

EDUCATION

- 12/2011 **Ph.D. degree** in Mathematics, School of Mathematics and Systems Science, Beihang University, Beijing, China
Topics: Mathematical knowledge management, automated geometric reasoning, geometric knowledge formalization and visualization
Thesis: On the Design and Implementation of an Electronic Geometry Textbook System
Supervisor: **Prof. Dongming Wang** (Member of Academia Europaea)
- 07/2004 **B.S. degree** in Information and Computing Sciences, School of Science, Beihang University, Beijing, China
Topics: Pattern recognition, support vector machine

WORK EXPERIENCES

- 03/2015 – **Assistant Professor** at School of Mathematics and Systems Science, Beihang University, China
- 01/2012 – 02/2015 **Postdoc** at the State Key Laboratory of Software Development and Environment, Beihang University, China
Topics: Knowledge representation and management, automated reasoning and knowledge discovery
Mentor: **Prof. Wei Li** (Member of Chinese Academy of Sciences)
- 09/2008 – 09/2009 **Guest Researcher**, Discrete Algebra and Geometry (DAM) group, TU/e, the Netherlands, hosted by **Prof. Arjeh M. Cohen** and **Prof. Hans Cuypers**

SELECTED PUBLICATIONS

■ Journal Papers

1. D. Song, D. Wang, and **X. Chen**: Retrieving geometric information from images: the case of hand-drawn diagrams. **Data Mining and Knowledge Discovery** 31(4):934–971, 2017.
2. **X. Chen**, D. Song, and D. Wang: Automated generation of geometric theorems from images of diagrams. Geometric Reasoning — Special issue of **Annals of Mathematics and Artificial Intelligence** 74(3-4):333–358, 2015.
3. **X. Chen**: Representation and automated transformation of geometric statements. **Journal of Systems Science & Complexity** 27(2):382–412, 2014.
4. **X. Chen**, X. Zhang, and D. Wang: Foreword to the special focus on mathematics, data and knowledge. **Mathematics in Computer Science** 7(4):379–386, 2013.
5. **X. Chen** and D. Wang: Formalization and specification of geometric knowledge objects. **Mathematics in Computer Science** 7(4):439–454, 2013.
6. **X. Chen** and D. Wang: Management of geometric knowledge in textbooks. **Data & Knowledge Engineering** 73:43–57, 2012.

