

Activities in History of Mathematics in Utrecht and Leiden in the year 2006

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Personnel

- Jan P. Hogendijk (JH): 0.5 Full Professor in History of Mathematics and 0.3 Associate Professor (UHD) at Utrecht University, Department of Mathematics. All year 0.2 Full Professor of History of Mathematics at Leiden University, Department of Mathematics
- Kim Plofker (KP): Jan. 1 - Aug. 31: 1.0 Postdoctoral position, financed by the NWO project “Mathematics in India, 500 BCE - 1800 CE, with special emphasis on its relationship with Islamic mathematics (750 - 1800 CE).” (MATHINDI, 613.000.430) Mrs Plofker is affiliated with the Department of Mathematics of Utrecht University (0,8) and the International Institute for Asian Studies at Leiden (0,2).
- Steven Wepster (SW): January 1, 2006 - Aug. 31, 2006: 0.6 AIO (Ph.D. student) history of mathematics, Department of Mathematics, Utrecht. January 1, 2006 - August 1, 2009: Junior Lecturer-Researcher, History of Mathematics, Department of Mathematics, Utrecht. In addition, SW has a 0,3 fte appointment at the Mathematics Department for non-history related tasks.

- Jeanine Daems, who is 1.0 AIO in Leiden, Department of Mathematics, works under the supervision of Prof. Hendrik Lenstra on a Ph.D thesis which is related in part to the history of mathematics.
- Hüseyin Şen (HS), has been appointed as student assistant of Jan Hogendijk, October 1, 2006 - September 31, 2007 for one day per week. [Programma: gekleurd talent, gefinancierd door het College van Bestuur van de Universiteit Utrecht]

International service

- On January 1, 2006, JH was succeeded as secretary of the Executive Committee of the International Commission for the History of Mathematics (ICHM) by Dr. Elena Ausejo (Zaragoza, Spain).
- 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-Matematicheski 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'rih-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).
- JH was a member of the reading committee of the Ph.D. thesis of Albrecht Heffer, “Van precepten tot vergelijkingen: de conceptuele ontwikkeling van de symbolische algebra in de zestiende eeuw” [From precepts to equations: the conceptual development of symbolic algebra in the sixteenth century], Universiteit Gent, Faculteit Letteren en Wijsbegeerte, Centrum voor Logica en Wetenschapsfilosofie, Public Defence in Gent, February 22, 2006.
- JH was examiner of the Ph.D. Thesis of Josep Casulleras Closa: *El Tratado sober proyección de rayos de Ibn Mu'ād de Jaén (m. 1093): Edición, Traducción y Estudio*, Universitat de Barcelona, Facultat de Filologia, Filologia Semítica (àrea Àrab). Defence in Barcelona, October 26, 2006.

- JH was a member of the reading committee of the Ph.D. Thesis of Silvia Harmsen, *Algorithmic Computer-Reconstructions of Stalactite Vaults - Muqarnas - in Islamic Architecture*, Heidelberg, Ruprecht-Karls Universität Heidelberg, Fakultät für Mathematik und Informatik, Oktober 2006.
- KP is a member of the editorial board of the online-journal Aestimatio <http://www.unc.edu/awmc/aestimatio.html>
- KP is Abstracts editor of the journal *Historia Mathematica* (Amsterdam-San Diego, 0315-0860),

Publications

- JH, Lees Euclides! *Euclides 81 no. 4* (februari 2006) pp. 171-173.
- JH, Het rekenwonder van het Rapenburg, *Eureka* (Leiden) 3 nr. 12 (2006), pp. 15-17.
- JH, *Geschenken uit het Oosten*: the printed text of the Leiden inaugural lecture of March 2005 appeared in the beginning of 2006, also available on the internet at <http://hdl.handle.net/1887/4356> . Abbreviated form of the lecture: “Geschenken uit het Oosten”, *De Cascade* 3 (voorjaar 2006), pp. 50-56.
- JH: Hoofdstuk: Indiase en Arabische wiskunde, pp. 81-100 in Machiel Keestra, red. *Een cultuurgeschiedenis van de wiskunde*, Amsterdam: Uitgeverij Nieuwezijds, 2006.
- KP, *Mathematics in India*, Chapter in *Sourcebook in Non-Western Mathematics*, ed. Victor Katz, Princeton, to appear towards the end of 2006.
- Liesbeth de Wreede, Willebrord Snellius: A Humanist Mathematician. In: Schnur, Rhoda and Galland-Hallyn, Perrine, eds., *Acta Conventus Neo-Latini Bonnensis. Proceedings of the Twelfth International Congress of Neo-Latin Studies. Bonn: 3-9 August 2003*. Tempe, Arizona: Arizona Center for Medieval and Renaissance Studies, pp. 277-306. ISBN 0866983600, 9780866983600, Series: Medieval and Renaissance texts and studies; vol. 315.
- Jeanine Daems: seven contributions on prime numbers, to appear in the calendar *Wetenschappelijke Scheurkalender 2007*, to be published by the monthly magazine *Natuurwetenschap & Techniek* in the end of 2006.

