

# KEXIN RONG

krong@stanford.edu

<http://kexinrong.github.io/>

## EDUCATION

### Stanford University

2015-Present

Ph.D. Candidate in Computer Science

Advisors: Peter Bailis, Philip Levis

### California Institute of Technology

2011-2015

B.S. in Computer Science

GPA: 4.0

## RESEARCH INTERESTS

data management systems, approximate query processing, similarity search, time series analytics

## AWARDS and HONORS

Rising Star in EECS, 2020

“Best of SIGMOD 2017” invitation to ACM TODS

1st Price, Caltech CMS Celebration of Undergraduate Research, 2014

NuSTAR (Nuclear Spectroscopic Telescope Array) mission Team Achievement Award, 2012

USAMO Qualification, 2009-2010

1st Prize, Chinese National Olympiad in Informatics in Jiangsu Province (NOIP), 2008-2009

## PUBLICATIONS

### Journal Articles and Conference Proceedings

**K. Rong**, Y. Lu, P. Bailis, S. Kandula, P. Levis. Approximate Partition Selection for BigData Workloads using Summary Statistics. *VLDB*, 2020.

P. Siminelakis\*, **K. Rong**\*, P. Bailis, M. Charikar, P. Levis. Rehashing Kernel Evaluation in High Dimensions. *ICML*, 2019. (Long talk)

**K. Rong**, C. Yoon, K. Bergen, H. Elezabi, P. Bailis, P. Levis, G. Beroza. Locality-Sensitive Hashing for Earthquake Detection: A Case Study of Scaling Data-Driven Science. *VLDB*, 2018.

**K. Rong** and P. Bailis. ASAP: Prioritizing Attention via Time Series Smoothing. *VLDB*, 2017.

F. Abuzaid, P. Bailis, J. Ding, E. Gan, S. Madden, D. Narayanan, **K. Rong**, and S. Suri. MacroBase: Prioritizing Attention in Fast Data. *ACM TODS*, 2018. “Best of SIGMOD 2017” Special Issue.

P. Bailis, E. Gan, S. Madden, D. Narayanan, **K. Rong**, and S. Suri. MacroBase: Prioritizing Attention in Fast Data. *ACM SIGMOD*, 2017.

P. Bailis, E. Gan, **K. Rong**, and S. Suri. Prioritizing Attention in Fast Data: Challenges and Opportunities. *CIDR*, 2017.

### Demonstrations and Workshops

J. Chen, E. Gan, **K. Rong**, S. Suri, P. Bailis. CrossTrainer: Practical Domain Adaptation with Loss Reweighting. *SIGMOD DEEM Workshop*, 2019.

P. Bailis, E. Gan, **K. Rong**, and S. Suri. Demonstration: MacroBase, A Fast Data Analysis Engine. *SIGMOD Demo*, 2017

### Journal Articles and Abstracts in Earth Science

C. Yoon, K. Bergen, **K. Rong**, H. Elezabi, W. L. Ellsworth, G. C. Beroza, P. Bailis, P. Levis. Un-supervised Large-Scale Search for Similar Earthquake Signals. *Bulletin of the Seismological Society of America*, 2019

C. Yoon, K. Bergen, **K. Rong**, H. Elezabi, P. Bailis, P. Levis, and G. Beroza. Efficient blind search for similar-waveform earthquakes in years of continuous seismic data. Oral presentation. 2017 AGU Fall Meeting. Abstract S21E-01.

C. Yoon, K. Bergen, **K. Rong**, H. Elezabi, P. Bailis, P. Levis, W. L. Ellsworth, and G. C. Beroza. Efficient blind search for small similar-waveform earthquakes in a decade of continuous seismic data (2007-2017) in coastal central California. Poster presentation. 2017 SCEC Meeting. Abstract 024.

### INVITED TALKS

Automating Dashboard Displays with ASAP at *Monitorama*, May 2017, Portland, OR.

MacroBase: An Analytics Engine for Prioritizing Attention in Fast Data at *the 43rd Asilomar Micro-computer Workshop*, April 2017, Asilomar, CA.

### TEACHING

CS 197: Computer Science Research	2019
<i>Teaching Assistant, Stanford (Recognized as top 5% of TAs)</i>	
CS 161: Design and Analysis of Algorithms	2018
<i>Teaching Assistant, Stanford</i>	
CS 122: Database System Implementation	2015
<i>Teaching Assistant, Caltech</i>	
CS 24: Introduction to Computing Systems	2014
<i>Teaching Assistant, Caltech</i>	
CS 1: Introduction to Computer Programming	2012, 2013
<i>Teaching Assistant, Caltech</i>	

### EXPERIENCE

<b>Research Intern</b>	Jun 2019 - Jan 2020
<i>Microsoft Research</i>	<i>Redmond, WA</i>

· Mentors: Dr. Srikanth Kandula and Dr. Yao Lu

- Worked on a research project that makes novel use of summary statistics to inform partition-level sampling for approximate query processing.

**Software Engineering Intern**

*Pinterest*

Apr 2015 - July 2015

*San Francisco, CA*

- Collected training data, built and evaluated models that classify soft 404 pages with high precision.

**Server Platform Intern**

*OpenX*

Jan 2015 - Mar 2015

*Pasadena, CA*

- Evaluated HBase as an alternative to their ad quality database based on MariaDB, and suggested ways to significantly cut down the database volume.

**Software Engineering Intern**

*Facebook Inc.*

Jun 2014 - Sep 2014

*Menlo Park, CA*

- Reduced the update delay for custom audience membership in the Facebook Ads Audience Insights tool from several days down to one hour.

**Software Engineering Intern**

*Lookout Mobile Security*

Jun 2013 - Aug 2013

*San Francisco, CA*

- Built an application crawler for Google Play. Created an internal web service to store, retrieve, edit, delete configurations and schedule tasks for the crawler.

**Caltech Summer Undergraduate Research Fellow**

*Space Radiation Lab, Caltech*

Jun 2012 - Aug 2012

*Pasadena, CA*

- Designed and built a website for NuSTAR (The Nuclear Spectroscopic Telescope Array) Science Operations Center. Developed observation planning tools for NuSTAR that calculate spacecraft pointing, instrument availability and other important parameters.

## SERVICE

PhD Student Mentor, Stanford CS Undergrad Research Program

2017-2020

*Provide mentorship to undergraduate researchers in the department. Lead efforts to broaden the reach of the program. Help design and teach the first version of a new course for undergraduate research (CS197) with Professor Michael Bernstein.*

Organizer, Lunch Speaker Series for PhD-track Women in CS

2016-2017

*Funded by Stanford's Diversity and Inclusion Innovation Funds (DIF) Project.*