

Activities in History of Mathematics in Utrecht and Leiden in the year 2007

Contents:

- Personnel
- International Service
- Publications
- Lectures
- Media
- Visits
- Visitors from abroad
- Organisation of conferences
- Courses
- Courses (not history-related)
- Ph.D. theses
- M.Sc. theses, publications and other work by students in history of mathematics

Personnel

Steven Wepster (SW): from February 1, 2007 - Dec. 31, 2007: 0,5 “Universitair Docent”, Department of Mathematics.

Hüseyin Şen (HS): Jan. 1, 2007 - Oct. 1, 2007: Student assistant. 0,2 fte (in the program ‘Coloured talent’ of the College van Bestuur).

Dr Kim Plofker (KP) was a postdoctoral fellow from Sept. 1, 2004 - Sept. 1, 2006, sponsored by NWO. Some of her publications which were written in that period appeared in 2007 and are mentioned in the list of publications.

Liesbeth de Wreede (LW): Jan. 1, 2007 - Dec. 31, 2007: Official (un-salaried) guest of the Mathematics Department (History of Mathematics Research Group), UU, 0.0 fte.

Jeanine Daems (JDa): Jan. 1, 2007 - Dec. 31, 2007: AIO (salaried Ph.D. student), Department of Mathematics, University of Leiden, working on a Ph.D. in the history of crystallography with Prof. Hendrik Lenstra and JH.

Jantien Dopper (JDo): Sept. 1, 2007 - Dec. 31, 2007: AIO (salaried Ph.D. student), Department of Mathematics, University of Utrecht, working on a Ph.D. in history of mathematics (17th century mathematics in the Netherlands) with JH.

Jan P. Hogendijk (JH), Jan. 1, 2007 - Dec. 31, 2007:, Professor of History of Mathematics in Utrecht University (0,5 full professor, 0,3 associate professor) and in Leiden University (0,2 full professor). Note: JH was on leave from Feb. 1 - July 1; almost all of this time was spent in activities unrelated to History of Mathematics.

Henk Hietbrink, mathematics teacher at the Cals College in Nieuwegein, worked from Sept. 1, 2007 - August 31, 2009 for one day per week on a “teacher in research” program, funded by NWO, on the preparation of educational material on 17th-century Dutch mathematics for highschool students in mathematics. The project was jointly supervised by Prof. Dr. Jan van Maanen (Freudenthal Institute for Mathematics and Science Education) and JH.

The following students deserve special mention, because they have participated on a regular basis in teaching, travelling, giving lectures etc.

Mr. Hüseyin Şen, masterstudent History and Philosophy of Science,

Mr. Wilfred de Graaf, master student Mathematics and Physics,

Mr. Eric van Lit, bachelorstudent Mathematics, Arabic, and Liberal Arts and Sciences.

International Service

JH is executive Member, Academie Internationale d’Histoire des Sciences

JH is a member of the editorial board of the following journals in the history of science:

- Ganita-Bharati (Delhi, ISSN 0970-0307),
- Istoriko-Matematicheskii Issledovaniya (Moscow, ISBN 5-8037-0291-9),
- Suhayl (Barcelona, ISSN 1576-9372),
- Centaurus (Aarhus, ISSN 0008-8994),
- Zeitschrift für Geschichte der arabisch-islamischen Wissenschaften (Frankfurt, ISSN 0179-4639),
- Historia Mathematica (Amsterdam-San Diego, ISSN 0315-0860),
- Ta’rikh-e Elm (Tehran, ISSN 1735-0573),
- Journal for the History of Arabic Science (Aleppo, ISSN 0379-2927),
- Early Science and Medicine (Leiden, ISSN 1383-7427).

Publications

JH: A new look at the Barber's Astrolabe in the *Arabian Nights*, pp. 65-76 in: A. Vrolijk, Jan P. Hogendijk, ed., *O ye Gentlemen: Arabic Studies on Science and Literary Culture in Honour of Remke Kruk*, Leiden, Brill 2007.