Lectures and workshops (including some activities by students)

- January 9, JH, lecture “Middeleeuwse Islamitische Wetenschap” [Medieval Islamic Science] in course: “Inleiding tot de Islam” [Introduction to Islam] of the Utrecht Department of Arabic, Persian and Turkish Language,

- January 13: KP, “Decimal and sexagesimal computation in Indian mathematics.” Session on Ancient and Nonwestern Mathematics, Joint Mathematics Meeting (AMS-MAA), San Antonio, Texas, USA.
- January 13: KP, “History of Mathematics and Original Sources in India: a fieldwork report.” Annual Meeting of the History of Mathematics Special Interest Group of the Mathematical Association of America., Joint Mathematics Meeting (AMS-MAA), San Antonio, Texas, USA.
- January 14: Jeanine Daems, “Mathematical crystallography after Hilbert’s 18th problem.” AMS-MAA Special Session on History of Mathematics, Joint Mathematics Meeting (AMS-MAA), San Antonio, Texas, USA.
- January 14, JH, “Het mozaïek van de wiskunde”, lecture on A-Eskwadraat ouderdag [day for parents of students]
- January 31: KP, “Concepts and strategies of proof in Indian mathematics,” Stafcolloquium, Department of Mathematics, University of Groningen.
- February 14: Steven Wepster, “Unexpected Newtonianism in Mayer’s lunar tables: The Horrox legacy”, Utrecht Studygroup on History of Astronomy (USHA).
- March 14: KP, “Euler, Bayer and Indian Astronomy,” Utrecht Studygroup on History of Astronomy.
- March 17: KP, Humans, Ancestors, Gods and their Worlds: The Sacred and Scientific Cosmologies of India. Conference: ”Geography, Ethnography and Perceptions of the World in Ancient Civilizations”. Brown University, Providence RI, USA.
- April 3: JH. Workshop: Babylonian mathematics. Utrecht University College, course: Mathematics for Poets.
- April 13: JH, Dr. Rob van Gent: Evening Program “Hoogtepunten van middeleeuws Islamitische wetenschap” [Highlights of medieval Islamic science], for Studenten Unie Nederland (a student union of mostly Muslim students), Diemen, Hogeschool Holland. Attended by 120 students.
- May 1: JH, assisted by Wilfred de Graaf, Astrolabe-workshop. Utrecht University College, course: Mathematics for Poets.
- May 16, 17 / Ordibehesht 26, 27, 1385 A.H. Solar: The following three workshops were performed by participants of the seminar History of Mathematics in Iran, during the Mathematics and Art Workshop *Kārgāh-e Riyāziyāt wa-honar* in Isfahan, House of Mathematics www.mathhouse.org: Daan van Well, Mark Roelands, *Penrose-tilings* (translator: Mohammad Bagheri); Hüseyin Şen, Wilfred de Graaf, *Escher Methods and Iranian Tilings* (translator: Behrouz Zabibian); Aldine Aaten, Jeanine Daems,

Michiel Kwetters, Jasper Lukkezen, *Tiling Regular Polygons by means of Triangles* (translator: Nina Mortazawi).

The audience consisted of ca. 100 Iranian students of mathematics as well as students of architecture. They were divided into four groups of around 25 persons and the three workshops were performed four times, once for each group.

