Activity report 2011-2016
DHST/DLMPST Interdivisionary Commission for the History and Philosophy of Computing

In 2013, the DHST General Assembly unanimously accepted the proposal to have a new commission on the History and Philosophy of Computing. The same proposal has been accepted by the DLMPST General Assembly in 2015. Since then HaPoC has become an interdivisional commission of DHST and DLMPST. This report gives an overview of

1. Commission Organization

2. Past activities; since this is the first report of HaPoC to DLMPST, we cover all activities of the Commission since its birth

3. Publications

1 Commission Organization

1.1 Council

The current council is composed of:

- Liesbeth De Mol, CNRS, UMR 8163 STL, Université de Lille 3, liesbeth.demol@univ-lille3.fr, President

- Giuseppe Primiero, Department of Computer Science, Middlesex University, G.Primiero@mdx.ac.uk, Vice-President

- Gerard Alberts, Korteweg-de Vries Institute for Mathematics, Universiteit van Amsterdam, G. Alberts@uva.nl, Councillor

- Helena Durnova, Department of Mathematics, Masaryk University, hdurnova@ped.muni.cz, Councillor

- Benedikt Löwe, ILLC, Universiteit van Amsterdam, Department of Mathematics and Hamburg University, b.loewe@uva.nl, Councillor

- Ray Turner, School of Computer Science and Electronic Engineering, University of Essex, turnr@essex.ac.uk, Councillor

1.2 Membership

Membership to the HAPOC commission is open and free for anyone with an interest in the history and philosophy of computing. One can register as a member through the HAPOC website. Currently, there are 190 registered users, mostly from Europe and U.S. but, also from South-American and Asian countries.

1.3 Website

The website of the commission is `www.hapoc.org`. The commission's Bylaws, History and Statement can be found here: `http://hapoc.org/node/34`.

2 Past Activities (2011–2016)

The commission has its roots in a number of events that were organized since 2011 around HAPOC-related topics. We also mention them here to give an idea of the history of the commission.

2.1 HAPOC-1

- First International conference on the History and Philosophy of Computing, 7–10 November 2011, Ghent, Belgium (`www.computing-conference.ugent.be`).

Chairs: Liesbeth De Mol and Giuseppe Primiero. It was an explicit goal of this conference to bring together researchers from different backgrounds but with a keen interest in HaPoC. The result was a program containing historians, philosophers, computer scientists, mathematicians, logicians and even some professionals. It was decided that, given this diversity, it was best to have a one-track conference to enhance communication and collaboration. This also allowed to reject about 40% of the contributed papers which increased the overall quality of the conference. The general spirit of this conference is one of interdisciplinarity and openness towards different approaches and fields relevant to HaPoC, guided by a quote by Mike Mahoney that the computer is not one thing but many things and that the same holds true of computing. It was this spirit which has guided most of the other events that have been coordinated by the later HAPOC commission.

Support was given by a variety of associations and societies including IACAP (International Association for Computing and Philosophy), CiE (Computability in Europe) and ASL (Association for symbolic Logic). After the conference, several authors submitted a full paper to two of the planned special issues, one in *Philosophy and Technology* and one in *History and Philosophy of Logic*. (See Publications). A HaPoC steering committee was assembled shortly afterwards, reflecting the multidisciplinary character of HaPoC. The original task of this SC was to guarantee the continuity of the HaPoC conference and to organize other HaPoC related events.

2.2 Turing in Context I and II

In 2012 more than hundred academic events were held to celebrate the Turing centenary. Three members of the steering committee (Liesbeth De Mol, Benedikt Löwe and Giuseppe Primiero) were involved with organizing two international workshops to contribute to the Turing celebrations:

- Turing in Context I, February 18–19, 2012, King's College, Cambridge (`http://www.math.uni-hamburg.de/home/loewe/TiC@Kings/`)

- Turing in Context II, 10–12 October, 2012, Royal Flemish Academy of Belgium for Science and Arts, Belgium (`http://www.compu\\ting-conference.ugent.be/tic2`).

