

Curriculum Vitae of  
**Benno van Dalen, Ph.D.**

*Address:*

Bavarian Academy of Sciences and Humanities  
Alfons-Goppel-Straße 11  
80539 München, Germany  
Tel. +49-89-23031 1234  
Email: [bvdalen@ptolemaeus.badw.de](mailto:bvdalen@ptolemaeus.badw.de)

**WORK EXPERIENCE (on contract basis)**

(period, employer, function and station, tasks)

- 05/13– **Bavarian Academy of Sciences and Humanities, Munich**  
Research leader in the project “Ptolemaeus Arabus et Latinus”
- 01/08–09/10 **Ludwig Maximilians University, Munich**  
Researcher at the Chair for History of Science. Project “The transfer of knowledge between Orient and Occident” of the programme *LMUexcellent*.
- 01/06–12/07 **German Research Foundation (DFG)**  
Researcher at the Institute for History of Science, Goethe University Frankfurt.  
Project for writing a book on Islamic astronomical sources extant in Chinese.
- 01/00–09/05 **German Research Foundation (DFG)**  
Researcher at the Institute for History of Science, Goethe University Frankfurt.  
Project for the compilation of a new survey of Islamic astronomical tables.
- 12/89–06/93 **Netherlands Organisation for Scientific Research (NWO)**  
“Scientific assistant” at the Mathematical Institute, University of Utrecht.  
Doctoral research, teacher of exercises for mathematics majors and minors.
- 12/87–01/89 **University of Utrecht**  
“Scientific assistant” at the Mathematical Institute.  
Doctoral research, teacher of exercises for mathematics majors and minors.
- 09/85–11/87 **University of Utrecht**  
“Student assistant” at the Mathematical Institute (part-time).  
Assistant teacher of exercises for mathematics majors, freshman level.

**POST-DOCTORAL SCHOLARSHIPS**

(period, foundation, station, brief description of project)

- 9/98–12/99 **Dibner Institute (MIT), Cambridge MA**  
Research on the exchange of scientific knowledge between Islam and China.
- 4/98–8/98 **Institute for the History of Arabic-Islamic Science, Frankfurt (Germany)**  
Research on Islamic mathematical geography.

- 9/97–2/98     **Alexander von Humboldt Foundation (Germany)**  
 Institute for History of Science, Frankfurt am Main (Germany).  
 Development of a database of astronomical parameters from Islamic sources.
- 9/95–8/97     **Japan Society for the Promotion of Science (JSPS)**  
 International Institute for Linguistic Sciences, Kyoto Sangyo University.  
 Research on Islamic astronomical tables extant in Chinese translation.
- 1/94–6/95     **Alexander von Humboldt Foundation (Germany)**  
 Institute for History of Science, Frankfurt am Main (Germany).  
 Research project on two important early Islamic astronomical handbooks.
- 2/89–11/89   **Netherlands Organisation for Scientific Research (NWO)**  
 Institute for History of Science, Frankfurt am Main (Germany).  
 Investigation of various historical aspects of my doctoral dissertation.

## EDUCATION

(degree, date, institution, title of thesis, subjects)

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|-------|---|---|
| Ph.D. | September 1993<br>Dissertation:                           | <b>Mathematical Institute, University of Utrecht</b><br>“Ancient and Mediaeval Astronomical Tables:<br>mathematical structure and parameter values”   |
| M.Sc. | November 1987<br>Master’s thesis:<br><br>Major:<br>Minor: | <b>Mathematical Institute, University of Utrecht</b><br>“Mathematical Analysis of Medieval<br>Islamic Astronomical Tables” (in Dutch)<br>mathematics, concentration statistics / history of mathematics<br>computer science, especially theoretical informatics |
| B.S.  | May 1983<br>Major:<br>Minor:                              | <b>Mathematical Institute, University of Utrecht (cum laude)</b><br>mathematics<br>computer science   |

## NOMINATIONS

- Goethe University, Frankfurt am Main: Shortlist nomination (2nd place) for the Associate Professorship (W2) for the history of pre-modern science in the cluster of excellency “Normative Orders” (2008).