- May 18: Speech by JH on the closing session of the Mathematics and Art Workshop, coinciding with the sixth Festival of the House of Mathematics in Isfahan, and the beginning of activities in the new building of the House of Mathematics. The speech was held in the Central Public Library in Isfahan.
- May 22: Mark Roelands, Daan van Well, workshop “Penrose-tilings”, Architecture College, Yazd, Iran.
- May 23: JH, lecture: “Abu Said Ahmad ibn Muhammad ibn Abdaljalil al-Sijzi, a Sistani Scientist of the fourth century Hijra” (translated by Mohammad Bagheri) and astrolabe workshop (translated by Mohammad Bagheri, with the assistance of Michiel Kwetters and Wilfred de Graaf). Zahedan, University of Zahedan, First International Conference on the Ancient Astronomy of Sistan.
- May 23: Hüseyin Şen, lecture “Islamic Science: History and Importance”, Yazd Mathematics House www.yazdmath.com, Yazd, Iran.
- May 23: Mark Roelands, Daan van Well, workshop “Penrose-tilings”, Yazd Mathematics House, Yazd, Iran (afternoon); University of Yazd, Yazd, Iran (evening).
- May 25: JH, lecture: “Abu Said Ahmad ibn Muhammad ibn Abdaljalil al-Sijzi, a Sistani Scientist of the fourth century Hijra” (translated by Mohammad Bagheri). and astrolabe workshop (translated by Mohammad Bagheri, with the assistance of Michiel Kwetters and Wilfred de Graaf, and six members of the Astronomical Association ‘Mehbang’ (Zahedan)): Zabol, Red Crescent Hall, First International Conference on the Ancient Astronomy of Sistan.
- June 8: JH: The division of figures in the Book on the geometrical constructions necessary for the craftsman by Abu’l-Wafā’ al-Būzjānī, Lille, Université Lille 3, Maison des Recherches, Journée des Divisions d’Euclide.
- June 13: Toke Knudsen (Brown University): The Siddhantasundara of Jnanaraja (ca. 1500 A.D.), Utrecht study Group in History of Astronomy.
- August 17: Mark Roelands, Presentation of the workshop on Islamic Mosaics and Penrose Tilings, 8th Iranian Mathematics Education Conference, Shahr-e Kord, Chahar Mahal & Bakhtiari, Iran.

- Sept. 5: JH, lecture 'History of Mathematics between Utrecht and Isfahan', Utrecht, Master Introduction 2006.
- Sept. 11, JH, 'A Persian mathematical manuscript, the Friday Mosque of Isfahan, and the conference poster', lecture at the workshop 'Geometric Patterns in Islamic Art', Leiden, Lorentz Center.
- Sept. 12, JH, lunchcolloquium 'Geometric Patterns in Islamic Art', Leiden, Faculty of Science, 150 participants.
- Sept. 21, JH, Special Lunchcolloquium, "Buchelius Lecture" Wiskundige schatten in de Universiteitsbibliotheek Utrecht [Mathematical Treasures in the University Library]; Utrecht, University Library, Department of Manuscripts and Early Printed Works.
- Oct. 5, JH, Workshop "The astrolabe", Museum Boerhaave, Leiden.
- Oct. 30, JH, colloquium "Mathematics in Eastern cultures," Kaleidoscoop van de Wiskunde, Utrecht.
- Nov. 3, SW, Polygons and Polynomials, and van Ceulen's amazing precision. 17th Novembertagung, on History and Philosophy of Mathematics, Science Studies Unit, University of Edinburgh, UK.
- Nov. 9, SW, workshop: "Mathematics of nautical maps", for prospective mathematics students [on Mercator's projection]
- Nov. 22, JH, Lunch colloquium: The Eastern roots of the quantitative natural sciences, Leiden (organized by student association "De Leidsche Fles")
- December 8, JH, HS: workshop "The Astrolabe: its working and its use mystical passages of Jalāl al-Dīn Rūmī," SUN (Studenten Unie Nederland), Hogeschool Holland, Diemen.

Media

- Radio: 747 am, 15 april, 20:00: Nederlandse Islamitische Omroep, 15 minute-interview with JH on medieval Islamic science.
- Radio: 747 am, 9 juni, 16:05: Nederlandse Moslim Omroep, Program: "Watnou?"; 15-minute interview with Jeanine Daems and Mark Roelands (students who participated in the seminar History of Mathematics in Iran and who went to Iran),
- Television: May 7, Al-Jazeera, film about Arabic manuscripts in the Library of the University of Leiden with explanations by Dr. Arnoud Vrolijk (Leiden) and JH. Title of the film: naf'is al-makḥūṭāt al-ʿarabiyya wa 'l-islāmiyya fī hūlandā [Precious Arabic and Islamic Manuscripts in Holland].

