of young earth scientists to bring IUGS to the social media such as Facebook, to develop apps, the modernizing of the electronic IUGS bulletin, new brochures and the publishing of annual reports of all subdivisions of the union on the website.

A flyer with the list of 27 Geostandards already prepared and in preparation under sponsorship from IUGS has been distributed (Geostandards Inventory). Setting standards is one of IUGS's highest tasks. Also the IUGS journal Episodes has been upgraded and further efforts are done to install an on-line submission and editorial system. The main driver during the past 4 years of the executive council has been the guiding from the era of the recognition of System Earth to the era of Future Earth studies focusing on energy and resources, understanding ecosystems, waste management, hazards and climatic changes and geo-governance.

Changes in the organizational structuring of the IUGS have been reviewed while all other traditional subdivisions of the union (ICS, INHIGEO, TECTASK, CGI, COGE, GEM) had no major changes and can be found at the website. IUGS created a New Activities Strategic Implementation Committee (NASIC) that started with the Resourcing Future Generations (RFG) program based on the legacy of the past International year of Planet Earth (IYPE); IUGS participated actively in the Third UN World Conference in 2015 leading to the Sendai Framework for Disaster Risk Reduction and a new IUGS Task Group on Risk and Hazard has been set up. The Geoscience and the Environmental Management Commission ended at the IGC Cape Town but the next Executive Council will deal with the further follow-up focus on the high social relevance of human activity on

the planet. The Task Group on Global Geoscience Professionalism has welcomed the association of the International Associations for Geoethics and for Promoting Geoethics. The One Geology program of the European Geological Surveys has been endorsed. Two new affiliated members joined IUGS: Earth Science Matters (ESM) and the Geological Association of Canada (CAG). The Heritage Stone Task Group and the Task Group on Geoheritage have been merged into a single new commission.

The Resourcing Future Generations (RFG) program started at the initiative of the New Activities Strategic Implementation Committee (NASIC) illustrates the challenge to bring evident societal impacts of geosciences to international organizations. Talks were given at many conferences. ICSU has financially supported a workshop on RFG in Namibia and IUGS was invited to talk at the economic meeting in Davos. At present a larger involvement of geoscientist is sought by an open call for proposals that can be provided by seeding money. At present a sound financial ground is sought by lobbying with Academies and other potential sponsors. A first inter-IGC conference will be devoted on RFG Energy-Minerals-Water in 2018 in Vancouver, Canada under the auspices of IUGS and supported by the different Canadian earth science, mineralogy, mining, metallurgy and petroleum oriented organizations (www.rfg2018.org).

Another example of the challenge to maintaining the visibility of geosciences in inter-governmental organizations is the down rating of geosciences at UNESCO. After initially a UNESCO draft was unacceptably downgrading the role of IUGS, finally UNESCO presented a structure with statutes and bylaws for the new International Geopark and Geoscience Program (IGGP). Also the Risk and Hazard group of UNESCO is now inserted in the new Geoscience Department at UNESCO. This means that IUGS is now an equal partner with UNESCO in the IGCP science program and provides the scientific board and the reviewers of the proposals coming from the geological community. The task of providing high rank expertise for IGCP, GeoParks and World Heritage fits the role of IUGS in setting standards.

Like IUGS and IGCP are now joint initiatives, other joint initiatives are the International Lithosphere Program with IUGG and the Isotopes and Geochronology group with IUPAC. IUGS has also a Memorandum of Understanding with the International Consortium on Landslides and with the UNESCO Centre on Geochemistry in Linjiang, China. It was suggested by the chairman that IUGS should appoint liaison officers in other geo-related unions like the IUGG to avoid the issue of the limited term in office of IUGS officers.

Finally, the difficult relationship with ICSU was discussed. IUGS is part of the GeoUnion. The published science plan is written without input of geoscience aspects at large and unfortunately no reaction was given to the improved input delivered by geosciences. Also the Future Earth

initiative remains vague. Apparently ICSU is now dropping the U and calls itself the International Council of Science (ICS).

Voting matters

The second part of the meeting was mainly devoted to the procedures for voting for the different new officers and for the selection of the host city of the 37th IGC in 2024. The 2020 host city for the 36th IGC was already decided and is New Delhi in India. In 2024 the 37th IGC will be held in Busan, South Korea. Busan was selected by a landslide majority over Berlin, Saint Petersburg and Istanbul.

The newly elected chairperson IUGS **President (2016-2020)** is Prof. Dr. Qiuming CHENG, Department of Earth and Space Science and Engineering, Department of Geography, York University, Toronto, Ontario, Canada. The newly elected **Secretary General (2016-2020)** is Prof. Dr. Stanley C. FINNEY, Department of Geological Sciences, California State University, Long Beach CA 90840, USA. He was the previous Chairman of the international Commission for Stratigraphy. Other officers elected can be found at the website.

4. National Commission for Stratigraphy (NCS)

Since the previous NCS meeting of May 2016 one NCS meeting was held on 29/6/2016.

A presentation was given by Y. Vanbrabant of the SGB-GSB on '*StratiSankey: a tool to ease the stratigraphic reading*' which was proposed as a strategic action of the Belgian Geological Survey.

All sub-commissions of NCS have their own activities leading to discussion and proposal texts posted on the ncs website. (ncs.naturalsciences.be). The website is currently at cruising speed for the lithostratigraphy. Efforts are still needed to insert the state of the chronostratigraphy. In addition to the traditional subcommissions, two sub entries are added: RegWal and Alteration. RegWal contains a list of all stratigraphic units used during the mapping Région Wallonne and not reported in the Geologica Belgica 2001 volume. Alteration is newly added to formalize extensive lithological bodies representing the alteration of older units. At present proposal/discussion texts are posted in the subcommissions Carboniferous (Hempenne Fm), Cretaceous (Vert Galant Fm), Paleogene-Neogene (several discussion texts and a proposal for the complete Leper Group), Quaternary (Arenberg Fm), Alteration (Clay-with-flint Fm). The list of actual discussions/proposals is now systematically reported in the Miscellanea. All representatives of universities and institutes at NCS have been asked to bring the existence of the website to the attention of their students and to encourage its use in their courses and practices.

Reflection is needed on the changing of the NCS board. The important core and sample material for stratigraphic research is now completely transferred to Peronnes-lez-Binche. The next meeting is scheduled for 11/1/2017.

5. Future perspectives

[a] National Commission for Stratigraphy

Next year the discussion on the formulation of internal rules of the NCGS and a timeline of its implementation will be continued.

NATIONAL COMMITTEE FOR LOGIC, HISTORY AND PHILOSOPHY OF SCIENCES

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 organisations (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 22 April 2016 and on 22 December 2016.

Main points on the agenda of the first meeting included: various administrative issues which came up in the course of preparing for the (successful) application for a subvention for 2016 from BELSPO; preparation of our two main events in November 2016. Main points on the agenda of the

second meeting included: preparing the Committee's activities for 2017; evaluation of our activities in the Fall of 2016.