## **FURTHER RELEVANT EXPERIENCE**

- Editor (2007–2009) of *Historia Mathematica*, *International Journal of History of Mathematics*, published by Elsevier Science. *Historia Mathematica* is a publication of the International Commission on the History of Mathematics of the Division of History of Science and Technology of the International Union of History and Philosophy of Science.
- Managing Editor (2004–2006) of *Historia Mathematica*.
- Elected member (2001–2009) of the Governing Council of the *Commission on History of Science & Technology in Islamic Societies* (<http://islamsci.org/>) of the Division of History of Science and Technology of the International Union of History and Philosophy of Science.
- Consultant (2005–) of the ISMI (*International Scientific Manuscripts Initiative*) project of McGill University (Montreal) and the Max Planck Institute for History of Science (Berlin).
- Corresponding member of the *Académie Internationale des Histories des Sciences*.
- Invited sectional talk in the section “History of Mathematics” at the International Congress of Mathematicians, Hyderabad, India, 19–27 August, 2010.

## **Organization of international conferences**

- *Certainty, Doubt, Error: The production of knowledge and its impediments in the practice of pre- and early modern science*, Frankfurt, November 17 and 18, 2001 (with Dr. Sonja Brentjes and Dr. François Charette; 16 invited speakers, 100 participants in total).
- *Symposium Aspects of Early Astronomy and Mathematics: Ancient Egypt, Ancient Greece, Islamic Middle Ages*, Frankfurt, July 7, 2006 (with Dr. Petra Schmidl; 5 invited speakers, 25 participants in total).
- *Symposium India and Islam. Episodes from the History of Pre-Modern Astronomy*, Frankfurt, July 16, 2007 (with Dr. Petra Schmidl; 5 invited speakers, 20 participants in total).
- *Between Orient and Occident: Transformation of Knowledge*, Munich, November 6 and 7, 2009 (20 invited speakers and chairs, 60 participants in total).

## **Membership of professional organizations**

- Commission for the History of Ancient and Mediaeval Astronomy (CHAMA);
- Commission on History of Science & Technology in Islamic Societies (HOSTIS);
- International Society for the History of East Asian Science, Technology and Medicine (ISHEASTM);
- previously: British Society for the History of Mathematics (BSHM);
- previously: Canadian Society for the History and Philosophy of Mathematics (CSHPM).

## PUBLICATIONS

by Benno van Dalen

### *Books*

1. *Ancient and Mediaeval Astronomical Tables: mathematical structure and parameter values* (doctoral dissertation), Utrecht University 1993.
2. *From China to Paris: 2000 Years Transmission of Mathematical Ideas* (editor, with Yvonne Dold-Samplonius, Joseph W. Dauben and Menso Folkerts), Stuttgart (Steiner) 2002.
3. *Certainty, Doubt, Error: Aspects of the Practice of Pre- and Early Modern Science in Honour of David A. King* (editor, with Sonja Brentjes and François Charette), special issue of *Early Science and Medicine* 7-3 (2002).
4. *Between Orient and Occident: Transformation of Knowledge* (editor, with Charles Burnett), special issue of *Annals of Science* 68-4 (2011).
5. *Islamic Astronomical Tables. Mathematical Analysis and Historical Investigation*, Farnham UK (Ashgate/Variorum), 2014. ISBN 978-1-4724-2238-5. See [this link](#) on the Ashgate website.