2.3   HaPoP-1

- First symposium on the History and Philosophy of Programming, co-located with IACAP-AISB world congress 2012 in Birmingham (UK), `http://www.computing-conference.ugent.be/hapop12`

Organized by Giuseppe Primiero and Liesbeth De Mol, involved several other of the SC members: Benedikt Löwe was a member of the programme committee and Gerard Alberts was one of two invited speakers. The symposium was a one-day symposium with 12 speakers (two invited and ten contributed papers). The proceedings of the symposium can be found at: `http://www.aisb.org.uk/publications/proceedings/aisb2012.zip`

The aim of the symposium was to offer a historical and philosophical reflection on the science of programming and contributions were invited on the folowing two topics:

1. The history of computational systems, hardware and software

2. Foundational issues and paradigms of programming (semantics and syntax, distributed, secure, cloud, functional, object-oriented, etc.)

2.4   Workshop and special session at CiE 2013

- Special Session on the History of Computing, as part of *Computability in Europe Conference 2013*, Milano `http://cie2013.disco.unimib.it/special-sessions/`).

Organised by Gerard Alberts and Liesbeth De Mol. Since this special session offered the opportunity to bring together several historians of computing, a workshop on early programming practices was also organized in parallel with CiE: `http://cie2013.disco.unimib.it/past-and-related-events/informal-workshop-on-early-programming-practices/`.

2.5   Symposia during ICHSTM 2013

- *Mathematics and machines: explorations of machine-assisted mathematics since 1800*, organised by Liesbeth De Mol, Maarten Bullynck and M.-J. Durand-Richard, twelve talks. See: `http://www.ichstm2013.com/programme/guide/s/S005.html` for more details. This symposium has resulted in a special issue witht he same title as the symposium. To appear in *Revue de Synthese*.

- ICOHTEC symposium *Enforced specialization in computing technology: debugging the history of cooperation and competition in COMECON countries*, organised by Helena Durnova and Slawomir Lotysz, four talks. See `http://www.ichstm2013.com/programme/guide/s/P125.html` for more information.

2.6 HaPoC-2, 2013

- Second International conference on the History and Philosophy of Computing, 28–31 October, 2013, Ecole Normale Supérieure, Paris, France (`http://hapoc2013.sciencesconf.org`).

Local Organisers and PC Chairs: Maarten Bullynck (Paris 8) and Jean-Baptise Joinet (Lyon 3). The number of submissions slightly increased with respect to HaPoC-1 and, based on the feedback we received from participants who attended HaPoC-1 and 2, the overall quality of HaPoC-2 was better than that of HaPoC-1. HAPOC-2 was organized in the same spirit as HAPOC-1, with only one track and a scientific program which represents the inclusive and pluralistic ambitions of the commission. As such, the keynotes included historians, philosophers, logicians, a computer scientist and a specialist on digital art.

2.7 HaPoP-2, 2014

- Second International Symposium for the History and Philosophy of Programming, co-located with AISB conference 2014 in London (UK), `http://www.computing-conference.ugent.be/hapop2`.

Organised by Liesbeth de Mol and Giuseppe Primiero. We invited two keynotes and selected 5 contributed papers. HAPOP-2 was very much in the same spirit and format as HAPOP-1.

2.8 Workshop and special session at CiE 2014

- Special Session on the History and Philosophy of Computing, as part of *Computability in Europe Conference 2014*, Budapest `http://cie2014.inf.elte.hu/?Special_Sessions`.

Organised by Liesbeth De Mol, Giuseppe Primiero. The commission also accepted to coordinate a HAPOC special session for the annual Computability in Europe conference for the next years.

2.9 HAPOC symposium at IACAP 2014

- HaPoC Symposium at IACAP 2014, thessaloniki, Greece `http://www.computing-conference.ugent.be/hapop2`.

This was the first symposium organized at the main conference of our sister organization IACAP. The programme (`http://www.hapoc.org/events/iacap`) consisted of researchers coming from a diversity of backgrounds, who want to engage with topics relevant to the history and philosophy of computing. The meeting focused on the following questions:

- What are programs, algorithms, machines and how do we understand their languages?

- What is computing/computation?

- What is the science in computer science?

Clearly, these questions can be tackled from a diversity of perspectives. For this reason, we invited researchers with different viewpoints on these different questions. See `http://www.hapoc.org/node/92` for a report on the symposium. Two younger scholars – Ksenia Tatarchenko and Mate Szabo – were funded by the commission.

2.10   Special session at CiE 2015

- Special Session on the History and Philosophy of Computing, as part of *Computability in Europe Conference 2015*, Bucharest `http://fmi.unibuc.ro/CiE2015/sessions.html`.

