

Connected 4D future

Hydro17 in Rotterdam

A conference report by ROB VAN REE

Hydro17 took place in November 2017 in Rotterdam. During the three days of this annual conference, six keynotes and 45 presentations were given on the theatre stage of the venue: the permanently moored cruiseliner SS »Rotterdam«. The conference

The conference Hydro17 in Rotterdam took place from 13 to 16 November. For the second time SS »Rotterdam« proved to be a very suitable location for the size and activities of our international showcase, the first occasion being Hydro12. And again the ship was buzzing ...

»Our« in this context refers to the International Federation of Hydrographic Societies (IFHS), in which nine regional societies from all over the world cooperate to exchange best practises and social calls relating to the hydrographic domain. The IFHS initiated and maintains the series of annual conferences, whereby member societies take their turn in organising them. Actually, Hydro17 was the 25th in line. The Hydrographic Society Benelux (HSB) took great pride in hosting it. In case you're wondering where the next Hydro conference will be held – keep reading. The organisers of Hydro18 have a serious challenge when trying to improve the Dutch party. But then, it isn't a contest ...

SS »Rotterdam« combines the functions of a luxurious hotel and a conference venue in a natural way. Having arrived on board and settled into their hotel room, delegates are submerged in a different world until they wake up after three days, realising that something special happened. Something special with a high energy level that is. The beautiful grand old lady of Holland America Line is still casting a spell on her passengers, even while permanently docked in the centre of Rotterdam with a sublime view on the city's skyline.

The structure and overall routine of the Hydro conferences was maintained, with the characteristic mix of commercial exhibition and scientific programme. The three-day event was informally opened with the Icebreaker party on Monday evening, at the end of a busy day for the company representatives setting up their booths.

The conference theme was »Connecting 4D future«, aiming to stretch connection in space and time from hydrography to any other relevant disciplines. Within the universe and on our beautiful blue marble Earth everything was, is and will be connected. Nearly always scientific development calls for reductionism, highly specialised efforts answering ever more detailed research issues. Sometimes it is essential to overlook all efforts to proceed with a holistic summary or even a continuous

record kept of all those minute steps on our way to understanding.

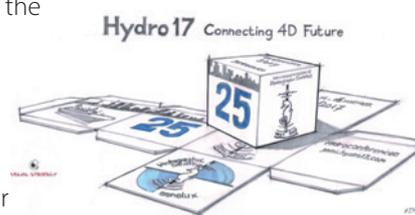
The conference handbook provided all involved with details of time and place, programme and floor plan, and an outline of each lecture presented. In the handbook all aspects of the conference were collected and arranged in an easy to use and appealing way. The book is the result of the year it took to prepare the event. While at first one year looks as too short, the organising committee could lean on the experience gathered in 2012.

Hydro17 was formally opened on Tuesday morning by Chief Hydrographer of the Navy Captain Marc van der Donck, also the Netherlands representative to the International Hydrographic Organization (IHO). He was the first of six special guests to dwell on wider subjects connecting corners of the far field, in his case connecting the famous world charts by Blaeu of 1648 to the latest available products like Google Earth and GEBCO.

Two impressive books led the committee to invite their authors for a keynote address.

»The discovery of planet Earth« by Peter Westbroek, emeritus professor in Geology, provides

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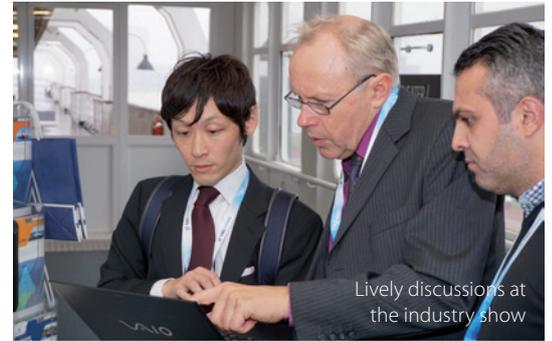
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The conference venue: SS »Rotterdam«

Picture: Mark de Rooij



Lively discussions at the industry show



The IHO Secretary-General addressing the hydrographic community

a summary of efforts to disclose the natural processes on a geologic time scale. At nearly 80 he addressed the packed auditorium with a perfectly logical and convincing review of the four dimensions in relation to life on earth and the development of Earth System Science as a realistic new scientific discipline. Gaia revisited.