### *Articles*

1. A Statistical Method for Recovering Unknown Parameters from Medieval Astronomical Tables, *Centaurus* 32 (1989), pp. 85–145.
2. A Table for the True Solar Longitude in the Jāmi‘ Zīj, in: *Ad Radices. Festband zum fünfzigjährigen Bestehen des Instituts für Geschichte der Naturwissenschaften der Johann Wolfgang Goethe-Universität Frankfurt am Main* (ed. Anton von Gotstedter), Stuttgart (Franz Steiner) 1994, pp. 171–190.
3. On Ptolemy’s Table for the Equation of Time, *Centaurus* 37 (1994), pp. 97–153.
4. Statistics and Medieval Astronomical Tables, in: *Images of SMC Research 1996*, Amsterdam (SMC) 1996, pp. 167–178.
5. al-Khwārizmī’s Astronomical Tables Revisited: Analysis of the Equation of Time, in: *From Baghdad to Barcelona. Studies on the Islamic Exact Sciences in Honour of Prof. Juan Vernet* (eds. Josep Casulleras and Julio Samsó), Barcelona (Instituto “Millás Vallicrosa”) 1996, vol. 1, pp. 195–252.
6. Article “Shams (the Sun) 2. In astronomy”, in *The Encyclopaedia of Islam, new edition*, vol. 9 (1997), pp. 291–294.
7. The Chinese-Uighur Calendar in Tūsī’s Zīj-i Īlkhānī, with E. S. Kennedy and Mustafa K. Saiyid, *Zeitschrift für Geschichte der Arabisch-Islamischen Wissenschaften* 11 (1997), pp. 111–152.
8. Islamic Astronomy in China during the Yuan and Ming Dynasties (translation from the Japanese and partial revision of a chapter from the book *Chūgoku no tenmonrekihō* by Kiyosi Yabuuti), *Historia Scientiarum* 7 (1997), pp. 11–43.
9. Islamic Astronomy in China: Two New Sources for the *Huihui li* (Islamic Calendar) (with Michio Yano), in *Highlights of Astronomy*, vol. 11B (ed. J. Andersen), Dordrecht (Reidel) 1998, pp. 697–700.
10. Tables of Planetary Latitude in the ‘Huihui li’ — Part II, in *Current Perspectives in the History of Science in East Asia* (eds. Yung Sik Kim & Francesca Bray), Seoul (National University Press) 1999, pp. 315–329.
11. Article “Ta’rīkh 2. Era chronology in astronomical handbooks” in: *The Encyclopaedia of Islam, new edition*, vol. 10 (2000), pp. 264–271.
12. Origin of the Mean Motion Tables of Jai Singh, *Indian Journal of History of Science* 35-1 (2000), pp. 41–66.
13. A Non-Ptolemaic Islamic Star Table in Chinese, in *Sic itur ad astra. Studien zur Geschichte der Mathematik und Naturwissenschaften. Festschrift für den Arabisten Paul Kunitzsch zum 70. Geburtstag* (eds. Menso Folkerts and Richard P. Lorch), Wiesbaden (Harrassowitz) 2000, pp. 147–176.
14. Islamic and Chinese Astronomy under the Mongols: a Little-Known Case of Transmission, in *From China to Paris: 2000 Years Transmission of Mathematical Ideas* (eds. Y. Dold-Samplonius et al.), Stuttgart (Steiner) 2002, pp. 327–356.

15. Islamic Astronomical Tables in China. The Sources for the Huihui li, in *History of Oriental Astronomy. Proceedings of the Joint Discussion-17 at the 23rd General Assembly of the International Astronomical Union, organised by the Commission 41 (History of Astronomy). Held in Kyoto, August 25–26, 1997* (ed. S.M.R. Ansari, editor), Dordrecht (Kluwer) 2002, pp. 19–31.
16. The *Zīj-i Nāširī* by Maḥmūd ibn `Umar. The Earliest Indian-Islamic Astronomical Handbook with Tables and its Relation to the ‘*Alā’ī Zīj*, in *Studies in the History of the Exact Sciences in Honour of David Pingree* (eds. Charles Burnett *et al.*), Leiden (Brill) 2004, pp. 825–862.
17. The Activities of Iranian Astronomers in Mongol China, in *Sciences, Techniques et Instruments dans le monde Iranien (Xe–XIXe siècle). Actes du colloque tenu à l’Université de Téhéran (7–9 juin 1998)* (eds. N. Pourjavady & Živa Vesel), Tehran (Presses Universitaires d’Iran / Institut Français de Recherche en Iran) 2004, pp. 17–28.
18. A Second Manuscript of the *Mumtaḥan Zīj*, *Suhayl* 4 (2004), pp. 9–44.
19. Articles “al-Battānī”, “Ulugh Beg”, “al-Wābkanwī”, “Yaḥyā ibn Abī Maṣṣūr”, and “Zhamaluding”, for the *Biographical Encyclopedia of Astronomers* (eds. Thomas A. Hockey, Jamil F. Ragep, *et al.*), Berlin (Springer), 2007.
20. An Index of Authors to *A Survey of the Scientific Manuscripts in the Egyptian National Library* (with David A. King), *Suhayl* 7 (2007), pp. 9–46.
21. Re-Editing the Tables in the *Sābi’ Zīj* by al-Battānī (ca. AD 900) (with Fritz S. Pedersen), in *Mathematics Celestial and Terrestrial. Festschrift für Menso Folkerts zum 65. Geburtstag* (eds. Joseph W. Dauben, Stefan Kirschner, Paul Kunitzsch, Andreas Kühne and Richard P. Lorch), Halle a/d Saale (Deutsche Akademie der Naturforscher Leopoldina) 2008, pp. 405–428.
22. „In Memoriam. E.S. Kennedy (1912–2009)“, *Historia Mathematica* 37 (2010), pp. 159–163.
23. Al-Battānī’s Astrological History of the Prophet and the Early Caliphate (with E.S. Kennedy, G. Saliba and J. Samsó), *Suhayl* 9 (2009–2010), pp. 13–148.

