

# Innovative Database and Information Systems Research Laboratory



Chengkai Li, Associate Professor

## Research areas

- Big Data and Data Science (Database, Data Mining, Natural Language Processing)

## Research directions

- computational journalism, computational fact-checking (**global leading position, well-known in both computing and professional fact-checking communities**)
- crowdsourcing and human computation
- cybersecurity, social bots
- data exploration by ranking/skyline/preference queries
- graph database usability, knowledge graphs

# Funding Sponsors



## As PI

- NSF IIS #1719054
- New Knight Foundation Grant
- Texas National Security Network Excellence Fund
- NSF I-Corps Teams #1565699
- Knight Prototype Fund
- NSF IIS Medium #1408928
- HP Labs Innovation Research Award, 2011 and 2012
- NSF IIS #1018865
- UTA REP, FDL

## As Co-PI

- NSF CCF #1117369
- NSFC 61370019

# In the Press

**AP** Associated Press

The Washington Post

theguardian

The Dallas Morning News

Star-Telegram

THE SHORTHORN  
UT-ARLINGTON'S MAIN NEWS SOURCE SINCE 1919

CUNY GRADUATE SCHOOL OF JOURNALISM  
TOW-KNIGHT CENTER FOR  
ENTREPRENEURIAL JOURNALISM

journalism  
.co.uk

SXSW

Poynter.  
A global leader in journalism

NiemanReports

POLICY  
OPTIONS  
POLITIQUES

MEDIA SHIFT

FIRST DRAFT

NewStatesman

PLAID ZEBRA

Techxplore

WIRED

New  
Scientist

NEW ATLAS

ZDNet Korea

EurekAlert!  
The Global Source for Science News

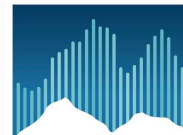
AAAS



Austin  
American-  
Statesman



the FACT-  
CHECKING  
PROJECT  
AMERICAN PRESS  
institute



NORDIC APIS

# Achievements and Recognitions

## Awards

- ACM SIGMOD 2017 Most Reproducible Paper
- First Runner-Up Award in SIGMOD17 Undergraduate Research Competition (Damian Jimenez)
- VLDB 2014 Excellent Demonstration Award
- 2011 and 2012 HP Labs Innovation Research Award
- 3rd place in best Vision Track paper competition in CIDR 2011

## Publications in top-tier conferences and journals

- SIGMOD, VLDB, ICDE, EDBT, CIDR, KDD, WWW, CIKM, WSDM, ISWC, TODS, TKDD, TKDE

## Keynotes/panels/invited talks

- SXSW 2017, MetroCon 2017, PyData 2015, Data4U workshop (VLDB 14), ACS workshop (SDM 13)

## Professional services

- General Chair/Program Chair (IEEE IPCCC), Finance Chair (SIGMOD17), Publicity Chair (WAIM16)
- Associate editor of top-tier journals
- Program committee member and editorial board member of many top-tier conferences and journals

# IDIR Students

## Current students

- **7 Ph.D.** students, **3 M.S.** thesis students, **2 B.S.** students (including REUs)

## Graduated students

- **4 Ph.D.** students, **18 M.S.** thesis and GRA students, **9 B.S.** students (including REUs)

## Internships

- Amazon A9 Labs, AT&T, Google, HP Labs, Huawei, IBM Research India, NEC Labs, Qatar Computing Research Institute (QCRI), RedHat

## First-employment after graduation

- **Tenure-track assistant professor** : University of Mississippi
- **Researchers**: Huawei US R&D Center, IBM Research India
- **Software engineers**: Akamai, Amazon, Ambit Energy, Capital One, Cerner, Copper Labs, Dematic, Electronic Arts (EA) , Google, Microsoft, Pivotal

# Collaborators

## On current projects

- Bill Adair (Duke)
- Pankaj Agarwal (Duke)
- Xiang Ao (Chinese Academy of Sciences)
- Vassilis Athitsos (UTA)
- Sourav Bhowmick (Nanyang Technological University)
- Byron Choi (Hong Kong Baptist University)
- Christoph Csallner (UTA)
- Peter Frays (University of Technology Sydney)
- James Hamilton (Stanford)
- Naeemul Hassan (Mississippi)
- Wei Hu (Nanjing University)
- Angela Lee (UTD)
- Zhiqiang Lin (UTD)
- Ping Luo (Chinese Academy of Sciences)
- Mark Tremayne (UTA)
- Jun Yang (Duke)
- Cong Yu (Google)

## On past projects

- Sharma Chakravarthy (UTA)
- Fei Chen (LinkedIn)
- Shimin Chen (Chinese Academy of Sciences)
- Gautam Das (UTA)
- Chris Ding (UTA)
- Ramez Elmasri (UTA)
- Leonidas Fegaras (UTA)
- Arijit Khan (Nanyang Technological University)
- Min Wang (Visa Research)
- Xifeng Yan (UCSB)
- Nan Zhang (Penn State)



Toward the Holy Grail of Automated Fact-checking

[idir.uta.edu/claimbuster](http://idir.uta.edu/claimbuster)





Enter Your Own Text



2016 U.S. Presidential Debates



Hansard: Parliament of Australia

ClaimBuster API



ClaimBuster Slackbot

End-to-end Fact-checking (beta)

## Tweets by @ClaimBusterTM



ClaimBuster Retweeted



**Linda McMahon**

@SBALinda

The U.S. has 29 million small businesses & nearly 867,000 of them are in [#Michigan](#). Almost ALL businesses in Michigan, 99.6% are [#SmallBiz](#).



Aug 8, 2017

ClaimBuster Retweeted



**Governor Walker**

@GovWalker

Since 2013, Kenosha County has seen nearly \$1 billion in capital investment – creating over 6,000 jobs!

[Embed](#)

[View on Twitter](#)



# IDIR Projects and Demos

- Demonstration Videos <https://vimeo.com/channels/1024406>
- [Botminator](#): Automated Detection of Fact-news Bots
- [ClaimBuster](#) ([idir.uta.edu/claimbuster](http://idir.uta.edu/claimbuster)) Automated, Live Fact-Checking
- [CrewScout](#) ([idir.uta.edu/crewsout](http://idir.uta.edu/crewsout)) Expert Team Finding by Skyline Groups
- [ERQ: Entity-Relationship Query](#) ([idir.uta.edu/erq](http://idir.uta.edu/erq)) Structured Entity-Centric Query on Wikipedia
- [Facetedpedia](#) ([idir.uta.edu/facetedpedia](http://idir.uta.edu/facetedpedia)) Faceted search interface for Wikipedia
- [FactWatcher](#) ([idir.uta.edu/factwatcher](http://idir.uta.edu/factwatcher)) Automated Monitoring of Facts from Real-World Events
- [GQBE](#) ([idir.uta.edu/gqbe](http://idir.uta.edu/gqbe)) Graph Query by Example
- [Orion](#) ([idir.uta.edu/orion](http://idir.uta.edu/orion)) Auto-suggestion for Interactive Graph Query Formulation
- [TableView](#) Generating Preview Tables for Knowledge Graphs