The main conclusions of 2016 were threefold: (1) The precise administrative relations and overhead modalities between BESTOR and RASAB would benefit from further explicit dialogue and agreement; (2) BESTOR is a success story, in no small part thanks to Geert Vanpaemel, Lyvia Diser and Alix Badot; (3) the Committee still has a salutary role to play in providing services to national and international PhD students in science studies (broadly defined) through workshops and young researcher's days. Attendance and liveliness of 2016's workshop on the historiography of science and Young Researcher's Days 5 offered ample testimony to this.

3. General Assembly of the Scientific Union

Geert Vanpaemel was present at the annual conference of the European Society for the History of Science (Prague, 22-24 September 2016; cf. <http://www.7eshs2016.cz/>).

4. Other activities

[a] Bestor:

Bestor⁵ is an online database on Belgian science and technology developed both for consultation by the general public and as a research instrument for the specialist scholar. It aims to provide a forum for historical research on (recent) Belgian science, to update historiographical sources with newer publications, and to promote the interest in the (history of) Belgian science.

Bestor contains records on Belgian scientists, scientific institutions and scientific societies of the last three centuries, both in French and in Dutch. The different items are interconnected through links, which enable the visitor to follow up on the network of relations between people and institutions. In many cases, historical information is supported by direct links to online available sources. The records also provide references to secondary sources and recent publications.

The information presented in Bestor is supplied and assessed by a small team of collaborators (National Centre for History of Science, members of National Committee, individual collaborators, etc.), under the direction of the National Committee of Logic, History and Philosophy of Science. Administrative support and housing facilities are provided by RASAB. The Bestor database is physically located on the server of the Faculty of Arts of KU Leuven, where matters of technical maintenance are taken care of.

⁵ www.bestor.be

Bestor is supported by an annual subsidy of Belspo, which has been generously accorded to the Committee since 2008.

Staff and management

During most of 2016 Bestor employed one scientific collaborator. As manager of the project Lyvia Diser (1 FTE) divides her time between writing new records, coordinating collaborators, updating and maintaining the website content, developing public relations and promoting the project. On April 1, 2016 Diser's fixed-term contract (01/04/'15-31/03/'16) was converted into an indefinite-term contract, in line with the Belgian legislation on the renewal of fixed-term contracts. To maintain contact with the academical world, which is essential for Bestor, Diser was voluntary research fellow at the University of Ghent. She also makes use of the Ugent resources at its Museum for History of Science and its academic libraries.

As envisaged in 2015 and thanks to careful budget managing, an extra collaborator (0,5 FTE, one year fixed-term contract) was recruited in October 2016 to translate records and manage the French side of the website. Alix Badot is not a stranger to the Bestor project. She was employed from its start in 2009 up to 2012. Badot is also working on a PhD-dissertation on the history of science and environment at the University of Namur. It was agreed that she will draw from her expertise on this topic as well as her many contacts in the French-speaking scholarly community in the Bestor projects.

The National Centre for the History of Science (KBR) contributed to Bestor by translating the quarterly newsletter and its linked records, until October when Badot took over. Apart from this, members of the National Committee have written, read and corrected records.

Last year a User Portal was added to the website. It invites Bestor readers to assist in the expansion of the database. The Bestor newsletter also occasionally reaches out to the public. As a result of these efforts, in 2016 18 new records were produced by readers, mostly amateur historians, under supervision of the Bestor team, while existing records were extended with data, sources and images (often from personal archives).

Supervisor of the project is Professor Geert Vanpaemel (KU Leuven), secretary/member of the National Committee.

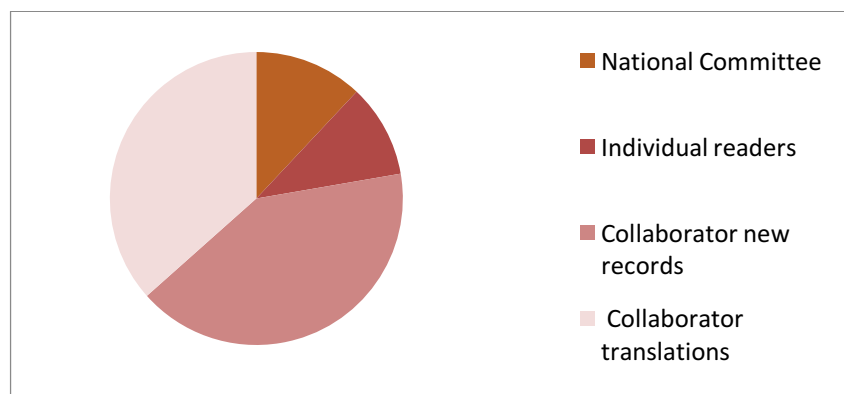


Figure 1: Overview creators of new records 2016

Outcome 2016

During 2016, several existing records have been revised or extended. Furthermore, 181 **new records** have been produced, 66 in French and 115 in Dutch. As of January 2017, Bestor contains 1070 French and 1113 Dutch records. For the first time there are more Dutch than French records. There is no equality in quantity between French and Dutch records at all times, it nevertheless remains Bestor's ambition to have two equivalent sets of records in both languages.

The graphs below show how the quick rise in records between 2010 and 2014 slowed down from 2014 onward. This is explained by a priority shift in 2014 from large scale translation efforts to the more time-consuming creation of new records (in Dutch). In 2016 Bestor decided to make these new Dutch records available in French, while continuing to produce new records in Dutch. This explains the larger increase of records in 2016: 40 % of the total amount (66 records) are translations into French, of which 44 were carried out by Badot since October. The increase of reader collaboration is a second explanation.

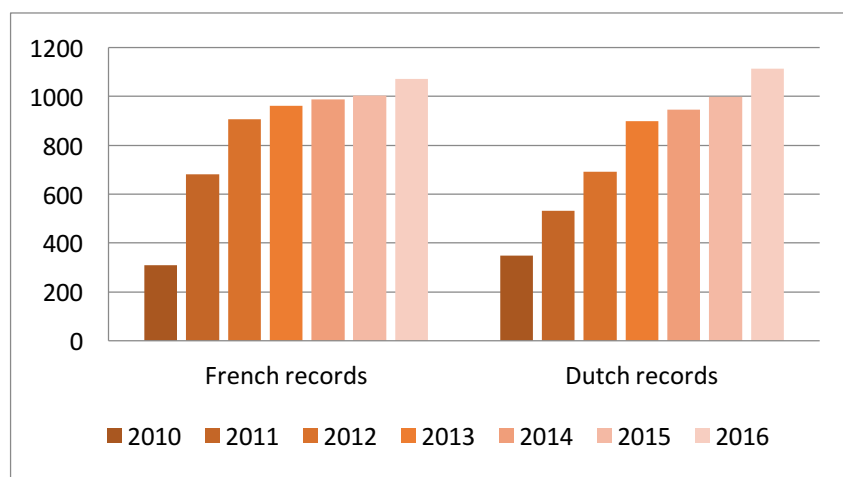


Figure 2: Evolution in number of records

As in previous years, most of the records are **biographical**: 607 French and 651 Dutch scientists' biographies (versus 598 and 610 in 2015). However, biographies produced in 2016 represent less than 30% of the total amount of records produced in 2016.⁶ In 2015 and 2014 50 % of new records were biographies.