JH: Similar mathematics in different cultures: Jamshid al-Kashi and Ludolph van Ceulen on the determination of pi; pp. 189-203 in *Mélanges offerts à Hossam Elkhadem par ses amis et élèves*, ed. Frank Daelemans, Jean-Marie Duvosquel, Robert Halleux and David Juste, Brussels, Archives et Bibliothèques de Belgique, Numéro Spécial 83 / Archief- en Bibliotheekwezen in België, 83 Extranummer, 2007, [ISSN: 0775-0722].

Wiggert Loonstra, Canon van de Wiskunde, over de 31 belangrijkste wiskundigen uit de geschiedenis, *Euclides* 83/2. p. 78 [on the student project Canon van de Wiskunde, see survey of activities in history of mathematics in 2006]

KP: Empires and exact sciences in pre-modern Eurasia, *International Institute for Asian Studies*, Newsletter 43: Comparative Intellectual Histories of Early Modern Asia, spring 2007, p.14

KP: Chapter: Mathematics in India, in: Victor Katz, ed., *The Mathematics of Egypt, Mesopotamia, China, India and Islam: A Sourcebook*. Princeton and Oxford: Princeton University Press, 2007, ISBN-13: 978-0-691-11485-9, ISBN-10: 0-691-11485-4. pp. 385-514.

Mattias Visser, the second part of his article on the *Topkapı Scroll* (based on his M.Sc. thesis on the subject) has appeared on the website www.arsetmathesis.nl in pdf, 17 pages) (this was part of his M.Sc thesis in the History of Mathematics) See *Arthesia* 21 no. 1, februari/maart 2007, p. 13.

Lectures

Jan. 12, JH: Inaugural lecture as full professor in History of Mathematics: "Vergeten Wortels", Utrecht University.

Jan. 17. JH: Presentation on workshop 'Geometric Patterns in Islamic Art'm Lorentz Center, for the "Adviesraad voor het Samenwerkingsprogramma NIAS-Lorentz Center".

Feb. 2, 15:30-17:00: Aldine Aaten, Jeanine Daems (Leiden Univ), De Isfahan Workshops (The Isfahan Workshops, of May 2006), Nationale Wiskundedagen, Noordwijkerhout, NH Leeuwenhorst (organised by the Freudenthal Institute, Utrecht). These workshops had been given in Isfahan in 2006.

Feb. 6, JH: *Ifrād al-Bayān fī Amr al-Ṭaylasān*: Keeping Time with Taylasan Tables. Lecture in the valedictory symposium for Professor David King, Frankfurt, Institut für Geschichte der Naturwissenschaften.

March 23, 9:00-10:30 HS, Wilfred de Graaf: workshop "Escher en Iraanse betegelingen" (Escher and Iranian tilings), Nationale Rekendagen, Noordwijkerhout, NH Leeuwenhorst (organised by the Freudenthal Institute, Utrecht). These workshops had been given in Isfahan in 2006.

May 14, LW: "Dimensional scruples: Willebrord Snellius's thoughts about the use of arithmetic in geometry," REHSEIS, Paris, France.

July 9, LW: “Between three fires: Snellius’s search for a new approach to the mathematical sciences,” Kolloquium zur Didaktik der Mathematik an der Universität Essen, Germany.

August 22, 11:30-13:00 JH, workshop “The Astrolabe”, in HOVO-course “Kijken naar de Hemel. Culturele aspecten van de sterrenkunde.”, Leiden. 48 participants.

September 6, LW: “Willebrord Snellius’s Exactification of Geometry”, Stafcolloquium, Department of Mathematics, University of Utrecht

September 20, SW: “On Longitude and Lunars: the other half of the story,” Stafcolloquium, Department of Mathematics, University of Utrecht.