#### Reviews

1. Michio Yano, *Kūshyār ibn Labbān’s “Introduction to Astrology”*, Tokyo 1997. In: *Isis* 90 (1999), pp. 591–592.
2. Christopher Cullen, *Astronomy and Mathematics in Ancient China: the “Zhou bi suan jing”*, Cambridge 1996. In: *Journal of the Royal Asiatic Society* 9 (1999), pp. 343–345.
3. James Evans, *The History and Practice of Ancient Astronomy*, Oxford 1998. In: *Isis* 91 (2000) 580–581.
4. David A. King, *World-Maps for Finding the Direction and Distance to Mecca*, Leiden (Brill) 1999. In: *Journal of the Royal Asiatic Society* 12 (2002), pp. 371–373.
5. Alexander Jones, *Astronomical Papyri from Oxyrhynchus (P. Oxy. 4133-4300a)*, 2 vols., Philadelphia (American Philosophical Society) 1999. *Journal of the Royal Asiatic Society* 14 (2004), pp. 127–129.
6. Carlos Dorce, *El Tāy al-Azyāy de Muḥyī al-Dīn al-Magribī*, Barcelona (Instituto “Millás Vallicrosa” de Historia de la Ciencia Árabe) 2002–2003. In: *Zeitschrift für Geschichte der Arabisch-Islamischen Wissenschaften* 17 (2006/07), pp. 390–396.
7. Petra G. Schmidl, *Volkstümliche Astronomie im islamischen Mittelalter. Zur Bestimmung der Gebetszeiten und der Qibla bei al-Aṣḥabī, Ibn Raḥīq und al-Fārisī* (2 vols.), Leiden (Brill) 2007. In: *Journal of the American Oriental Society* 130 (2010), pp. 121–124.
8. Jean-Claude Martzloff, *Le calendrier chinois: Structure et calculs (104 av. J.-C.-1644)*. Paris (Honoré Champion) 2009. In: *Isis* 102 (2011), pp. 544–545.
9. Robert H. Gassmann, *Antikchinesisches Kalenderwesen. Die Rekonstruktion der chunqiuzeitlichen Kalender des Fürstentums Lu und der Zhou-Könige*. Bern (Peter Lang) 2002. In: *East Asian Science and Medicine* 35 (2012), pp. 151–153.
10. Nathan Sivin, *Granting the Seasons: The Chinese Astronomical Reform of 1280, With a Study of its Many Dimensions and an Annotated Translation of Its Records*, New York (Springer) 2009. In: *East Asian Science and Medicine* 36 (2013), pp. 205–211.
11. 18 abstracts in *Mathematical Reviews* and 42 abstracts in *Zentralblatt für Mathematik*.