Furthermore, there are 131 (F) and 87 (D) records on scientific societies, 80 (D) and 42 (F) records on prizes and awards in science, 15 (F) and 39 (D) on scientific journals. There are records on most of the Federal research institutions and their staff, such as the Royal Observatory (98 records, D and F), the Botanical Garden 42 records (D), the Meteorological Institute (17 records, D and F), the Royal Museum for Art and History (23 records, D and F) and the Royal Academy. In 2016 the number of 'Science stories'⁷ rose from 21 to 28 (D and F).

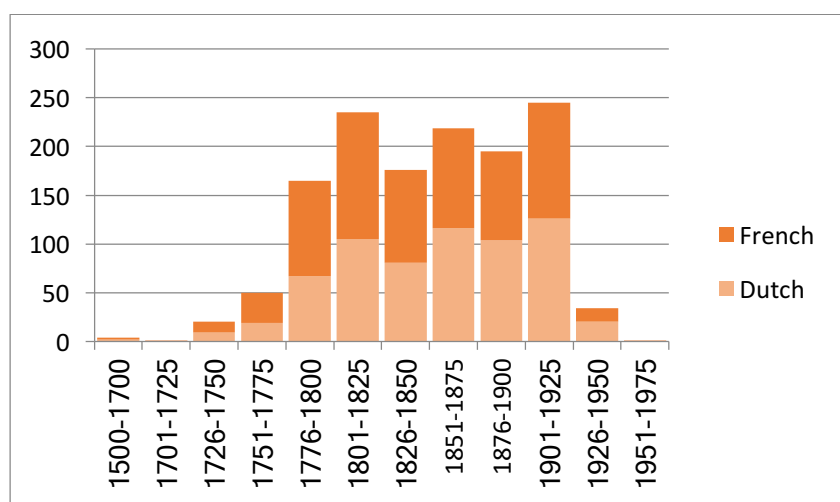


Figure 3: Chronological overview of biographical records (by date of birth)

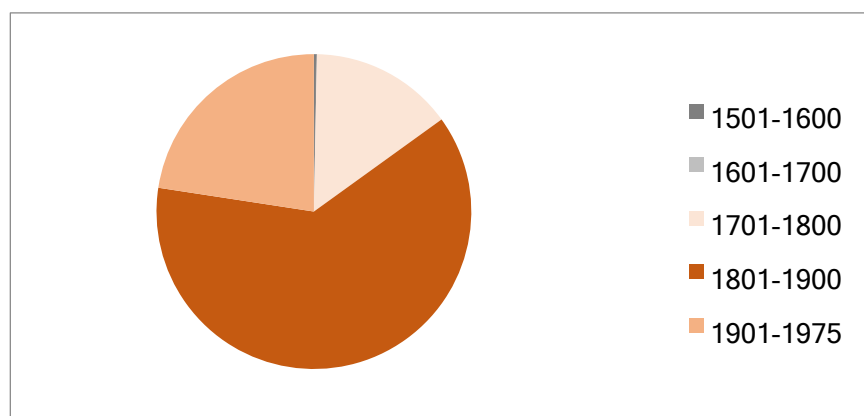


Figure 4: Biographical records (by date of birth) as percentages of total

⁶ Moreover, about three third of those biographies were contributions of readers and members of the National Committee.

⁷ 'Science stories' are attractive and richly illustrated short stories on key events in the history of Belgian science. Because of their many links, these pages function as a stepping stone towards other records in Bestor.

This year's new records were created in the framework of **two thematical inventory projects**, as recorded in the 2015's report. One focused on science monuments in the public space, the other on important sites, buildings and places in Belgian history of science.

The project on 'lieux de mémoire' related to science and scientists in the public space was launched at the end of 2015. The goal was to offer a portal where visitors can explore the scientific background of public statues, busts and commemoration monuments in their own surroundings. For this reason a new category was created on Bestor where readers can easily browse monuments by city or province. At the beginning of the project, the newsletter launched an appeal to readers to tip-off statues in their neighbourhood. In this way a list of records was composed, which continues to grow still. The project was rounded off in November 2016. As of now 46 science monuments related to science and scientists, as well as one Science story, are accessible online on the Dutch part of the database. Although almost all of these Belgian monuments originated in the vast patriotic campaign launched by the Government shortly after the Belgian Revolution, they have never before been compiled in one place, for readers to browse and compare. Some results were already presented to the public through the newsletter. The presentation of the project as a whole will follow after the translations to French are completed.

The second project, Plaatsen van Wetenschap/Sites et Sciences, took a start in November. It documents places that are or were of interest in the history of Belgian sciences. The list of 45 records contains university buildings, campuses, laboratories, national, regional or communal research institutions, observatories, museums, gardens and less traditional places, that are meaningful in the history of Belgian scientific activity or discovery. Some results were already presented in the newsletter, for example on the Neolithic caves of Spiennes or the exploration ship Belgica. So far 16 records and 2 Science Stories are accessible online.

As in previous years, a **quarterly Bestor newsletter** was published. Newsletters generally present topics related to the history of Belgian sciences or today's Belgian science world. These topics are linked as much as possible to ongoing inventory work. This year however Bestor consciously chose to invest more time in the creation of records on trending topics for the newsletter (F and D). This resulted in numerous new records, for example on the world famous particle physicist Robert Brout, whose birth was commemorated in the April bulletin, or on scientist-refugees and immigrants on Belgian soil. On two occasions **extra inventory projects** were set up: The Nobel prize election in December 2016 called for the creation of 15 new records in Dutch and French on the Quinquennial and Decennial Science Prizes of the Government – 'Belgian Nobel prizes *avant la lettre*'. And the January 2017 topic on the Universities' golden jubilee year 2017 was preceded by

the creation of one Science story and 8 biographies of professors of the early science faculties in Dutch and French.

N° 1 (jan-febr-ma) Publication date: 18 01 2016	<ul style="list-style-type: none"> · 100 jaar relativiteitstheorie Le centenaire de la théorie de la relativité · Vluchten is van alle tijden Les réfugiés : un phénomène intemporel · Lezingenreeks UCL 2016 rond symbolen en symbolisme Série de conférences UCL 2016 autour des symboles et du symbolisme
N° 2 (apr-may-june) Publication date: 11 04 2016	<ul style="list-style-type: none"> · Robert Brout overleed vijf jaar geleden Robert Brout décédé il y a cinq ans · Albert Toilliez, de man van Spiennes Albert Toilliez, l'homme de Spiennes · Tips en tools rond wetenschapsgeschiedenis Trucs et astuces autour de l'histoire des sciences
N°. 3 (july-aug-sept) Publication date: 04 07 2016	<ul style="list-style-type: none"> · De schoonheid van priemgetallen La beauté des nombres-premiers (on the occasion of 150th birthday Charles-Jean de La Vallée Poussin) · Met Quetelet op citytrip Avec Quetelet en citytrip · Aankondigingen Annonces
N°. 4 (oct-nov-dec) Publication date: 12 10 2016	<ul style="list-style-type: none"> · Nobel aan de Noordzee Un Nobel au Plat pays · Labo in het pakijs Un laboratoire sur la banquise · Aankondigingen Annonces

Figure 5: Newsletter topics throughout 2016

The **Bestor homepage** is a dynamic environment where the reader gets a regular update on significant dates and events in the history of Belgian science or the Belgian science today. Alternating focus texts shed light on topics such as the Nobel Prize ceremonies in December, or National Women's day in March. The agenda announces upcoming events concerning the history of science, such as conferences, exhibitions or call for papers. The homepage displays on the newest publications on history of science.