■ Papers in Proceedings

1. X. Chen, H. Shuai, D. Wang, and J. Yang: LaTeX: a linear algebra textbook system. In: Artificial Intelligence and Symbolic Computation (J. Fleuriot, D. Wang, and J. Calmet, eds.), **Lecture Notes in Artificial Intelligence 11110**, pp. 209 – 214. Springer, Berlin Heidelberg, 2018.
2. D. Jiang, X. Chen, X. Yang: A Chinese new word detection approach based on independence testing. In: Artificial Intelligence and Symbolic Computation (J. Fleuriot, D. Wang, and J. Calmet, eds.), **Lecture Notes in Artificial Intelligence 11110**, pp. 227 – 236. Springer, Berlin Heidelberg, 2018.
3. W. An, X. Chen, and D. Wang: Searching for geometric theorems using features retrieved from diagrams. In: Mathematical Aspects of Computer and Information Sciences (I.S. Kotsireas et al., eds.), **Lecture Notes in Computer Science 9582**, pp. 383–397. Springer, Berlin Heidelberg, 2016.
4. D. Song, D. Wang, and X. Chen: Discovering geometric theorems from scanned and photographed images of diagrams. In: Automated Deduction in Geometry (F. Botana and P. Quaresma, eds.), **Lecture Notes in Computer Science 9201**, pp. 149–165. Springer, Berlin Heidelberg, 2015.
5. D. Wang, X. Chen, W. An, L. Jiang, and D. Song: OpenGeo: an open geometric knowledge base. In: ICMS 2014 (H. Hong and C. Yap, eds.), **Lecture Notes in Computer Science 8592**, pp. 240–245. Springer, Berlin Heidelberg, 2014.
6. X. Chen and J. Luo: RCK: a software toolkit for R-calculus (Extended abstract). In: Proceedings of the 3rd International Seminar on Program Verification, Automated Debugging and Symbolic Computation (July 17–18, 2014, Vienna, Austria). Vienna University of Technology, 2014.
7. X. Chen, T. Zhao, and D. Wang: GeoText: an intelligent dynamic geometry textbook. **ACM Communications in Computer Algebra 46(4)**:171–175, 2012.
8. X. Chen: Interfacing Euclidean geometry discourse with diverse geometry software (Extended abstract). In: Proceedings of the 9th International Workshop on Automated Deduction in Geometry (September 17–19, 2012, Edinburgh, UK) (T. Ida and J. Fleuriot, eds.), pp. 99–105. **Informatics Research Report**, University of Edinburgh, 2012.
9. X. Chen, W. Li, J. Luo, and D. Wang: Open geometry textbook: a case study of knowledge acquisition via collective intelligence. In: Intelligent Computer Mathematics (J. Jeuring, J. A. Campbell, J. Carette, G. Dos Reis, P. Sojka, M. Wenzel, and V. Sorge, eds.), **Lecture Notes in Artificial Intelligence 7362**, pp. 432–437. Springer, Berlin Heidelberg, 2012.
10. X. Chen, Y. Huang, and D. Wang: On the design and implementation of a geometric knowledge base. In: Automated Deduction in Geometry (T. Sturm and C. Zengler, eds.), **Lecture Notes in Artificial Intelligence 6301**, pp. 22–41. Springer, Berlin Heidelberg, 2011.
11. X. Chen: Formal representation and automated transformation of geometric statements. In: Proceedings of the 8th International Workshop on Automated Deduction in Geometry (July 22–24, 2010, Munich, Germany) (J. Richter-Gebert and P. Schreck, eds.), pp. 1–19. Technical University of Munich, 2010.
12. X. Chen: Electronic geometry textbook: a geometric textbook knowledge management system. In: Intelligent Computer Mathematics (S. Autexier, J. Calmet, D. Delahaye, P. Ion, L. Rideau, R. Rioboo, and A. Sexton, eds.), **Lecture Notes in Artificial Intelligence 6167**, pp. 278–292. Springer, Berlin Heidelberg, 2010.
13. X. Chen and D. Wang: Towards an electronic geometry textbook. In: Automated Deduction in Geometry (F. Botana and T. Recio, eds.), **Lecture Notes in Artificial Intelligence 4869**, pp. 1–23. Springer, Berlin Heidelberg, 2007.
14. X. Chen, T. Liang, D. Wang, and T. Zhao: Towards a dynamic environment for geometry research & education (Extended abstract). In: Proceedings of the 5th Asian Workshop on Foundations of Software (June 1–3, 2007, Xiamen, China) (T. Ida, Q. Jiang, and D. Wang, eds.), pp. 153–156. Xiamen University, 2007.

■ Preprint

1. X. Chen and D. Wang: The spaces of data, information, and knowledge. arXiv:1411.1497, pp. 1–14, 2014.

FUNDED PROJECTS

1. Semantic Representation and Intelligent Management of Geometric Knowledge, PI, NSFC, 2018–2020.
2. Knowledge Management based on Tetrahedron Model, PI, SKLSDE, 2016–2017.

