

# Curriculum Vitae

(28 Jan, 2022)

## PERSONAL DATA

**Name:** Xuemin Lin (PhD, Member of Academia Europaea, Fellow of IEEE)

**Sex:** Male

**Nationality:** Australian

**Current position:** Chair Professor, Head of Department of Data and Business Intelligence, Antai College of Economics & Management, Shanghai Jiaotong University

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## EMPLOYMENT

- Chair Professor: May 2022- now, the Antai Management School at Shanghai Jiaotong University.
- UNSW Sciential Professor: Jan 2015 – May 2022 (a.k.a University Distinguished Chair Professor, total no more than 50 at any time),
- Professor: 2007 - 2014 (Continuing appointment, holding E4 (Top Step) since 2011) at the School of Computer Science and Engineering, The University of New South Wales,
- Associate Professor: 2003 - 2007 (Continuing appointment) at the School of Computer Science and Engineering, The University of New South Wales,
- Senior Lecturer: 1998 - 2003 (Continuing appointment) at School of Computer Science and Engineering, The University of New South Wales,
- Lecturer: November 1994 - November 1997 at the Department of Computer Science, The University of Western Australia,
- Research Fellow: June 1992 - November 1994 at the Department of Computer Science, The University of Queensland.

## AWARDS

- Foreign Member of Academia Europaea

- CCF Second Price of Nature Science (sencod Name) in 2022
- Fellow of AAIA
- Research Highlight Award SIGMOD 2021
- One of the best paper award in SIGMOD2020
- Runner-Up of VLDB2020 best paper award
- Alibaba Innovative Research Award, 2019
- The best paper award of ICDE 2016
- Elevated to Fellow of IEEE in Nov, 2015,
- Award of outstanding reviewer in SIGKDD2012,
- Many distinctions and special awards for outstanding publications are listed in section Publications (and distinctions) below.

### **ACADEMIC RECORD AND QUALIFICATIONS**

- PhD degree (1992) in Computer Science, University of Queensland, Australia.
- PhD Student (July 1989 - August 1992) at the Department of Computer Science, The University of Queensland, Australia,
- PhD Student (September 1984 - November 1988) at Mathematical Institute, Fudan University, P.R. China,
- BSc (1984) in Applied Mathematics, Fudan University, China
- Undergraduate study (September 1980 - July 1984) at the Department of Mathematics, Fudan University, P.R. China

### **TEACHING AND MENTORING**

- Co-proposed a new teaching stream; Data science, for the master degree at the School of Computer Science at the University of New South Wales,
- 39 students have obtained PhD under Professor Lin's supervision,
- My PhD student, Ying Zhang, obtained ARC Australian Postdoctoral Fellowship for 2011-2013,
- The following young researchers under my supervision/mentoring awarded ARC Discovery Early Career Researcher Awards. They are: Wenjie Zhang (my PhD student) in 2012, Muhammad Aamir Cheema (my PhD student) in 2013, Ying Zhang (my PhD student) in 2014, and Lijun Chang (my Postdoctoral researcher) in 2015,
- The following researchers: Ying Zhang (my PhD student and Postdoctoral researcher), Muhammad Aamir Cheema (my PhD student and Postdoctoral researcher), and Lijun Chang (my Postdoctoral researcher), Wenjie Zhang (my PhD student and Postdoctoral researcher) were awarded future follows, in 2017, 2018, and 2021 respectively,
- Dr Wenjie Zhang (my PhD student and postdoctoral researcher) won the Australia Chris Wallace award in 2018.
- Dr Zenfeng Huang (my Postdoctoral researcher), Dr Weiwei Liu (my Postdoctoral researcher), Dr Kai Wang (my PhD and Postdoctoral researcher) were awarded the Chinese Yong thousand Talents in 2019 and 2022, respectively.

- Dr Xiang Zhao (my PhD student) is awarded a national youth Changjiang Professor – very selective.

## **ACADEMIC AND RESEARCH LEADERSHIP**

- The founding head of Database Research Group (now called Database and Knowledge Research Group) at the School of Computer Science. It is ranked the number 5 in database systems world-wide in CS ranking against the four top conferences: SIGMOD, VLDB, ICDE, and PODS.