From January to October, the only **translations** made were the newsletters and their linked records (D to F), by the National Centre. In October a large scale translation project (D to F) was started. Priority was given to the projects of the previous years. In 2016 66 Dutch records were translated in French.

In May we have started up the phased procedure of **updating the Bestor software**, to create a more professional, user friendly and safe web environment. The ICT-team at Faculty of Arts KULeuven will execute the project. In a long first phase (May -December 2016) the upgrade was successfully tested in a safe environment, back-ups were made and an application for a server subscription was submitted. The second phase consisted of the upgrade of the website's software Mediawiki version 1.15.1, which is no longer supported by Mediawiki, to version 1.28.0. This version is more stable, safer and more user-friendly. At the same time a migration of the website to an external server (ICTS server) was executed and security protocol for encrypting the website was installed, so as to make it more resistant to cyber crime and in line with search engines current requirements of internet safety (https-address). One more phase is to follow (see *Projected activities in 2017-8*).

Due to lack of time it has not been possible to follow up on the project Art and science as was planned.

Promotion and visibility

As in previous years, the quarterly Bestor email **Newsletter** continued to appear. Eleven editions in French and in Dutch have come out since its take-off in July 2014. The Dutch newsletter is edited by Diser. The translation has been taken care of by the National Centre for History of Science until October, when Badot took over. The letter draws the attention to curious stories or significant dates in the history of Belgian science and presents historical background information to Belgian science today. It also presents updates on Bestor projects and brings important recent publications and interesting events related to history of science into focus. Links invite readers to continue reading and browsing on the Bestor website.

The number of views of the hyperlinked records increases significantly in the days and weeks following the appearance of the newsletters. This year the 22 featured hyperlinks received a total of 774 clicks. This brings the clicking rate on 9 %, meaning that each hyperlink on average is clicked by 9 % of the readers. Current (and previous) newsletters can also be read on the website. This year this web spot grew out to be one of the most viewed pages on Bestor Dutch (10.612 views) and French (8.216 views).

The newsletter is sent out to contacts by email. The list of subscribers contains most science history societies as well as individual scholars, amateurs, teachers and students. Subscription can be done through the website. Apart from the steady flow of spontaneous subscriptions and online viewers, special efforts have been made to reach out to new groups of subscribers. Promotion for the newsletter was done through the Bestor publicity leaflet, on the website and through publications, newsletters of congenial organisations, mailing lists of other organisations, conferences, etc. Furthermore, Badot has made a start to reach out to the French speaking community, starting with scholars and students in her own contact networks. Thanks to these efforts, as of February 2016, the mailing list contains 390 subscribers (D and F).

Just as in previous years, the Bestor **publicity leaflet** was distributed at scholarly conferences and seminars. Bestor was present at important events related to history of science, science communication and scientific heritage: *Journée ModerNum - Penser les temps modernes avec les Digital Humanities* (Mai 13), *De wereld van de zuidelijke geleerden tijdens het Koninkrijk der Nederlanden (1815-1830)* (November 18, 2016), *Science in the past, science in the present. Reflections on a historiography of science for the 21st century* (November 24), *Fifth Young Researchers Days in Logic, Philosophy and History of Science* (November 25-26) and *Sismicité historique, histoire du paysage et résilience environnementale* (December 21).

Advertising for Bestor was also done through the selective **publishing** of articles based on the Bestor database. In the *Nationaal Biografisch Woordenboek* (2016), a standard work for Belgian historians – scholars and amateurs – Diser published two articles with reference to Bestor for further reading (“Massart, Jean”, 714-722 and “Libert, Marie-Anne”, 668-674). On the blog *Cultuurgeschiedenis.be*, Diser’s article “Hoe vluchtelingen de Belgische wetenschap verrijkten” with Bestor advertising was shared and (re)tweeted. The Science story “De Nooduniversiteit van Amersfoort 1915” was picked up by the Dutch society Digitaal Wetenschapshistorisch Centrum (Knew) and shared and (re)tweeted amongst its reader audience - Dutch history societies and scholars.

Bestor has significantly gained in **visibility**. The visitors’ statistics tool now lists over 3.3 million visits for the French site and over 2 million for the Dutch site. Apart from the home page, the page most often viewed remains the Category of Scientists: 73.527 (F) and 31.290 (D). The rest of the top five, that used to be quite stable for years, now undergoes changes every three months. Each of the ten most viewed pages (D and F) is consulted on a daily basis. With some notable exceptions (e.g. Quetelet, Lemaître), all biographies in the top ten are twentieth century born scientists, probably because of the fact that there are no other easily available sources on them. However, whereas in previous years biographies were popular, we now see readers’ interest shift

towards records on societies and on national or federal institutions. The Royal Meteorological Institution and the Belgian Institute for Space Aeronomy were high ranked throughout the year. Shooting star of this year was a record that lists digitally consultable records on the history of sciences in Belgium (F). It entered the top ten only in October, but is now the third most popular page. In general, astronomy, meteorology and horticulture were popular topics. The most popular Science story is “Vluchten is van alle tijden” on the Dutch site, with a speedy climb to n° 13 on the rank list (8.457 views) since its creation in January, and “L’université D’Amersfoort” on the French site (3.384 views). Both stories deal with aspects of war, in particular the Great War. In general the science stories on the Great War do well. On the French site 1.037 pages had more than 100 views, and 858 pages have even received more than 1.000 views (respectively 1.068 and 546 pages for the Dutch site). Bestor pages are well represented in Google queries.

[b] Workshop “Science in the Past, Science in the Present: Reflections on a historiography of science for the 21st century” (KVAB, 24/11/2016)

One of the most exciting trends to come out of the field of Science and Technology Studies, has been the articulation of a completely new understanding of science. Instead of using a narrow, technical emphasis on the theoretical organization of knowledge, confined within institutional or disciplinary boundaries, scholars, reflecting the concerns of science policy makers, now frame science within a much broader view of e.g. ‘knowledge production’ or the ‘national science system’. Within the science system, many stakeholders, including teachers and journalists, contribute to public forms of knowledge that are constantly being (re)configured, appropriated, negotiated and circulated. It is understood that science is being co-produced with social power systems, and that it is always tangled up with economic, political, industrial and legal practices. These approaches challenge the traditional narrative of the history of science as a history of ideas, and create new opportunities for making history of science relevant to contemporary debates.