September 24, LW: “Snellius’s Exactification of Measurements”, Symposium Measures of Exactness Exactness of Measures, Topics in the History of Mathematics, University of Utrecht

September 24, SW: ““On Longitude and Lunars”, Symposium Measures of Exactness Exactness of Measures, Topics in the History of Mathematics, University of Utrecht

October 11, SW (together with Prof. Dr. Dirk Siersma) “Wiskunde D en het Beta-Steunpunt Utrecht.” (not history-related). Stafcolloquium, Mathematics Department, Utrecht.

October 22, JH: “Wiskunde in Oosterse Culturen” (Mathematics in Eastern Cultures), for 90 first-year mathematics and physics students of the University of Utrecht, series: Kaleidoscoop van de Wiskunde.

November 13, LW: “Willebrord Snellius (1580-1626): a Humanist Reshaping the Mathematical Sciences,” Colloquium This Weeks Discoveries, University of Leiden

December 21, JH: “Iranian mathematicians in a 17th century Dutch work”, Association of Students of Arabic: Taj, Utrecht. Department of Oriental Studies.

December 29: Eric van Lit, Wilfred de Graaf, Workshop: The Astrolabe. Esfahan (Iran), House of Mathematics, 25 participants.

December 29, JH: Iranian mathematics (3d-9th century H), Dutch mathematics (16th-17th c. A.D) and their various relationships; Esfahan (Iran), Community Library (organized by the House of Mathematics), 50 participants.

Media

Jan. 18: the Utrecht University Newspaper (Ublad) 38 (2006-7), no. 18 printed in the section “Wetenschap” a passage from JH’s inaugural lecture relating to cooperation with Arabic countries, Iran and Afghanistan.

Jan. 25: Nederlandse Moslim Omroep, radio programme “Verkenningen” (22:00-23:00): interview with JH as well as Remke Kruk and Tom Goris.

June-July 2007: Several interviews for Turkish television programs by HS, and one by JH, in connection with the new Museum for History of Islamic Science in Istanbul. Details are unavailable.

Sept. 11, 2007: a live-interview with LW on her dissertation on Snellius was broadcast in the radio program “Noorderlicht”, Radio 1, ca. 10:25, see <http://noorderlicht.vpro.nl/afleveringen/35385905/>

Sept. 13, 2007: the U-blad printed a two-page interview with JH, entitled “are you Muslim?”

Sept. 19, 2007; an eight-minute live interview with JH (on the occasion of the publication of the Dutch version of *The Archimedes Codex* on Sept. 20) was broadcast in radio program “Met het oog op morgen” (NOS), Radio 1, ca. 23:45.

Sept. 21, 2007: a twenty-minute interview with JH (on the Archimedes palimpsest) was broadcast in the radio program ” Hoe?Zo!” (Teleac), Radio 5, 21:00-22:00.

Setp. 22, 2007: article by Geertje Dekkers, “Meten tot aan Bergen op Zoom: Eerste biografie van Willibrord Snellius” on LW’s dissertation appeared in De Volkskrant, Kennis, p. 2.

Sept. 25, 2007: Articles by Rob van den Berg on LW’s dissertation on Snellius appeared in NRC (“Snellius wilde de wiskunde hervormen”, p. 8) and NRC-Next (“Snellius was meer dan de brekingswet”, p. 17)

JH was author of question nr. 13 in the Nationale Wetenschapsquiz (broadcast on December 24, 2007).

Note that JDa is one of the two authors of the site www.wiskundemeisjes.nl a website aimed at popularizing mathematics. The manifold media activities in connection with this website are not mentioned here.

Visits

Feb. 5-7: HS, JH: Frankfurt: Institut für Geschichte der Naturwissenschaften, Institut für Geschichte der arabisch-islamischen Wissenschaften, J.W. Goethe-Universität.

Feb. 15-20: The students Huseyin Sen (HS) and Wilfred de Graaf visited Istanbul and attended a training program organized by the Turkish foundation Tübitak on Designing a Museum.

March 28-30: HS, JH, Wilfred de Graaf: Visit of Frankfurt, Institut für Geschichte der arabisch-islamischen Wissenschaften, J.W. Goethe-Universität.