Organised by Liesbeth De Mol, Giuseppe Primiero, Christine Proust (Paris 7) and Marco Benini (Insubria).

2.11   HaPoC Symposium, CLMPS 2015, Helsinki

From 3-8 August 2015, CLMPS, the main conference of the DLMPST, was held in Helsinki and the commission was asked to organize a symposium as a way of presenting the commission's work and character. The commission decided on the particular topic of the relation between computations, proofs and models. In the spirit of HaPoC we invited speakers from a diversity of backgrounds, including historians but also computer scientists and philosophers. See `http://hapoc.org/node/119` for the program.

2.12   HaPoC-3, 2015

- Third International conference on the History and Philosophy of Computing, 8–11 October, 2015, Pisa, Italy (`https://hapoc2015.sciencesconf.org/`).

Local Organisers and PC Chairs: Fabio Gadducci (Pisa), Mirko Tavosanis. In total, we received 51 papers of which 32 were accepted. During the conference we also organized the first HaPoC GA. We also organized a granting scheme which focused particularly on younger scholars. A total of 7 grants of 250 EUR were distributed.

2.13   HaPoP-3, 2016

- Third International Symposium for the History and Philosophy of Programming, June 25th 2016 `http://www.hapoc.org/hapop3`.

This was the first time that HaPoP was not organized within the framework of the AISB conference but as a stand-alone event (as a satellite of CiE 2016). Moreover, for the first time, we also selected a particular topic, viz. Operating Systems. The symposium was co-organized by L. De Mol, R. Fournier-S'niehotta (CNAM), B. Mélés (CNRS, UMR7117), G. Primiero. We had two invited speakers, a roundtable on the more political topic of souvereign operating systems and 8 contributed talks. An edited volume in the Series *Philosophical Studies* (Springer) will collect the revised versions of the papers.

2.14 Symposium on Philosophy of Computer Science IACAP 2016

- Sponsored Symposium *Methodological Issues in the Philosophy of Computer Science*, organised by N. Angius, G. Primiero and P. Stefaneas (`http://www.iacap.org/conferences/iacap-2016/`).

The costs of one speaker, Nir Fresco (Research Fellow of the Edelstein Center for the History and Philosophy of Science, Technology and Medicine) have been refunded by a HaPoC Grant.

2.15 Special session at CiE 2016

- Special Session on the History and Philosophy of Computing, as part of *Computability in Europe Conference 2016*, Paris, France `http://lipn.univ-paris13.fr/CIE2016/program.php`.

Organised by Alberto Naibo (IHPST, Universit de Paris 1) and Ksenia Tatarchenko. During the session, a roundtable was organized and, based on that, it was decided that this special session should become more focused in connection to the aims and scope of the CiE conference. To this end, the next special session will be devoted to a particular topic, viz. Recursion, celebrating Rosza Pter.

3 Publications

- L. de Mol, G. Primiero (eds.), *Reflections on Operating Systems – Historical and Philosophical Aspects*, Philosophical Studies Series, Springer (forthcoming 2017).

- M. Bullynck, L. De Mol, M.-j. Durand-Richard, *Mathematics and Machines*, special issue in *Revue de Synthese* (forthcoming 2017).

- F. Gadducci, M. Tavosanis (eds.), *Post-Proceedings Third International Conference, HaPoC 2015*, Pisa, Italy, October 8-11, 2015, Revised Selected Papers, IFIP Advances in Information and Communication Technology, vol. 487, Springer.
  `http://www.springer.com/us/book/9783319472850#otherversion=9783319472867`.

- L. de Mol, G. Primiero (eds.), *Logical Issues in the History and Philosophy of Computing*, History & Philosophy of Logic, vol.36, Issue 3, 2015.
  `http://www.tandfonline.com/doi/full/10.1080/01445340.2015.1084183`.

- L. de Mol, G. Primiero (eds.), *Trends in the History and Philosophy of Computing*, Philosophy & Technology, vol. 27, Issue 3, 2014.
  `http://link.springer.com/journal/13347/27/3/page/1`

- L. de Mol, G. Primiero (eds.), *Proceedings of the Symposium on History and Philosophy of Programming*, AISB/IACAP World Congress 2012, University of Birmingham, 2-6 July 2012. The Society for the Study of Artificial Intelligence and Simulation of Behaviour, ISBN 978-1-908187-17-8.
  `http://www.aisb.org.uk/publications/proceedings/aisb2012.zip`