In this workshop, the focus has been laid on the multifaceted challenges faced yesterday and today in the writing process of the history of science. Obviously, the scope of historiography includes a wider range of stakeholders that make up for an effective science system. Enriched with various intellectual and academic traditions (Belgium, France, Netherlands, Germany), the workshop has provided enlighting routes of telling / writing the history of science. Notable guests include Dominique Pestre (EHESS) and Bart Karstens (Leiden).

Attendance: 23 (including 7 speakers)

[c] Fifth Young Researchers Days in History, Philosophy, and Logic of Science (KVAB, 25 & 26/11/2016)

Already in its fifth installment, the National Committee's "Young Researchers Days" provide an ideal opportunity for young researchers (PhD students, young postdocs) working in the fields of Logic, Philosophy of Science and History of Science in Belgian Universities, to present their work to a larger community of emerging and established scholars in these fields.

Papers were accepted in English, Dutch, and French. However, the lingua franca of YRD5 is English, and applicants were encouraged to present papers in this language. Paper presentations were about 20 minutes in length, followed by 10 minutes for discussion.

Attendance: 35 (including 3 keynote speakers and 21 young researchers)

5. Future perspectives

[a] Bestor

In 2017-18 translations and inventory projects remain important in order to allow the creation of new records. However, now we will make a special effort to focus also on the disclosure of the available information to readers.

- Project for the creation of new records

New records as part of 3 thematical inventory projects will be made. The first, **Plaatsen van Wetenschap/ Sites et Sciences**, had its take-off in November 2016. The project documents sites and places that are of interest for the history of Belgian scientific activity or discovery, such as university buildings, campuses, laboratories, national, regional or communal research institutions, observatories, museums, gardens and other less traditional places. In the jubilee year 2017 (1817-2017) special attention will be paid to the start-up of the Belgian scientific infrastructure, including university science faculties. The aim of the project is to introduce the history of Belgian science into the local communities. Bestor can thus serve as a guide and stimulus for local teachers, journalists or simply tourists to visit places of interest concerning Belgian science. The output of the project will consist of 45 new records, created by Diser.

The second project will deal with the contemporary topic of **science, environment and expertise**. This project will be a **collaboration project**: it will aim at encouraging scholars and other experts to participate in further extending and perfecting Bestor, by writing new records on their own field of expertise. The chosen topic is very much alive in present-day scholarly (historical)

research. In particular in at the universities of Namur and Liège, several scholars are dealing with these subjects. Badot, who has studied questions of science and environment as a PhD-researcher, will coordinate the volunteers and scout for interesting new candidates and stories.

Colonial science will be the topic of the third inventory project. Bestor will seek collaboration with the Royal Museum for Central Africa (Tervuren), that will reopen for the public in June 2018 – in particular with Patricia Schuylenbergh, head of Section History and Politics. The output will consist of records on known and less known scientists, explorers, (agricultural) engineers, scholars in the medical field, institutions, expeditions and striking events etc.

Bestor records are always anonymous and subject to adaptations. In order to make publishing into the Bestor database attractive for scholars, a link will be added to the Bestor record, where the original, inadaptable, signed text of the scholar will be uploaded. In this way, scholars can refer to these publications.

- Projects to increase user friendliness and disclose website content

In 2017-8 Bestor will work towards increasing the user friendliness of its database. The creation of **portals** is the way to move forward in this. Portals are visually attractive ‘start pages’ on a specific topic. They function as starting points and entry gates for this topic. The Bestor portals will be web spots, rich in images, where all links to records on persons, events, institutions etc., related to one particular topic will be summed up, thus creating an overview for the reader. Records of special interest, new articles and related Science stories will be put on display there. In this way the portals will help readers navigate through Bestor records.

Two portals will be created. The first will be about **Science and War**. All records concerning war, e.g. on scientists-refugees, scholars that were active in battle, war institutions etc. will be listed on the portal. The reader will also be able to browse through a compilation of Science stories on the First World War. The portal will be up and running in the course of 2017. Starting from July 2017, Bestor will start preparing the jubilee year 1918-2018 with a series of trending stories on ‘science in the aftermath of the Great War’ (restoration of the landscape, the newly acquired ex-German colonies etc.) The new stories will be presented throughout 2018.

The second 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 the course of 2018.

Apart from portals, our focus will be on digitally **improving website interface facilities**. In cooperation with the ICT team at KULeuven, we will strive to increase the user friendliness of the website. A high performance search box with prediction mode, “sound as” mode and frequent pattern recognition will be crucial in this. Also tagclouds will help readers by conjuring an easy and visually attractive overview on the network of the record of their choice (*Tagcloud app*). Polyglot extensions for easier handling of multilingualism within one site, a language choice portal etc. are to be installed. At the same time Search Engine Optimisation will ensure a higher-ranking placement in the results page of search engines such as Google, to increase the visibility of Bestor on the net, while Google Web Analytics tool will improve our understanding of how readers interact with the Bestor site, with the goal of improving reader experience and reacting to their preferences.

- Translations

In the past, the French and Dutch record lists were very unequal. Bestor convinced of the importance of offering articles to readers of both languages. Therefore in 2017-8 it will continue our translation efforts, as it has done in previous years. In October 2016 Badot was hired, in the first place to execute the most urgent translations into French. The translation of one record equals a workload of about one day/week. Priority will be given to recent inventory projects, so that they can be introduced to the newsletter readership:

- 1) **Vrouwelijke wetenschappers/ Femmes scientifiques:** Foremost attention will be given to the translation of this project, since the French database contains only 6 entries in this category. 41 records including 1 Science story. Deadline: end of September 2017.
- 2) **Publieke Wetenschapsmonumenten/Monuments et Sciences:** 40 records. Deadline: end of June 2017.
- 3) **Newsletters 2017:** including the Bestor records that they refer to if there is no French version.
- 4) **Extra: Science Stories:** If time allows, efforts will be made to provide all Science Stories in both languages.

- Promotion and dissemination

In the following years Bestor will continue its **newsletter**. Extending the mailing list of the newsletter will be a primary goal. In 2017 our focus will be to **increase readership** in the French speaking community, with a special attention to French teachers (of science and history) who so far have not been addressed.

Bestor will remain **active on websites, magazines, newsletters of related organisations, institutions** etc. It will also be present at important events related to history of science, science communication and scientific heritage, as well as scientific conferences. The Bestor collaborators will invite science societies to subscribe to the newsletter or to add a link to Bestor on their website, e.g. to their own Bestor record. Promotion of Bestor will also be done through the presentation of research papers based on the Bestor database.