Recently started in his position as Secretary-General of the International Hydrographic Organization, Dr Mathias Jonas titled his presentation: »Data centric hydrography – bringing knowledge to action«. The Nippon Foundation joined in with GEBCO in the global project Seabed 2030. The objective is to by then have identified all structures on the global seabed with a minimum size of 100 metres. The IHO embodies standardisation in every way to achieve this goal of global mapping in high resolution.

The third keynote address, second on the Wednesday, was by Rob Luijnenburg, former

chairman of Hydrographic Society Benelux. During his more than 40 years career with Van Oord and Fugro he is perhaps second to no one in having gained insight and overview of commercial hydrography. He was also Fugro's spokesman on the project to find MH370, the Malaysian Boeing 777 that was lost in March 2014. The start of the search was only possible after conducting a gigantic bathymetric survey in the expected area where the airplane would have crashed. Rob's message was very much in line with Dr Jonas': The technology to even begin to think of such a task – of global mapping – has really only become available in the last two decades, the task is enormous ... Apart from the scientific urge to learn all there is to know of the seabed, seabed information is key to future human prosperity. Last year, the OECD, the Organisation of Economic Cooperation and Development, think tank of 35, mostly developed nations has published the results of a comprehensive study under the banner: »The Ocean Economy 2030«. The topic of the study is the current and future economic impact of ocean-based activities. The study argues that the ocean economy is the key to the future welfare and prosperity of humankind. But the unsustainable use of the ocean and its resources threatens the very basis on which this welfare and prosperity depends.

»The Water Book« by UK scientific journalist Alok Jha is on the reading list of the Dutch hydrography students. On nearly every page Alok gives the reader something he didn't know before on water. Water is so common, we often forget about it. But looked at in Alok's way, many special and contra-intuitive properties are seen. For example at room temperature water really should be gaseous instead of liquid – imagine what that would do to the sea level ... – and ice should really sink in liquid water instead of floating around at the surface – like us when measuring our water depths.

Early on the third conference day we were invited into the world of maritime archeology by Martijn Manders. The title of his keynote address says it all: »The excavation of the eighteenth century Dutch East Indiaman (VOC) ship the Rooswijk«. Several weeks prior to Hydro17 Dutch TV showed a documentary on the »Rooswijk«. Martijn had a way of presenting his lecture, that easily woke up the audience after the night before. In his very enthusiastic way he showed a valid connection between



Participants of the Education Session receiving their well-deserved applause

Pictures: Holger Klimdt

hydrography and archeology. 4D future? Well yes, certainly when looked at from the dramatic sinking of the »Rooswijk«.

The scientific programme consisted of ten sessions on a wide variety of themes, from traditional – bathymetry, backscatter, data processing, education – to innovative – airborne and autonomous surveying. A total of 45 lectures were presented.

Two contests were held during the conference, one for the best lecture overall and one for the best student lecture. In the latter group we had five entries, one of which was withdrawn. Reenu Toodesh of Delft University of Technology held the best student lecture. Her paper titled »Data driven decision making« focused on optimising the national hydrographic planning on the Dutch continental shelf in conjunction with a dedicated monitoring scheme. She was a convincing presenter.

The student lecture prize was awarded during the conference dinner on the evening of the second day. Also this is the traditional moment of awarding the larger IFHS prize for the best thesis of the previous year, in this case 2016. The winner was elected from four national winners, UK's William Dann with his MSc thesis on »Bathymetric data derived from free source satellite imagery«.

Following on from the successful event of 2016 in Rostock-Warnemünde, Hydro17 again was

highly rated by all involved. It was difficult to find anyone who was dissatisfied with the arrangements. Lots of commercial connections were made. And the presence of so many youngsters was also highly valued. The provision of catering by the on-board personnel was of a high standard. Delegates spent their breaks not just in the main conference area, but also on the promenade deck where many booths were put up. Not only the Icebreaker, but certainly also the conference dinner – with its spectacular venue on board of a harbour cruising ship, where dinner was popping up in fire-works from the next deck below – and the closing ceremony on Thursday afternoon, just prior to the delegates having to return to their day-to-day routines, made the event worth it. But not before awarding the best lecture prize overall, which was elected by scientists, a number of delegates and students and went to Peter Naaijen, again of Delft University of Technology: »More uptime, less risk: performance of a real time on-board wave and ship motion prediction system«.

And of course the introduction of the next edition in the Hydro conference series. Hydro18 will be held in Sydney, down under. John Maschke of the Australasian Hydrographic Society invited us all to take part with a most appealing presentation. Be prepared, the shortest way along the geodesic: Rotterdam – Sydney 16 695 kilometres ... [📍](#)

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