TALKS

1. **Invited Track Speaker.** The 13th International Conference on Artificial Intelligence and Symbolic Computation (**AISC 2018**), Suzhou, China
Title: **Towards Intelligent Mathematical Documents**
2. The 4th International Congress on Mathematical Software (**ICMS 2014**), Seoul, Korea
Title: **OpenGeo: An Open Geometric Knowledge Base**
3. The 3rd International Seminar on Program Verification, Automated Debugging and Symbolic Computation (**PAS 2014**), Vienna, Austria
Title: **RCK: A Software Toolkit for R-calculus**
4. The 5th Chinese Conference on Computer Mathematics (**CM 2013**), Changchun, China
Title: **An Open Platform for Sharing Mathematical Knowledge Resources**
5. The 9th International Workshop on Automated Deduction in Geometry (**ADG 2012**), Edinburgh, UK
Title: **Interfacing Euclidean Geometry Discourse with Diverse Geometry Software**
6. The 37th International Symposium on Symbolic and Algebraic Computation (**ISSAC 2012**), Software Presentation Track, Grenoble, France
Title: **GeoText: An Intelligent Dynamic Geometry Textbook**
7. Conferences on Intelligent Computer Mathematics (**CICM 2012**), System & Project Track, Bremen, Germany
Title: **Open Geometry Textbook: A Case Study of Knowledge Acquisition via Collective Intelligence**
8. The 8th International Workshop on Automated Deduction in Geometry (**ADG 2010**), Munich, Germany
Title: **Formal Representation and Automated Transformation of Geometric Statements**
9. The 9th International Conference on Mathematical Knowledge Management (**MKM 2010**), Paris, France
Title: **Electronic Geometry Textbook: A Geometric Textbook Knowledge Management System**
10. **RISC Colloquium 2010**, Linz, Austria
Title: **Formalization and Management of Geometric Knowledge** (with Dongming Wang)
11. The 5th Asian Workshop on Foundations of Software (**AWFS 2007**), Xiamen, China
Title: **Towards a Dynamic Environment for Geometry Research & Education**
12. The 6th International Workshop on Automated Deduction in Geometry (**ADG 2006**), Vigo, Spain
Title: **Towards an Electronic Geometry Textbook**
13. International Seminar on Symbolic Computation in Education 2006 (**SCE 2006**), Beijing, China
Title: **The Electronic Geometry Textbook Project**

ACADEMIC SERVICES

Session Co-chair	<ul style="list-style-type: none">• MACIS 2017 Track: Data Modeling and Analysis• MACIS 2015 Session: Data and Knowledge Exploration• ICMS 2014 Session: Software for Geometry
Guest Co-editor	Mathematics, Data and Knowledge — Special focus of Mathematics in Computer Science. Birkhäuser/Springer, Basel, 2013
PC Member	KMIS 2011–2015, ADG 2012–2018, CM 2018

VISITS

<i>08/2018</i>	University of Edinburgh, UK, hosted by Dr. Jacques Fleuriot University of Bath, UK, hosted by Prof. James H. Davenport
<i>07/2014</i>	Hasso Plattner Institute, Potsdam, Germany, hosted by Prof. Christoph Meinel Saarland University, Saarbrücken, Germany, hosted by Prof. Reinhard Wilhelm
<i>07/2012</i>	Computer Graphics and Geometry (IGG) group, University of Strasbourg, France, hosted by Prof. Pascal Schreck and Dr. Julien Narboux
<i>07/2012</i>	Knowledge Adaptation and Reasoning for Content (KWARC) group, Jacobs University, Bremen, Germany, hosted by Prof. Michael Kohlhase
<i>07/2010</i>	Research Institute for Symbolic Computation (RISC), Linz, Austria, hosted by Prof. Franz Winkler
<i>06/2007</i>	Discrete Algebra and Geometry (DAM) group, Eindhoven University of Technology, the Netherlands, hosted by Prof. Arjeh M. Cohen
<i>02/2006 – 04/2006</i>	Special Semester on Gröbner Bases and Related Methods, Research Institute for Symbolic Computation (RISC), Linz, Austria, hosted by Prof. Bruno Buchberger

ACTIVITIES

Local Co-organizer	PAS 2012 2013 2015, MACIS 2011, AISC 2006
Participation	SSSC 2006, MACIS 2006, SCC 2008, RCA 2009, ADG 2014, GC 2015, ADG 2016 the 2nd Asian-Pacific Coq Summer School