May 22; Visit by JH of Frankfurt, Institut für Geschichte der arabisch-islamischen Wissenschaften, J.W. Goethe-Universität.

June 1 - Dec. 1: HS, Wilfred de Graaf, visit to Istanbul (see below under “other work by students”) June 25-28: JH, visit to Istanbul, the newly designed Museum for History of Islamic Science.

December 27 - January 9: visit by JDo and 38 students of mathematics and physics from Utrecht and Leiden universities to Iran (group leader JH): Qom, Esfahan, Yazd, where newyear’s eve was celebrated. See 2008 for the continuation of the trip.

Visitors from Abroad

April 26-27: Dr. Kim Plofker, Brown University.

Organisation of Conferences

On Monday, September 24, a Symposium was organized at the Department of Mathematics, University of Utrecht, to mark the Ph.D. defenses of Liesbeth de Wreede and Steven Wepster on the next day. The symposium was organised by SW and LW and entitled: “Measures of Exactness, Exactness of Measures: Topics in the History of Mathematics.”. The symposium was sponsored by the University of Utrecht, the Department of Mathematics of the University of Utrecht, the Mathematical Research Institute, NWO, and GMFW. Program:

10:00	Jan Hogendijk	Opening word
10:15	Liesbeth de Wreede	Snellius’s Exactification of Measurements
11:00	coffee break	
11:15	Sébastien Maronne (Paris)	Descartes’ ovals in <i>Excerpta Mathematica</i> and the Method for Normals
12:00	Marc van der Poel (Nijmegen)	Latin as a Vehicle for Scientific Discourse in the 17th and 18th Centuries
12:45	lunch	
14:00	Rob van Gent	Measuring the Stars for a New Sky
14:45	Frauke Böttcher (Köln)	Too Exact for Vulgarization? Mathematics a Self-Taught Discipline in the 18th Century
15:30	coffee break	
15:45	Steven Wepster	On Longitude and Lunars
16:30	Henk Bos	Concluding Remarks
17:00	Drinks	

Together with Dr. Piet Lemmens and Ab van de Roest, SW organized the Masterclass Knot Theory, 19-20 oct., for advanced highschool students, in the Mathematics Department of the University of Utrecht.

Courses

- LW: Course: “De bloeitijd van de Leidse wiskunde (1580-1665),” Fridays 23 feb - 20 april, 11:15-13:00 [April 6 no class, March 30 visit to University Library]. HOVO, Universiteit Leiden.
- Spring 2007: SW: Seminar in History of Mathematics, University of Utrecht.
- Fall 2007: SW: History of Mathematics, University of Utrecht
- Fall 2007: JH: History of Mathematics, University of Leiden.

Courses and workshops (not related to History of Mathematics)

Fall 2007: JH taught Infinitesimalrekening (calculus, WISB 131) to around 100 mathematics students. 4 hours of lectures per week.

Fall 2007: JDo taught exercise classes in Infinitesimaalrekening and Linear Algebra, 6 - 8 hours per week, around 20 students.

SW taught the following workshops in 2007:

- Together with Dr Roelof Bruggeman and Bas Janssens M. Sc: Workshop complex numbers in the study day “Beta onder de Dom” for teachers in the vwo-highschool
- together with Cees de Waard: Workshop ”Wiskunde D” at the NVvW-day (meeting of the Netherlands Mathematics Teachers Society)

Ph.D. theses

- Steven Wepster, “Between Theory and Observations: Tobias Mayer’s Explorations of Lunar Motion, 1751-1755.” Public Defense: Sept. 25, 12:45 pm.
- Liesbeth de Wreede, “ Willebrord Snellius (1580-1626): A Humanist Reshaping the Mathematical Sciences.” Public Defense: Sept. 25, 16:15 pm.