- Television: May 18: Iran, Isfahan, Channel 5, 20:45, broadcast of the lecture of JH at the closing session of the Isfahan Workshop on Mathematics and Art.
- May 23, 16:00: Iran, National Iranian TV, Khabar [=News] channel, also broadcast internationally by satellite: report on lecture on Sijzi by J.P. Hogendijk in Zahedan.
- May 23, 24, 25: Iran, Zahedan TV station (channel no. 7), interview with J.P. Hogendijk and report on the astrolabe workshop.
- article by Jasper Lukkezen, 'Wiskunde in Iran', *Eureka!* (informatica Natuurkunde Sterrenkunde Wiskunde, Universiteit Leiden) Jaargang 4, juli 2006, Nr. 14, pp. 8-10
- Full-page article 'Wilfred de Graaf verzorgt workshops in Iran', *De Bunschoter* nr. 079 (76e jaargang), vrijdag 21 juli 2006.
- September 2: NRC Handelsblad, full-page article by Dirk van Delft: "Een zevenhoek in Isfahan", Bijlage Wetenschap & Onderwijs, p. 49. [On the Lorentz Center Workshop 'Geometric Patterns in Islamic Art' (Sept. 11-15, Leiden) and cooperation projects of JH with Iran].
- September 21: Interview with JH, colleagues and students on the workshop *Geometric Patterns in Islamic Art*, Radio Program "Verkenningen", Radio 5 (747 AM), NMO, 22:00- ca. 22:30.
- (Reports in Iranian national and local newspapers are not mentioned here)
- Interview with Hüseyin Şen, entitled: "... Anders had ik pizza's moeten gaan rondbrengen", in U-blad, 9 november 2006, p. 24.

Visits from abroad

- Mr. Mohammad Bagheri (Encyclopaedia Islamica Foundation, Tehran) visited the Mathematics Department of the University of Utrecht from April 1 - 30. He is Lorenz fellow in the Netherlands Institute for Advanced Studies in the Social Sciences and Humanities (N.I.A.S, Wassenaar) from Sept. 1, 2006 - Jan. 31, 2007.
- Mr. Toke Knudsen (Brown University, Providence R.I., USA) visited the Mathematics Department of the University of Utrecht from May 1 - June 30.

Organisation of Conferences

- David Pingree Memorial Seminar, *Empires and Exact Sciences in Pre-modern Eurasia*. Organizers: KP, JH. Leiden, 29-30 May 2006, The seminar was sponsored by the Research School CNWS (School of Asian,

African and Amerindian Studies) and the International Institute of Asian Studies. Mrs. Isabelle Pingree and Mrs. Amanda Pingree were present at this Memorial Symposium.

Program:

- May 29, Morning Session, Chair: Teije de Jong.
 - * Charles Burnett (Warburg Institute, London), *Abu Ma'shar (AD 787–886): New approaches and new discoveries concerning the context and diffusion of astrology in Baghdad, Constantinople and the Latin West*
 - * Alexander Jones (University of Toronto, Canada), *Merely an aberrant development? How much did knowledge of Babylonian astronomy affect Greek astronomy?*
 - * David A. King (J.W. Goethe University, Frankfurt am Main), *The end of the Byzantine Empire and the first scientific instrument of the Renaissance: from Regiomontanus' acrostic to Piero della Francesca's enigmatic 'Flagellation of Christ'*
- May 29, Afternoon Session, Chair: JH
 - * Benno van Dalen (J.W. Goethe University, Frankfurt am Main), *Transmission of Islamic astronomical knowledge to Mongol China*
 - * S. R. Sarma (Aligarh Muslim University, Hyderabad, India), *Bilingual dictionaries and the dissemination of Islamic astronomy and astrology in India*
 - * Takanori Kusuba (University of Economics, Osaka, Japan), *Geometrical demonstrations in Sanskrit texts*
- May 29, Evening Session, Chair: KP,
Seminar/masterclass lecture: Christopher Minkowski, *The exact sciences in early modern India; can the history of science be comparative?*
- May 30, Morning Session, Chair: Arlo Griffiths.
 - * Antonio Panaino (University of Bologna, Italy), *Sasanian astronomy and astrology in the contributions of D. Pingree*
 - * Toke Knudsen (Brown University, Providence RI, USA), *Jñānarāja and the crystalline spheres*
 - * Joseph W. Dauben (City University of New York / Chinese Academy of Sciences), *Shu shu ji yi (Memoir on the Art of Numbers): on methods of writing very large numbers in ancient mathematics, with examples from Greece, India and China*
 - * Michio Yano (Kyoto Sangyo University, Japan), *The iconography of Buddhist astrology*
- May 30, Afternoon Session. Chair: JH.
Discussion for seminar participants about the legacy of David Pingree and the institutional future of the history of the pre-modern exact sciences.