### *Selected invited lectures*

1. *Recovering Unknown Parameters in Islamic Astronomical Tables*, XVIIIth International Congress of History of Science, Hamburg and Munich (Germany), 1–9 August 1989.
2. *Transmission of Astronomical Parameter Values from East to West*, XIXth International Congress of History of Science, Zaragoza (Spain), 22–29 August 1993.
3. *Tables of Planetary Latitude in the “Huihui li” — Analysis*, Eighth International Conference on the History of Science in East Asia, Seoul (Korea), 26–31 August 1996.
4. *Islamic Astronomy in China: Two New Sources for the Huihui-li* (with Michio Yano), XXIIIrd General Assembly of the International Astronomical Union, Kyoto (Japan), 18–30 August 1997.
5. *Islamic Astronomical Tables and Their Transmission to Europe and China*, Conference “Harmony of the Heavens”, London (United Kingdom), 13–14 March 1998.
6. *The Activities of Iranian Astronomers in China in the 13th Century*, Conference “La science dans le monde iranien”, Tehran (Iran), 7–9 June 1998.
7. *Islamic Astronomical Tables: What we can learn from them and how they were transmitted to other cultures*, in the colloquium of the Dibner Institute, Cambridge MA (USA), 6 October 1998.
8. *An Example of Applied Mathematics in Islamic Astronomy: the Calculation of the Vernal Equinox by al-Kashi*, Second Joint Meeting: Canadian Society for the History and Philosophy of Mathematics / British Society for the History of Mathematics, Toronto (Canada), 15–17 July 1999.
9. *The Transmission of Mathematical Knowledge between Iran and China in the Mongol Period: a Little Known Route*, Conference “2000 Years Transmission of Mathematical Ideas”, Bellagio (Italy), 8–12 May 2000.
10. *Transmission of Astronomical Knowledge within the Islamic World*, XXIth International Congress of History of Science, Mexico City (Mexico), 8–14 July 2001.
11. *Tables for Calculating Planetary Longitudes in Islamic Astronomical Handbooks*, Third Joint Conference of the British Society for the History of Mathematics and the Canadian Society for the History and Philosophy of Mathematics, Clare College, Cambridge (England), 9–11 July 2004.
12. *Islamic Astronomy in China: State of the Art of Research on the Huihuiifa*, Eleventh International Conference on the History of Science in East Asia, Deutsches Museum, Munich (Germany), 15–20 August 2005.
13. *Transmission of Islamic Astronomy to China*, David Pingree Memorial Seminar “Empires and Exact Sciences in Pre-modern Eurasia”, Leiden (Netherlands), 29–30 May 2006.
14. *Islamic Astronomy in Northeastern Tibet (14th c.)*, International Conference “Islam & Tibet: Cultural Interactions”, The Warburg Institute, London, 16–18 November 2006.
15. *Islamic Astronomy in China: Latest Developments*, International Conference “A Shared Legacy. Islamic Astronomy East and West”, Barcelona (Spain), 11–14 April 2007.
16. *Mixing Islamic and Chinese Astronomy in the Huihuiifa*, Twelfth International Conference on the History of Science in East Asia, Baltimore, 14–18 Juli 2008.
17. *Mathematical Astrology in Islamic Astronomical Handbooks*, Conference „From Masha'allah to Kepler: The Theory and Practice of Astrology in the Middle Ages and the Renaissance“, Warburg Institute, London, 13–15 November 2008.
18. *Methods for Correcting the Ascendant in Islamic zijes. In Memoriam: Edward S. Kennedy (1912–2009)*, XXIIIrd International Congress of History of Science and Technology, Budapest, 28 Juli–2 August 2009.
19. *Islamic Astronomical Handbooks and their Transmission to India and China*, invited sectional lecture, International Congress of Mathematicians, Hyderabad (India), 19–27 August 2010.
20. *Islamic and Chinese Astronomy under the Mongols*, Workshop “Transliteration and Transfiguration of Cultural Traditions: Archaeology, Medical Knowledge, Art and Science”. Max Planck Institute for the History of Science, Berlin, 18–19 March 2011.
21. ‘Umar al-Khayyām in the *Dustūr al-munajjimīn?*, Workshop “Science in Context: The *Dustūr al-munajjimīn* and its world”, Bonn, 22–23 July 2011.
22. *Editing mathematical astronomical tables: From Nallino to the personal computer*, Research symposium “Editing Historical Mathematics: techniques and traditions since 1900”, All Souls College, Oxford, 15–16 December 2011.
23. *al-Kashi’s Khaqani Zij: Ingenuity in Modeling and Computation*, International conference “The Scientific Heritage of Ghiyath al-Din Jamshid al-Kashi”, University of Kashan, Iran, 22-23 February 2012.
24. *Ptolemy’s Astronomical Heritage in the Middle Ages*, “24<sup>th</sup> International Congress of History of Science”, Manchester, 21-28 July, 2013.
25. *Islamic Astronomical Tables in China and their Role in Astrological Predictions*, symposium “The Impact of Arabic Sources on Divination and the Practical Sciences in Europe and Asia”, Erlangen, 21-23 January 2014.