In 2017-18 Bestor will also increase its visibility on **social media**. There will be a try-out of a Bestor Facebook page, that will be updated with regular posts with links to the website. These posts will deal with information on ongoing projects, curious facts, new records or announcements of newsletters or important events. The Facebook page will also interact with other socially active history/science organizations (sharing posts, liking). The aim is to create a social network of people and organisations. At the end of the year, an evaluation of the efforts vs. benefits will make clear if this commitment is to be continued.

[b] Workshop “Faculties of Science at 200: A Transnational Perspective on Belgium and the Netherlands”

This workshop seeks to pool scholarly resources in Belgium and the Netherlands so as to provide better insight in the circumstances and effects of the erection of academic faculties of science (1817) in the United Kingdom of the Netherlands. A collaboration with GEWINA and possible French partners is currently being explored, perhaps to coincide with Belgium as a host for Gewina’s annual autumn meeting.

[c] Workshop on the historiography of the history of Belgian medicine

On the immediate occasion of the publication of the survey of the history of Belgian medicine in the 19th and 20th centuries by Kaat Wils & Joris Vandendriessche.

[d] Workshop on the historiography of science in the Southern Netherlands

On the immediate occasion of the publication of *Embattled territories*, eds. Sven Dupré, Geert Vanpaemel et al.

[e] Participation at the 25th International Congress of History of Science, and Technology (ICHST) (Rio de Janeiro, Brazil, 23–29 July 2017).

Brigitte Van Tiggelen and Denis Diagre will both attend. The National Committee has two votes in the Council of DSMT.

NATIONAL COMMITTEE FOR MATHEMATICS

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 in pure and applied mathematics is not always easy to make. In pure mathematics we think of algebra, geometry and analysis, but also these areas overlap and do not cover the whole domain. One can think of logic, combinatorics, topology, set theory, etc. Applied mathematics, consisting among others of numerical analysis, statistics, mathematics related to physics, is currently expanding and covers areas such as econometry and finance, informatics, biomathematics, etc.

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 could represent Belgium at the General Assemblies of the IMU and propose 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*.

We aim at having 16 members, respecting linguistic parity, taking care of a good gender representation and having a well-balanced participation of the different universities and important mathematical domains.

2. Meetings of the Committee

The National Committee for Mathematics met on March 24 and October 24, 2016, both times at the Palace of the Academies. In March, Joel Fine (ULB) delivered a talk, untitled “The geometry of the Einstein equation”.

The meeting in October was particularly devoted to the relations between the NCM and the ICMI Belgium. We elected as new president for the ICMI Belgium: Paul Igodt, the former president, Maggy Schneider (from the Ulg) having resigned. Paul Igodt is Professor at the KUL and becomes an associated member of the NCM.

We elected a new member for the NCM: Pierre-Emmanuel Caprace from the UCL.

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

No Assembly of the Scientific Union in 2016.

4. Other activities

[a] The Newsletter appeared five times in 2016 and was distributed both electronically and in a paper version.

[b] The next meeting of the general assembly of the International Mathematical Union will happen in 2018 in Rio. In 2016, there was a meeting of the European Mathematical Union in Berlin. Many Belgian mathematicians attended the meeting and some gave invited talks.

NATIONAL COMMITTEE FOR MECHANICS

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

Three administrative meetings were organized in 2016 on: 5 February, 12 March and 22 October.

[a] January 26, 2016. Main discussions:

Replacement of I. Doghri by O. Verlinden as the representative with FNRS. Establishing a short list of 6 candidates for the Best Thesis Award.

[b] February 25, 2016. Main discussions:

Best Thesis Award, 2015 is granted to Katrien van Niemen (KUL) and Emmanuel Tromme will be the Belgian candidate for the ECCOMAS best thesis award.

[c] October 27, 2016. Main discussions:

Due to repeated no show, it has been decided that E. Marchandise was no longer a member of our committee. Candidates for the renewal of the Committee (October 2017):

- Pierre Lambert (ULB) for Gérard Degrez (ULB)
- Thierry Massart (ULB) for Christine de Mol (ULB)
- Geert Lombaert (KUL) for Geert Degrande (KUL)
- Patrick Guillaume (VUB) for Dirk Lefebvre (VUB)
- Tine Tysmans (VUB) for Danny Van Hemelrijck (VUB)
- Anne-Marie Habraken (ULg) for Emilie Marchandise (UCL)
- Eric Colon (ERM/KMS) for Walter Bosschaert (ERM/KMS)
- Véronique Feldheim (UMons) for O. Verlinden (UMons)
- V. Legat (UCL) - to be proposed

- W. Desmet (KUL) - to be proposed

All candidates unanimously accepted. Former members will become “Honorary members”, except E. Marchandise.

3. General Assembly of the Scientific Union

No Assembly of the Scientific Union in 2016.

4. Future perspectives

- Election for the “Best (Belgian) Thesis in Mechanical Engineering” for 2016 (January and February 2017).
- Proposal of an ECCOMAS price winner Belgian candidate from the NCTAM for 2016 (scheduled March 2017).
- Organisation and improvement of the doctoral school for Mechanical Engineers (GRASMECH).
- Organisation of the National Conference for Theoretical and Applied Mechanics (Liège 2017-2018).
- Setting up of the new committee (October 2017).

NATIONAL COMMITTEE FOR MICROBIOLOGY

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. The following joint meetings were organised to prepare the yearly symposium of BSM under auspices of the NaCoMi and the Royal Academies: 15/1/2016 and 17/6/2016.

The Committee met also on 9/05/2016, 27/09/2016

[a] NaCoMi meeting: 9 May 2016

Agenda:

- Situation of the membership and compliance with the regulation of the National Committees
- Evolution of the membership in the future – new members, confirmation/election of Chair (Co-Chair) Secretary and Co-Secretary.
- Relationship of NaCoMi with the Board of the Belgian Society of Microbiology
- Possible activities of the NaCoMi
- AOB

[B] BSM/NCM Board meeting: 27 September 2016

Agenda:

- Discussion of the 'internal rules' document
- Proposal of new effective members: N. Boon and E. Peeters
- Proposal of honorary members
- International representation of the NaCoMi in IUMS meeting

- Report of the meeting of the BSM and the discussion on the practical organization of the relationship between BSM and NaCoMi
- AOB

3. General Assembly of the Scientific Union

No Assembly of the Scientific Union in 2016.

NATIONAL COMMITTEE FOR PHYSICS

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 website⁸.

2. Meetings of the Committee

Meetings were held on March 2 and October 13. The main interest points of these meetings were:

- Preparation of the Colloquium 2017
- Updating of the publication *Research in Physics in Belgium*
- Preparation of 2017 General Assembly of IUPAP

3. General Assembly of the Scientific Union

No Assembly of the Scientific Union in 2016.

4. Other activities

[a] 2017 colloquium of the NCPAP

The NCPAP will organise its next bi-annual colloquium on April 22, 2017 in the Palace of the Academies on "The Physics of Living Systems".