- Interdisciplinary Workshop: Geometrical Patterns in Islamic Art. University of Leiden, Lorentz Center, September 11-15, 2006. Organizers: JH, Remke Kruk (Professor of Arabic, Leiden University), Mohammad Bagheri (Encyclopaedia Islamica Foundation, Tehran). Scientific Program:
 - September 11:
 - 10:00 Opening of the workshop by Mrs. Martje Kruk, manager of the Lorentz Center, and the organizers.
 - 10.30-11.15 Two workshops in parallel sessions. Workshop 1: Huseyin Sen and Wilfred de Graaf (Utrecht, NL), 'Escher and Islamic tilings'; Workshop 2: Mark Roelands, Daan van Well (Leiden, NL), Behrooz Zabihian (Tehran, Iran), 'Penrose-tilings'.
 - 11.30-12.15 The same two workshops in parallel sessions.
 - 14.15-15.15 Yvonne Dold-Samplonius, Silvia Harmsen (Heidelberg, Germany), 'Muqarnas, Cultural Heritage and Mathematical Challenge'
 - 15.30-16.30 Robert Hillenbrand (Edinburgh, UK), 'The role of geometry in Islamic art and architecture'. [Because of the late arrival of the speaker, Mr. Hillenbrand's lecture was postponed to the lunch break on Tuesday, and JH gave his lecture on 'A Persian mathematical manuscript, the Friday Mosque of Isfahan, and the conference poster', which had originally been planned for Friday Sept. 15.]
 - 16.30 Official opening of the exhibition on tilings by Mr. Ata Mesbah, Minister Counsellor of the Embassy of the I.R. Iran in the Netherlands. Brief introductions of the artists: Elviera Wersche (Nuenen, NL), Coskun Celik (Esch, NL), Behrooz Zabihian (Tehran, Iran), Farnoosh Mortazavi (Tehran, Iran), Nina Mortazavi (Tehran, Iran), Sogol Nayeri (Tehran, Iran).
 - September 12:
 - 09.15-10.00 Luit Mols (Den Haag, NL), 'Star Patterns on Mamluk metalwork found in Cairo: form and context'
 - 10.00-10.45 Eric Broug (Saltburn-by-the-Sea, UK), 'Geometrical design from the Late Mamluk Period in Cairo: Some Observations'
 - 11.15-12:00 Ali Rejali (Isfahan, Iran): 'The House of Mathematics in Isfahan, and its activities in history of mathematics and art'
 - 13.30-14.30 Robert Hillenbrand (see September 11).
 - 15.00-16.00 Frans Oort (Utrecht, NL), 'All Penrose tilings'
 - September 13:
 - 09.15-10.00 Carol Bier (Berkeley, USA): 'Geometry and Algorithms in Islamic Textiles and Carpets'
 - 10.00-10.45 Gillian Vogelsang-Eastwood (Leiden, NL), 'Geometric Cut and Design of Saudi Arabian dresses'