## **MAJOR SERVICES TO THE PROFESSIONAL COMMUNITY**

### **1. Research-based Services (visiting, adjunct, or other positions outside employment place):**

- External faculty member of the Complexity Science Laboratory of the University of Maribor (2021-2022),
- Distinguished Visiting Professor at Tsinghua University, China (2019-2022),
- Visiting Chair Professor at Fudan University (2016 - now),
- University Hai-Tian (adjunct) Distinguished Professor at Dalian University of Technology, China (May 2009 - May 2012),
- University Guest Distinguished Professor at Dalian Maritime University, China (Dec 2008 - Dec 2011),
- Adjunct Professor at East China Normal University (2009-2011),
- Steering Committee Member of ARC Research Network in Enterprise Information Infrastructure and the coordinator of Data and Knowledge Management Research Program (2007 -),
- Visiting Professor, Nagoya University, Japan (Dec 2007 - Jan 2008),
- JSPS (Japan Society for the Promotion of Science) fellow at Tokyo University: (Nov - Dec 2005), Visiting Tokyo University,
- Visiting Scientist in Microsoft Asia Research Lab: (Aug - Oct 2005, Sep - Nov, 2009),
- Visiting Associate Professor of Information Systems: (Dec 1999 - June 2000), at the Department of System Engineering and Engineering Management, Chinese University of Hong Kong.

### **2. Editorial Boards**

- Editor-in-Chief of IEEE Transaction on Knowledge and Data Engineering
  - (2017.1 – 2021.12),
- Associate Editor-in-Chief of IEEE Transaction on Knowledge and Data Engineering
  - (2015 Jan - 2016 Dec),
- Associate Editor of IEEE Transaction on Knowledge and Data Engineering
  - (2013 March - 2015 Jan),
- Associate Editor of ACM Transactions on Database Systems
  - (Flagship Journal in Databases) (Jan 2008- Jan 2014).,
- Associate Editor of World Wide Web Journal (2013 April - now).

### **3. Conference Steering Committees**

- Steering Committee member of Annual Australasian Database Conference (2007 - Now, Chair 2021 -- ),
- Steering Committee Member of APWEB (04-2017) and the chair (2009 - 2013),
- Steering Committee Member of Annual Australasian Theoretical Computer Science Conference, 1998-2004.

### **4. PC Chair**

- PC Co-chair of 48th International Conference on Very Large Data Bases (VLDB2022),
- PC Co-chair of 35th IEEE International Conference on Data Engineering (ICDE2019),
- PC Co-chair of 14th International Conference on Web Information System Engineering (WISE 2013),
- PC Co-chair of VLDB08 workshop on Quality of Databases (QDB 2008), 23 August 2008, Auckland, New Zealand,
- Program Committee Co-Chair of 19th & 20th Australasian Database Conference. (2008 & 2009),
- Program Committee Co-Chair of the Joint Conference of 9th Asia-Pacific Web Conference and the 8th International Conference on Web-Age Information Management, 2007,
- Program Committee Co-Chair of the 6th Asia Pacific Web Conferences, 2004,
- Program Committee Co-Chair of the 6th International Computing and Combinatorics Conference (COCOON2000), 2000,
- Program Committee Chair of 4th Australasian Theory Symposium (CATS'98).

### **5. Conference Organization Chairs**

- Conference co-Chair of DASFAA'09,
- Workshop General Chair of the 1st Workshop on Management and mining Of Uncertain Data (MOUND 2009),
- Tutorial co-Chair of ICDE09,
- Demo Chair of DASFAA'07.

**6. Served as a program committee member** for many conferences including the top tier conferences SIGMOD (2007, 2009, 2013-2016), VLDB (1999, 2008, 2010, 2012-2015), ICDE (2005, 2010-2015, Track Chair in 2013), KDD (2012), ICDM (2005, 2006, 2012-2015, Vice Chair in 2012).