Biophysics has seen a tremendous growth in the last decennia. It is the motor of spectacular progress in Biology and a source of innovation in the high-tech economy. The extensiveness of the subject imposes however that the more specific physics aspects of the domain will be stressed at the expense of the equally essential chemical and biological contributions. The program will therefore be structured along two lines:

⁸ <https://sites.google.com/site/physbel/>

- The application of the know-how and the modellisation techniques of Physics to Biophysics (structural characterisation, manipulation and modification of biological systems, the physicist's perspective on the organising principles of living matter).
- The application of models from Nature in Physics and Technology.

A Scientific Committee, composed of David Alsteens (UCLouvain), Marcel Ameloot (UHasselt), Sophie De Buyl (VUB), Joël De Coninck (UMons, chairman), Albert Goldbeter (ULB), Tom Krekels (Umicore), Stephane Lucas (UNamur), Alexander Panfilov (UGent), and Pierre Defrance, Robert Sporken and Roger Weynants (all from NCPAP), proposed a program around the following speakers and topics:

Prof. Daniel MÜLLER, ETH Zürich: "Imaging biological structure and functioning with a focus on Atomic Force Microscopy".

Dr. François NÉDÉLEC, EMBL Heidelberg: "Probing the organisation principles of living matter through simulations".

Prof. Hans-Jürgen BUTT, MPIP Mainz: "Biomimetics : from nature to physical applications".

Prof. Antoni TOMSIA. Berkeley Lab: "Biomaterials and bone reconstruction".

Prof. Liesbet LAGAE, IMEC: "Bio-electronic tools for life science research, diagnosis and treatment".

Ir. Yves JONGEN, IBA: "Diagnostic and treatment by particle beam applications".

As 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 the IBA Best Poster Award.

[b] Update of Research in Physics in Belgium:

The NCPAP initiated for the first time in 2005 the compilation of short reports on the main physical research topics in Belgium, both theoretical and experimental. Fifteen of these were written by prominent Belgian researchers, actively involved in the IUPAP Commissions, and were published in 2006 in *Physicalia Magazine* and posted on the websites of the NCPAP and of the Belgian Physical Society⁹.

The NCPAP considered that a regular updating is in order and has, between 2011 and 2015, revised the original contributions. These were published on-line in BPhy Magazine, the successor of Physicalia Magazine, and are to be found on our website¹⁰.

⁹ <http://sites.google.com/site/belgianphysicalsociety/>

¹⁰ <https://sites.google.com/site/physbel/Physics-in-Belgium>

[c] The next General Assembly of IUPAP will take place in October 2017 in Sao Paolo (Brazil). The NCPAP has started the process of finding Belgian candidates to be proposed to the GA as possible members to one of the 18 IUPAP Scientific Commissions for the period 2018- 2020. The Belgian share in the IUPAP financing in principle entitles to 4 Commission members.

NATIONAL COMMITTEE FOR PHYSIOLOGY AND PHARMACOLOGY

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.

Because of the common goals, the members of the National Committee for Physiology and Pharmacology are also member of Physiology and Pharmacology and as such are involved in the preparation and organization of all the activities of this Society.

2. Meetings of the Committee

6th November, held in Brussels (Palace of the Academies).

3. General Assembly of the Scientific Union

The committee organizes twice a year a scientific session and once a year the General Assembly. The General Assembly took place on October 22th in Brussels.

4. Other Activities

[a] *The National Spring meeting of the Belgian Society of Physiology and Pharmacology, April 22th in Brussels (Palace of the Academies)*, aiming to bring together the physiologists and pharmacologists from Belgian laboratories. About 50 scientists attended the meeting. Prof. David Gall (ULBruxelles) hosted the meeting. Programme and abstracts are included in this correspondence¹¹.

[B] *The National Autumn meeting of the Belgian Society of Physiology and Pharmacology, October 21th in Brussels (Palace of the Academies)*, aiming to bring together the physiologists and pharmacologists from Belgian laboratories. About 55 scientists attended the meeting. Prof. Nathalie Caron (University of Namur) hosted the meeting. Programme and abstracts are included in this correspondence¹².

¹¹ <http://users.ugent.be/~jvdvoord/physiology&pharmacology>

¹² <http://users.ugent.be/~jvdvoord/physiology&pharmacology>

5. Future perspectives

2017 Scientific Meetings

- April 21th Brussels (host: Prof. Dr. Philippe Gailly, UCLouvain)
- October 20th Brussels (host: Prof. Dr. Wim Martinet, UAntwerpen)

2018 Scientific Meetings

Spring 2018: 3rd PhysPhar Benelux Congress – Third Benelux Congress of the National Societies of Physiology, Pharmacology of Belgium, The Netherlands and Luxembourg.

NATIONAL COMMITTEE FOR PSYCHOLOGICAL SCIENCES

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 2016: The first took place on April 23rd; the second on November 19th.

3. General Assembly of the Scientific Union

The Scientific Union held a meeting in 2016, in Yokohama, Japan. The National Committee was represented by Pr. Régine Kolinsky (ULB) and by Pr. Gina Rossi (VUB). Pr. Kolinsky composed a report about the event itself and about the proceedings of the General Assembly of the International Union of Psychological Science (IUPsyS), to which she took part as a voting member.

4. Other activities

[a] The committee organizes bi-annual symposia. The next symposium will take place in 2017 and is currently in the planning stages.

[b] The committee also assists, every year, the Belgian Association for Psychological Science in selecting the recipient of its “Best Thesis Award”. The 2016 competition is currently underway. A jury composed of committee members and presided by A. Vandierendonck will make the final selection during the month of March.

5. 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, and (3) handling the final stage of the BAPS Best Thesis Award.

NATIONAL COMMITTEE FOR RADIO-ELECTRICITY (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, a '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, of which the secretariat is hosted in Ghent with Paul Lagasse as Secretary-General and Peter Van Daele as Assistant Secretary-General.

2. Meetings of the Committee

The URSI Asia-Pacific Radio Science Conference (AP-RASC 2016) took place in Seoul, Korea, in August 2016. Viviane Pierrard co-organized a Special Session entitled "Radio Science for Space Weather" for Commission H and co-authored two papers presented there. Emmanuel Van Lil had a poster paper presentation for Commission F and attended the Business Meeting of Commission A.

The next triennial URSI General Assembly will take place in Montreal in August 2017.

3. General Assembly of the Scientific Union

No General Assembly in 2016.

4. Other activities

Due to difficulties in finding a room free of charge for the meeting, the BENELUX URSI Forum could not take place in December 2016 and had to be postponed to 2017.

5. Future perspectives

The tenth BENELUX URSI Forum will be organized by Xavier Neyt on February 16 in Brussels at the Royal Military Academy.

NATIONAL COMMITTEE FOR SOIL SCIENCES

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 on the young people. This original mission of SSSB/NCSS is more relevant now than it has even been - soil and soil suitability comes daily in the media and in the public debate: 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).

Special editions of our activities were launched in the wake the UNESCO International Year of Soils, and in view of the International Decade of the Soil under the IUSS:

Continuation of the prestigious “Africa in Profile” exhibition, through to the end of January 2016

Day of the Young Soil Scientist: Keynote by the President Bruno Delvaux.