- 11.15-12.00 Arnoud Vrolijk (Leiden, NL): 'Geometric Patterns on Islamic Bookbindings'
- 14.00-14.45 Jeanine Daems (Leiden, NL) 'Group theory and Islamic tilings'
- 15.05-16.20 Mahmud Maheronnaqsh (Tehran): Workshop: 'Designing and execution of patterns in Persian tilings'
- September 14:
- 09.15-10.00 Ahmed Montazer (Isfahan, Iran), 'Geometrical Drawing of Shahgere (knot in knot)'
- 10:00-11:00 Jay Bonner (Santa Fe, NM, USA), Three Traditions of Self-Similarity in Fourteenth and Fifteenth Century Islamic Geometric Ornament
- 11.30-12.00 M. Akbar Zamani (Isfahan, Iran), 'Using mosaic Patterns in Mathematics Education'
- 14.30-15.15 J. Lennart Berggren (Burnaby, B.C., Canada), 'Artistic Problems in Islamic Geometry: Abu al-Wafa' al-Buzjani and his treatise on geometry for the artisan'
- 15.45-16.30 Lynn Bodner (West Long Branch, NJ, USA), 'Constructing Remarkable Pentagonal Star Polygon Designs'
- September 15:
- 09.30-10.30 Jay Bonner (Santa Fe, NM, USA), The Polygonal Technique: An exposition of the primary historic method of constructing Islamic Geometric Patterns
- 11.00-12.00 Aldine Aaten (Leiden, NL), Jasper Lukkezen (Leiden, NL), Jeanine Daems (Leiden, NL), workshop on non-periodic patterns with sevenfold and ninefold rotational symmetry.
- 14:30-15:00 Behnaz Hashemipour (Isfahan, Iran), 'Pentagons in the Islamic Art of Isfahan'
- 15:00-15:15 Video: Magic of Muqarnas. [by Yvonne Dold and Silvia Harmen]
- 15.30-16.30 Conclusion and discussion on the follow-up conference in Isfahan in August 2007.

Honours and Awards

JH was made Honorary Citizen of the Province of Sistan and Baluchistan (South-East Iran) by the governor of this Province, Dr. Habibollah Dahmardeh, in a ceremony in Kuhak near Zabol (Iran) on May 25.

Until August 31, JH was Adjunct Professor at the Department of Mathematical Sciences of King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia www.kfupm.edu.sa/math.

Courses

- JH: Seminar in the History of Mathematics in Iran, in Leiden, Spring 2006, for 7 mathematics students from Leiden and Utrecht universities. Jeanine Daems also participated in this seminar. Participants of the seminar prepared three workshops related to Islamic tilings, history of mathematics and modern mathematics, for a mixed audience of mathematics students and students of art. Try-outs of these workshops were held in the Netherlands several times. Participants were also able to take optional classes by JH on reading the Arabic alphabet and a few basics of Arabic and Persian language and Islamic culture. After the seminar was formally concluded on May 10, the participants visited Iran from May 14 - May 21 or May 14-May 28. The three workshops were performed in Iran, see the section on “Lectures”. They generated some attention of the media in the Netherlands and Iran. (see under “Media”). Two participants were trained to assist in astrolabe workshops in Iran.
- JH: Seminar in the History of Mathematics for 11 mathematics students from Utrecht and Leiden University. Topic of the seminar was the analysis of the chapters in Ludolph van Ceulen’s work *Vanden Circkel* dealing with equations of degree higher than 2 and the computation of sine tables. A digital edition of these chapters was prepared during the seminar, Van Ceulen’s computations were analyzed by modern methods, and his mathematical thought was compared with the work of relevant contemporaries (Adriaan van Roomen and François Viète). The results of this seminar will be posted on the website www.wiskonst.nl.
- Steven Wepster: Assistant to the History of Mathematics Seminar, Spring 2006, Utrecht.
- Jeanine Daems: Assistant to the History of Mathematics Seminar, Spring 2006, Leiden.

Courses: not history-related

- JH: Fall 2006: Wat is wiskunde (‘What is Mathematics’, introduction to mathematical argumentation for freshmen), 25 students.
- Steven Wepster:
- Jeanine Daems: Spring 2006: tutorial Algebra 1

Ph. D. theses:

Mr. Mohammad Bagheri submitted his Ph.D. thesis, entitled: *Books I and IV of Kūshyār ibn Labbān’s Jāmi’c Zij: An Arabic astronomical handbook by an eleventh-century Iranian scholar* on April 30. Promoters are Henk Bos and JH, The public defense has been tentatively scheduled on December 20, 2006 at 12:45, subject to the approval of the thesis by a committee of readers.