## **RESEARCH GRANTS**

### **1. ARC grants**

- 2022 - 2024 Australian Research Council Discovery Project (DP220103128): Towards High-Order Structure Search on Large-Scale Graphs, \$510,000, Xuemin Lin.
- 2020 - 2022 Australian Research Council Discovery Project (DP200101338): Structure Search Over Large Scale Heterogeneous Information Networks, \$540,000, Xuemin Lin.
- 2018 - 2020 Australian Research Council Discovery Project (DP180103096): Efficient Processing of Large Scale Multi-dimensional Graphs, \$407,974. (Xuemin Lin, Wenjie Zhang & Ying Zhang),
- 2017 - 2019 Australian Research Council Discovery Grant (DP170101628): Towards Efficient Processing of Big Graphs, \$528,000. (Xuemin Lin),
- 2015 - 2017 Australian Research Council Discovery Grant (DP150102728): Efficiently Processing Pattern-based Structure Queries over Large Graphs , \$397,500. (Xuemin Lin & Wenjie Zhang),
- 2014 - 2016 Australian Research Council Discovery Grant (DP140103578): Probabilistic Search Over Large-Scale Uncertain Graphs, \$413, 000. (Xuemin Lin),
- 2012-2014 Australian Research Council Discovery Project (DP120104168): Ranking Complex Objects in a Multi-dimensional Space, \$350, 000. (Xuemin Lin and Wenjie Zhang),
- 2011-2013 Australian Research Council Discovery Grant (DP110102937): Efficient Structure Search over Large Graphs , \$210,000. (Xuemin Lin),
- 2009-2011,Australian Research Council Discovery Grant (DP0987557): Analyzing Uncertain Data: Probabilistic Approaches, \$342,000. (Xuemin Lin and Xiaofang Zhou),
- 2008-2010, Australian Research Council Discovery Grant (DP0881035): Effectively Computing and Maintaining Graph based Statistics in Large Scale Applications , \$250,000. (Xuemin Lin),
- 2006-2008, Australian Research Council Discovery Grant (DP0666428): Computing Order Statistics over Data Streams, \$315,000. (Xuemin Lin, Xiaofang Zhou and Jeray X Yu (PI) ),
- 2004-2009, ARC Research Network in Enterprise Information Infrastructure, \$3.2 million, funded by the Australian Research Council (Steering Committee Member and the Coordinator of the Data and Knowledge Management Research Program),
- 2003-2005, Australian Research Council Discovery Grant (DP0346004): ARC): Efficient Processing of Complex Spatial Queries, \$175,000 (Xuemin Lin and John Shepherd),
- 2003-2005, Australian Research Council Discovery Grant (DP0345710): Multi-resolution Spatial Query Processing, \$178,240 (Xiaofang Zhou, Xuemin Lin, and Yanchun Zhang).

## 2. Major Grants in China

- 2018-2021 (2018YFB1003504) RMB40,610,000.
- 2019-2023 (2018AAA0102502) RMB36,750,000
- 2017-2020 (NSFC6162235) RMB800,000
- 2013-2017 (NSFC61232006) RMB2,750,000
- 2021-2025 (U20B2046) RMB2,570,000
- 2020-2022 (2019B1515120048) RMB1,000,000

- 2018/2019 Alibaba Research Project, Graph Processing Language and Graph Matching, RMB1,150,000.
- 2017/2018 Alibaba Research Project, Developing Large Scale Distributed Graph Processing Platform, RMB1,150,00.

### 3. Other Competitive Grants:

- 2018 UNSW-Huawei Project, Cohesive Subgraph Mining for Anomaly Analysis, \$322,966, Xuemin Lin, Wenjie Zhang, Lu Qin, Lijun Chang,
- 2013-2017 NSFC Key Project RMB2.75M (Xuemin Lin Leading CI),
- 2009 UNSW Major Research Equipment & Infrastructure Scheme Grant, Equipping the Database Research Group with State of the Art Computing Facilities , \$123,000, (Xuemin Lin and Wei Wang),
- Google Research Award, Taming Uncertainty of Distributed Data , US\$50,000 (Xuemin Lin and Sanjay Jha),
- 2007 - 2009, NICTA Research Project, In-Memory XML Query Processing, (Sebastian Maneth, Xuemin Lin, and Raymond Wong),
- 2007, UNSW Goldstar Awards: GraphSUM: Summarizing Graph-based Statistics in Large Scale Applications, \$40,000 (Xuemin Lin),
- 2006, Faculty Research Grant Program (FRGP, PS08709), Summarizing Massive Graphs over Data Streams , \$15,000 (Xuemin Lin),
- 2002 UNSW RIBG: Very Large Database Server, \$100,000 (Xuemin Lin, Boualem Benatallah, John Shepherd, and Raymond Wong),
- 2002 CMCRC Seed Grant: A Performance Study of Advanced Synopses Techniques for On-line Approximation Analysis of Financial Data, \$10,000 (Xuemin Lin),
- 2001-2003 UNSW Gold-Star Award: Similarity Search in Spatial Database on Implicit Feature Spaces, \$60,000 (Xuemin Lin),
- 1999 Small ARC: Efficient Mining of Proximity, Similarity, and Visibility Relationships in Very Large Spatial Databases, \$20,000 (Xuemin Lin),
- 1998 CSE Start-up Grant: Replicated Data Management, \$10,000 (Xuemin Lin),
- 1997 Small ARC: Distributed Data Mining , \$20,000 (Xuemin Lin and Chi-Ping Tsang from UWA),
- 1995 UWA IRG: Transaction Management in Distributed Database Systems, \$18,000 (Xuemin Lin).