International congress on soil science at UCL, Louvain-La-Neuve

Congress excursion to Bertem Forest and to the Zonien Forest

Thematic Day (on the World Soil Day on 5 December): Soil processes and biogeochemical cycling of elements.

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

Establishment of a virtual tour through the “Africa in Profile” exhibition:
<http://ees.kuleuven.be/africa-in-profile/virtuele-tentoonstelling/virtual-tour.html>

Soil on Canvas Exhibition at the Culture House “The Warande” at Turnhout along with its thematic symposium on soil heritage

Joint excursion with Belgian Association of Geomorphologists (BAG)

As follow-up of the “Africa in Profile” exhibition by KU Leuven, ISRIC, EU-JRC and Africa Museum (5/12/2015 – 29/01/2016), a permanent soil hub will be established in the Africa Museum Museum of Tervuren

We contributed to a round table discussion in the EU-DG Development with focus on soil care

2. Meetings of the committee

- 16/03/2016: NCSS board meeting, Royal Academy, Brussels
- 16/03/2016: General Assembly and Day of the Young Soil Scientists at RASAB, with some 45 participants
- 10/06/2016: Contribution to the excursion of the Belgian Association of Geomorphologists in the catchment of the AA river: some 50 participants. Organization: Jan Nyssen and Amaury Frankl (UGent)
- From 5 – 8 July, 2016: Joint International Congress (YES) of the Soil Science Society of Belgium with the French Soil Science Society (AFES), organized by UCL (Bas Vanwesemael and Bruno Delvaux): 150 participants
- 8/07/2016: Annual excursion in the margin of the YES congress to Bertembos (Seppe Deckers, Karen Vancampenhout and Bruno Delvaux) and to the Zonienforest (Roger Langohr), 150 participants
- 25/10/2016: Soil on Canvas exhibition in the Cultural Centre at Turnhout (Karen Vancampenhout): 135 participants
- 25/10/2016: Symposium in the margin of “Soil on Canvas” on “Soil awareness – Bodem bewust”: 25 participants
- 25/10/2016: Post-symposium excursion to visit the “Soil drawer – bodemschuif” in the nature reserve “De Liereman”, 12 participants
- 06/12/2016: Soil processes and biogeochemical cycling of elements: J.T. Cornelis, ULiege, Gembloux: 45 participants
- 14/12/2016: Thematic Day on the numerical soil map of Wallonia: Xavier Legrain, ULiege, Gembloux: over 100 participants

Main conclusions: the NCSS normally organizes 5 activities per year: 1) Day of the Young Scientists in February, 2) a field excursion in May/June or September and 3) a Thematic Day in November - December & 4) two boards (one in February, together with the Day of the Young Scientists, one in December, together with the Thematic Day). This year, special and additional activities were organized in the aftermath of the International Year of the soil and also to mark the International decennium of the Soil.

3. General Assembly of the Scientific Union

The planned Eurosoil meeting of the European Confederation of Soil Sciences in Istanbul (17-22th of July 2016) was cancelled due to the coup attempt in Turkey. The next Eurosoil meeting will be organized in Geneva, Switzerland in 2018.

Main conclusions: K. Vancampenhout is member of the IUSS Board. 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 South Africa. Seppe Deckers is also chairing the Ad-Hoc Selection Committee of the bi-annual IUSS-Guy Smith Medal Award, the latest Medal Award (2016) was bestowed to Dr. Juan Comerma from Venezuela.

4. Other activities

- Participation to the EGU at Vienna, Austria in April 2016.
- Seppe Deckers received the status of “Honorary Membership of the International Soil Reference and Information Centre (ISRIC), Wageningen University, The Netherlands on 8/09/2016 for his life-long work on soil classification, more particularly the World Reference Base for Soil Resources (WRB).
- 11/07/2016: International Soil Monolith Campaign (SSSB and ISRIC) on Luvisols and Stagnosol at Anderlecht (Karen Vancampenhout).
- 23/08/2016: ad-hoc excursion to an excavation site in the river bench of the Schelde, West of Gent (Jari Nickelsen).

5. Future perspectives

NCSS will organize 5 core activities in 2017:

- 2 board meetings (February 15, 2017 & December 5, 2017) at RASAB;
- A general assembly and Day of the Young Soil Scientist on February 15, 2017 at RASAB;
- An annual excursion on The Orneau: a fertile valley for soil research, organization Patrick Engels, ULiege, on 23/5/2017;
- Thematic Day – December 5, 2017: Soil Mapping in Belgium: past, present and future, organization Seppe Deckers (KU Leuven);
- In addition, other activities will be under the NCSS umbrella: IUSS, Working Group WRB: International Soil Classification excursion to Riga, Letland in July 2017.

INTERNATIONAL UNIONS

The existence of a national committee is subject to the existence of an International Scientific Union or scientific body affiliated to International Council for Science — ICSU¹³ (scientific committees, special committees, etc.) concerning the same scientific subject.

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| ▪ International Astronomical Union (IAU) | www.iau.org |
| ▪ International Geographical Union (IGU) | www.igu-net.org |
| ▪ International Federation for Medical and Biological Engineering (IFMBE) | www.ifmbe.org |
| ▪ International Mathematical Union (IMU) | www.mathunion.org |
| ▪ International Union for Physical and Engineering Sciences in Medicine (IUPESM) | www.iupesm.org |
| ▪ International Union for Quaternary Research (INQUA) | www.inqua.org |
| ▪ International Union of Biochemistry and Molecular Biology (IUBMB) | www.iubmb.org |
| ▪ International Union of Biological Sciences (IUBS) | www.iubs.org |
| ▪ International Union of Crystallography (IUCr) | www.iucr.org |
| ▪ International Union of Geodesy and Geophysics (IUGG) | www.iugg.org |
| ▪ International Union of Geological Sciences (IUGS) | www.iugs.org |
| ▪ International Union of History and Philosophy of Science (IUHPS), | |
| ○ Division of History of Science and Technology (IUHPS-DHST) | |
| ○ Division of Logic, Methodology and Philosophy of Science (IUHPS-DLMPs) | www.dlmps.org |
| ▪ International Union of Microbiological Societies (IUMS) | www.iums.org |
| ▪ International Union of Pharmacology (IUPHAR) | www.iuphar.org |
| ▪ International Union of Physiological Sciences (IUPS) | www.iups.org |
| ▪ International Union of Psychological Science (IUPsyS) | www.iupsys.net |
| ▪ International Union of Pure and Applied Biophysics (IUPAB) | www.iupab.org |
| ▪ International Union of Pure and Applied Chemistry (IUPAC) | www.iupac.org |
| ▪ International Union of Pure and Applied Physics (IUPAP) | www.iupap.org |
| ▪ International Union of Radio Science (URSI) | www.ursi.org |
| ▪ International Union of Soil Sciences (IUSS) | www.iuss.org |
| ▪ International Union of Theoretical and Applied Mechanics (IUTAM) | www.iutam.net |

¹³ www.icsu.org