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

- M. Sc. Thesis: Leonard M. Hugenholtz, De vergelijking van Pell (at the Department of Mathematics in Leiden; supervisors: R. Tijdeman and J.P. Hogendijk). To be submitted in July 2006.
- “Kleine scriptie” (\approx Bachelor Thesis): Timo Koffeman, Van Radix quadrata ende cubica [on a Dutch arithmetical work by Van der Gucht (1567)]
- “Kleine scriptie” (\approx Bachelor Thesis): Berry van den Heuvel, “Sterrenkunde rond 1600 volgens Simon Stevin (1548-1620)” [on Simon Stevin’s introduction in solar theory in his Dutch work *Hemelloop* (1605-1608)].
- For lectures and presentations in Iran by the participants of the seminar “History of Mathematics in Iran”, see under lectures, between May 14 and May 28.
- Essays written by participants of the course “History of Mathematics”, Utrecht, Fall 2005 (turned in in early Spring 2006, all in Dutch):
 - Rutger de Looij, Bastian Michel: Over een merkwaardig diep doorzicht bewijs in Flos van Leonardo Pisano.
 - Herman Blok, Ruben van Diggelen: Descartes en het succesverhaal van een generatie Nederlandse wiskundigen.
 - Axel Hartog: De Turing Machine en het Gödel apparaat
 - Marco Hazenberg, Bertus Veurink: Oud-Egyptische wiskunde op de Moscow Papyrus.
 - Jildou Baarsma, Elke Balleman, Eric van Lit: Een introductie in Simon Stevin’s *Meetdaet*
 - Martin Boeckhoudt en Jan Beuving: Computers in Bewijzen: De rol van de computer in de oplossing van het vierkleurenprobleem.
 - Rouke Pouw, Roos Sorgdrager: Meerdimensionale meetkunde.
 - Wim Villerius: L.E.J. Brouwer, Leven en werk van een genie.
 - Emiel Penners, Tjarko de Vries: De ontwikkeling van de complexe getallen.
 - Ambi Oosterhout, Annelie Vink: Liu Hui en Cavalieri’s principe.
 - Niels Vermeer, Maarten Verdult, Marijke van Bommel: Fibonacci en de invloed van de Arabische wiskunde.
 - Anoukh van Giessen, Stephan de Jong, Lianda Leeggangers: Het ontstaan van de waarschijnlijkheidsrekening.
 - Hüseyin Şen: Al-Qānūn al-Mas^cūdī van Al-Bīrūnī.
 - Herman Blok, Roben van Diggelen: Descartes en zijn invloed op de Nederlandse wiskunde.

- Essays written by participants of the course "History of Mathematics", Leiden, Fall 2005 (turned in in early Spring 2006, all in Dutch):
 - Herman Houtgast: Arabische versies van de Stelling van Pythagoras.
 - Matthijs van Staalduine, Matthijs Pronk: Het brachistochrone probleem van Johann Bernoulli.
 - Paulien Out: Drie oplossingen van het Delische probleem
 - Daan van Well, Mark Roelands: Een educatieve reis van \mathbf{N} naar \mathbf{R} .
 - Maxim Hendriks: Solutie ende Werckinghe op twee geometrieche vraghen by Willem Goudaen inde jaren 1580 ende 83 binnen Haerlem aenden kerckdeure ghestelt, mitsgaders propositie van twee andere geometrische vraghen, tsamen door Ludolph van Colen. [the text will be made available on www.wiskonst.nl]
 - Jasper Lukkezen, Maurits Malkus: Crisis in de wiskunde: irrationale getallen.
 - Laetitia Diemer, Maxim Hendriks: Snijden in een driehoek: over een probleem uit Ludolph van Ceulen's *Arithmetische en Geometrische Fondamenten* [the text will be made available on www.wiskonst.nl].
 - Daan van Well, Mark Roelands: Een educatieve reis van \mathbf{N} naar \mathbf{R} .
- Essay written for the course *Kaleidoscoop 1* for first-year students (essay supervised by JH): Sietske Tacoma, Johan Konter, Ivo Pasmans, Jacob Akkerboom: Een moderne blik op Euler's somreeksen.

Ph.D. Thesis

Mohammad Bagheri, *Books I and IV of Kūshyār ibn Labbān's Jāmi' Zīj: An Arabic astronomical handbook by an eleventh-century Iranian scholar* Promoters: Henk J.M. Bos, Jan P. Hogendijk
 The public Defence was at Wednesday December 20, 2006, 12:45.