M.Sc. theses, publications and other work by students in history of mathematics

- Special Work: Huşeyin Sen (master student in History of Science) and Wilfred de Graaf (master student in mathematics and physics) worked between June 1, 2007 and December 1, 2007 as special assistant in the newly established Museum on History of Islamic Science in the garden of the TopkapıPalace (i.e., Gülhane Park) in Istanbul. Their work is funded by the Turkish governmental organisation Tübitak.
- Special Project in History of Mathematics (7,5 ECTS): Wiggert Loonstra, Johannes Lok wrote a Canon of (31) Mathematicians, published on <http://www.wiskundecanon.nl> See the section on Publications.
- B. Sc. thesis (“Kleine scriptie”, 7,5 ECTS): Jan Beuving, Tractaet der Perspective: Perspectieftekenen volgens Frans van Schooten. November 2007.
- Essays written by participants of the course ”History of Mathematics”, Leiden, Fall 2006 (turned in in early Spring 2007, all in Dutch):
 - Lisette de Boer, Yvette Kleinherenbrink, “Egyptische wiskunde”
 - Gonny Hauwert, Zlata Tanović, “Geschiedenis van vrouwen in de wiskunde”
 - Frans van Helden en Niels van Splunter, “Negen hoofdstukken over de kunst van de wiskunde” (Chinese wiskunde)

- Aron Kalsbeek, Harm Nooitgedagt, “Simon Stevin’s De Thiende, zijn invloed op het getallenstelsel.”
- Oliver Lenz en Michael Fung, “ašvin, $\frac{a}{0}$ en 346: de getallen van de Indiase wiskunde”
- Peter van der Linden, Daan van de Meerberg, “Descartes en zijn invloed op de analytische meetkunde”
- Alexander Stolwijk, Laurens Smit, “Leibniz en Newton”
- Essays written by participants of the Bachelor course ”History of Mathematics”, Utrecht, Fall 2006 (turned in in early Spring 2007, all in Dutch):
 - Maarten Citroen, De geometrie van de koepel van Florence
 - Daniël van Dijk en Marlous Kamp, L.E.J.Brouwer, de onbekende revolutionair in de wiskunde, en het intuïtionisme
 - Barbara Harzevoort, Silvie Ketelaars, Hogeregraads vergelijkingen numeriek oplossen in het China van de dertiende eeuw
 - Bas den Heijer, Johannes Steenstra, Legendre en het vijfde postulaat
 - Mathijs Jansen, Lobatsjevski en de niet-euclidische meetkunde
 - Willem Ouburg, Maarten Fugers, van Ceulen en zijn berekeningen voor de lengtes van zijden van regelmatige veelhoeken
 - Susanna Petrucelli, Perspectief in de Renaissance: De bijdragen van enkele Italiaanse schilders en architecten
 - Sjoerd van der Ploeg en Erkan Uysal, Plaatsbepaling op zee in de Gouden Eeuw
 - Thekla Teunis en Eric Cornet, Tweestrijd over dualiteit: De strijd tussen Poncelet en Gergonne over het dualiteitsprincipe in de meetkunde
 - Anjani Jadoenandansing, Frédérique Kuiper, De Abacus [including a model which has been displayed in the library of the Mathematics Department]
 - Gabriël de Jong, Bart Russel, Project: Designing a Board-game on Euclid’s proof of the Theorem of Pythagoras.
- Essays written by participants of the Master course ”History of Mathematics”, Utrecht, Fall 2006 (turned in in early Spring 2007):
 - Mieke Janssen en Stephan Berendonk, Meetkunde in de negen hoofdstukken: Een essay over meetkundige technieken in het oude China
 - Roelof Oosterhuis, Machtige Brouwsels? Over de blijvende betekenis van Brouwers intuïtionisme
 - Annelies van der Veen en Gertjan Brug, Stevin en de Watermolens
 - Martin Weiss, Microelectronics in the GDR

– Marielle van der Wijden, Nico van Wijngaarden, De pythagoreër
[sic]

- Essay written for the course *Kaleidoscoop 1* for first-year students (essay supervised by JH): Mark Bogers, Kasimir van Rijn, Ederick Ruiz: Euler en de som van oneindige reeksen.