

# Xiating Ouyang

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<https://pages.cs.wisc.edu/~xouyang/>

RESEARCH INTERESTS	<b>Database systems and theoretical computer science:</b> Query processing and optimization, managing inconsistent data, algorithm design, complexity theory and graph theory.	
EDUCATION	<b>University of Wisconsin–Madison</b>	
	Ph.D. in Computer Science	2018 – 2023
	Advisor: Prof. Paraschos Koutris	
	Thesis: <i>Finding Consistent Answers from Inconsistent Data: Systems, Algorithms, and Complexity</i>	
	Minor in Mathematics	
	M.Sc. in Computer Science	2018 – 2020
	<b>Hong Kong Polytechnic University</b>	
	B.Sc. in Computing (1st honor)	2014 – 2018
	<b>University of Waterloo</b>	
	Exchange Program	2017
EMPLOYMENTS	<b>Meta</b> , Menlo Park CA	
	<i>Research Scientist</i>	2024 – present
	<b>Meta</b> , Seattle WA	
	<i>PhD Software Engineer Intern</i>	Summer 2022
	<b>Microsoft Gray Systems Lab</b> , Madison WI (remote)	
	<i>Research Intern with Alekh Jindal and Abhishek Roy</i>	Summer 2020
	<b>Thermo Fisher Scientific</b> , Madison WI	
	<i>Software Development Intern</i>	Summer 2019
	<b>University of Wisconsin–Madison</b>	
	<i>Research Assistant</i>	2023
	<i>Klug Fellow</i>	2022 – 2023
	<i>Research Assistant</i>	2019 – 2022
	<i>Teaching Assistant</i>	2018 – 2019
	<b>Hong Kong Polytechnic University</b>	
	<i>Undergraduate Research Assistant</i>	2015 – 2018
PUBLICATIONS	*: alphabetical authorship following the tradition of theoretical computer science	
	†: equal contributions	
	<b>Consistent Query Answering for Simple Primary Keys on Rooted Tree Queries</b>	
	* with Paraschos Koutris and Jef Wijsen	
	To appear in <b>PODS</b> 2024	
	<b>Conjunctive Queries with Negation and Aggregation: A Linear Time Characterization</b>	
	Hangdong Zhao, Austen Z. Fan, Xiating Ouyang and Paraschos Koutris	
	To appear in <b>PODS</b> 2024	
	<b>LinCQA: Faster Consistent Query Answering with Linear Time Guarantees</b>	
	* with Zhiwei Fan, Paraschos Koutris and Jef Wijsen	
	<i>Proceedings of the ACM on Management of Data</i> 1 ( <b>SIGMOD</b> ), 1, Article 38, 2023. doi:10.1145/3588718	
	<b>Consistent Query Answering for Primary Keys on Path Queries</b>	
	* with Paraschos Koutris and Jef Wijsen	
	<i>Proceedings of the 40th ACM SIGMOD-SIGACT-SIGAI Symposium on Principles of Database Systems (PODS)</i> : 215–232, 2021. doi:10.1145/3452021.3458334	

## SparkCruise: Workload Optimization in Managed Spark Clusters at Microsoft

Abhishek Roy, Alekh Jindal, Priyanka Gomatam, Xiating Ouyang, Ashit Gosalia, Nishkam Ravi, Swinky Mann and Prakhar Jain

*Proceedings of the VLDB Endowment (PVLDB)*, 14(12): 3122–3134, 2021. doi:[10.14778/3476311.3476388](https://doi.org/10.14778/3476311.3476388)

## Unit Interval Vertex Deletion: Fewer Vertices are Relevant

Yuping Ke, Yixin Cao, Xiating Ouyang, Wenjun Li and Jianxin Wang

*Journal of Computer and System Sciences (JCSS)*, 96:109–121, 2018. doi:[10.1016/j.jcss.2018.01.001](https://doi.org/10.1016/j.jcss.2018.01.001)

## Certifiable Robustness for Naive Bayes Classifiers

Song Bian<sup>†</sup>, Xiating Ouyang<sup>†</sup>, Zhiwei Fan and Paraschos Koutris. Manuscript.

### HONORS AND AWARDS

Travel awards from SIGMOD, SODA, VLDB	
Anthony C. Klug NCR Fellowship, UW-Madison	2022
ACM-ICPC North Central North America Regional Contest, 10/208	2018
UW-Madison CS Special Fellowship	2018
Hong Kong PhD Fellowship (declined)	2018
Hong Kong SAR Government Scholarship	2016, 2017, 2018
Dean’s Honors List, HK PolyU	2015, 2016, 2018
Outstanding Student Award, Dept. of Computing, HK PolyU	2018
ACM-HK Chapter Collegiate Programming Contest, 3/34, 3/37	2016, 2017
ACM-HK Chapter Collegiate Programming Contest, 3/34	2016
CMA & Donars Scholarship	2016, 2017
Hong Kong SAR Talent Development Scholarship	2015, 2017
Hong Kong SAR Reaching Out Award	2017
Wong Tit-Shing Student Exchange Scholarship	2017
National High School Mathematics Competition, First Prize	2013

### TALKS

LinCQA: Faster Consistent Query Answering with Linear Time Guarantees	
◦ SIGMOD, 2023	
◦ UW DB Seminar, 2022	
Finding Consistent Answers from Inconsistent Data: Systems, Algorithms and Complexity.	
◦ PhD Defense, 2023	
◦ UW-Madison CS Research Symposium, 2023	
◦ <a href="#">UW DB Affiliates</a> , 2022	
Consistent Query Answering for Primary Keys on Path Queries	
◦ <a href="#">UW DB Seminar</a> , 2021	
◦ <a href="#">PODS</a> , 2021	
Consistent Query Answering on Inconsistent Databases	
◦ <a href="#">UW DB Affiliates</a> , 2021	
First-order Logic, Database and Consistent Query Answering	
◦ <a href="#">Graduate Logic Seminar</a> , 2021	

### SERVICES

Conference reviewer	
◦ PODS’24	
Journal reviewer	
◦ ACM Transactions on Database Systems	
◦ Discrete Mathematics & Theoretical Computer Science	
<b>Volunteer:</b> SIGMOD’23, VLDB’21, COCOON’17, SMARTCOMP’17	
<b>Organizer:</b> UW-Madison DB Seminars	2022–present
<b>Judge:</b> Departmental Programming Contest, UW–Madison	2019
<b>Coach:</b> ACM-ICPC team, HK PolyU	2017 – 2018
<b>Vice president:</b> Exploring Hong Kong Community	2015 – 2016

TEACHING	TA: CS 577 Introduction to Algorithms, UW–Madison	Spring 2019
EXPERIENCES	TA: CS 240 Discrete Mathematics, UW–Madison	Fall 2018
	TA: COMP 2422 Database Systems, HK PolyU	Fall 2017
SKILLS	<b>Programming languages:</b> Python, C/C++/C# , Java, PHP, JavaScript, SQL, Datalog <b>Operating systems:</b> Linux, MacOS, Windows <b>Tools:</b> git, Spark, $\text{\LaTeX}$ <b>Languages:</b> English (proficient), Mandarin (native) and Cantonese (intermediate)	