## CONFERENCE PRESENTATIONS

### 1. Tutorials given in World Premier Conferences:

- Yi Chen, Wei Wang, Ziyang Liu, Xuemin Lin. Keyword Search on Structured and Semi-structured Data. ACM SIGMOD 2009,
- J. Pei, M. Hua, Y. Tao, X. LIN, Mining Uncertain and Probabilistic Data: problems, Challenges, Methods, and Applications, 14th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, KDD 2008,
- J. Pei, M. Hua, Y. Tao, X. LIN, Query Answering Techniques on Uncertain and

Probabilistic Data, ACM SIGMOD Conference, 2008.

## **2. Invited & Keynote Speeches**

- Keynote Talk: Towards Big Graph Processing: Applications, Challenges, and Advances. 23rd International Conference on Database Systems for Advanced Applications (DASFAA 2018),
- Keynote Talk: Graph Processing: Applications, Challenges, and Advances. APWEB-WAIM 2018,
- Keynote Talk: Towards Big Graph Processing: Applications, Challenges, and Advances. IEEE International Conference on Data Science in Cyberspace (IEEE D- SC2018),
- Invited/Keynote Talk: Towards Processing of Big Graphs: from Theory, Algorithm to System. 27th International Symposium on Algorithm and Computation (ISAAC 2016),
- Invited Talk: Research Activities of DBG at UNSW for Managing Network Data. 30th Chinese National Database Conference (NDBC2013),
- Invited Tutorial Talk: Ranking Complex Objects in a Multi-dimensional Space. 18th International Conference on Database for Advanced Applications, 2013,
- Keynote Talk: Research Progress of DBG at UNSW for Managing Network Data. 2012 Congress of Shanghai Computing Society,
- Keynote Talk: Graph Structure Search. WISA2012,
- Invited Tutorial Talk: How to Publish in Top Venues. 29th Chinese National Database Conference (NDBC2012),
- Invited Tutorial Talk: Stochastic Orders and Skyline. 28th Chinese National Database Conference (NDBC2011),
- Keynote Talk: Skyline Computation. 2nd International E-Business Summit, 2011,
- Graph Substructure Search (Keynote Talk) The 5th International Conference on Frontier of Computer Science and Technology, 2010,
- Graph Substructure Search (Keynote Talk) The 1st International Workshop on Graph Databases, 2010,
- Subgraph Matching in Massive Graph Databases (Keynote Speech), 25th Chinese

National Database Conference, 2008,

- Skyline Computation (Keynote Talk), The 9th International Conference on Web-Information Management, 2008,
- Aggregate Computation over Data Streams (Keynote Talk), 10th Asia Pacific Web Conference, 2008,
- Computing the top-k Skyline Points (Keynote Talk), 18th International Workshop on Combinatorial Algorithms (IWCA07), 2007,
- Probabilistic Queries (Invited Speech), 2007 IEEE/IFIP International Workshop on Frontier of Data-Driven Engineering (FDDE2007), 2007,
- Continuously Maintaining Order Statistics over Data Streams (Invited Speech), 18th Australasian Database Conference, 2007 (Jan, Australia),
- Order Statistics Computation over Data Streams (Invited Speech), EII DM Workshop (Aug, Australia), 2006,
- Order Queries over Data Streams (Keynote Speech), 22nd Chinese DB Conference 2005 (Aug, China),
- Order Statistics Computation over Data Streams (Invited Speech), Japan DBWeb 2005 (Nov, Tokyo),
- Continuously Maintaining Quantile Summaries over Sliding Windows (Keynote Speech), 15th Australasian Workshop on Combinatorial Algorithms (AWOCA), 2004 (July, Australia).

#### **CURRENT RESEARCH INTERESTS**

- Real time Computation in Cloud,
- Big Data Analytics,
- Graph Data Analysis, Mining, and Visualization,
- Stream Data Analysis,
- Spatial Information Systems,
- Uncertain Data Management,
- Web Information Systems.

#### **PUBLICATIONS (and distinctions)**



In total 400 papers published, majority in the top international venues - over 230 papers are published in the top tier journals and conferences.

Professor Lin's papers were nominated as one of the best papers in:

ICDE2010 (Spatial),

SIGMOD2011 (Text),

ICDE2012 (Spatial Temporal), and

ICDE2013 (Graph), and ICDE2018 (Text), and

SIGMOD2020 (Graph),

In VLDB2020, he received **Best Paper Runner-Up**. ICDE2016, he received the **best paper award**, while in ICDE2007, he received **the best student paper award**.

His paper in keyword search area has been nominated as a Spotlight paper in TKDE, Dec 2011. His VLDB2007 paper has been regarded as the number 3 most cited among all VLDB07 papers, and SIGMOD08 paper - the number 8 most cited among all SIGMOD08 paper.

The list of all publications is available in separate file.

## **CITATIONS**

As in November 11, 2022 - the total number of citations of Professor Lin's research work is over 19,600 with the H-index 71 according to Google Scholar service.