

Changbeom Shim, Ph.D.

Research Associate ◊ Dept. of Electrical and Computer Engineering ◊ Curtin University
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Education

Korea University Ph.D. in Computer Science and Engineering	MAR. 2014 - AUG. 2019 <i>South Korea</i>
Korea University B.E. in Electronics and Information Engineering · On leave: SEPT. 2008 - FEB. 2011, Military Service	MAR. 2007 - FEB. 2014 <i>South Korea</i>

Professional Experiences

School of Elec. Eng., Comp. and Math Sci. at Curtin University Research Associate · Project 3: An intelligent system for crime analysis and prevention based on multi-object tracking and situational awareness · Project 2: A data-driven system for privacy-preserving pandemic prevention · Project 1: Efficient large-scale multi-object tracking	NOV. 2019 - Present <i>Australia</i>
Database Laboratory at Korea University Research Assistant · Project 3: A research on safe and convenient big data processing methods · Project 2: A research on privacy issues and privacy protection methods for social network services · Project 1: An intelligent system for crime detection/prevention and public security based on CCTV bigdata	MAR. 2014 - AUG. 2019 <i>South Korea</i>
School of Engineering at RMIT University Visiting Student of Dr. Du Yong Kim · Project: A research on random finite set approach to database applications	JAN. 2019 - FEB. 2019 <i>Australia</i>
Korea Institute of Science and Technology Information (KISTI) Student Researcher · Project: Research on analysis and application platform technologies for science and technology big data	JUL. 2013 - FEB. 2014 <i>South Korea</i>
3D Information Processing Laboratory at Korea University Student Researcher	JAN. 2011 - JUN. 2013 <i>South Korea</i>

Honors and Awards

SEP. 2020	Postdoctoral Fellowship Program, National Research Foundation (NRF) of Korea
FEB. 2019	KU Graduate Student Achievement Award, Korea University
JUL. 2018	Student Paper Contest Award, Korea Computer Congress (KCC)
FEB. 2018	Outstanding Ph.D. Candidate Paper Award, Korea University
OCT. 2017	Honorable Mention Award, IEEE Visual Analytics Science and Technology (VAST Challenge)
MAY 2015	Outstanding Paper Award, Korean DataBase Conference (KDBC)

Research Interests

- Databases, Data Mining, and Machine Learning
- Query Processing, Spatial Databases, and Spatio-Temporal Algorithms
 - Visual Analytics, Geo-Social Networks, and Pattern Mining
 - Bayesian Learning, Multi-Object Tracking, and Clustering

Publications

International Journals

- J6** Wooil Kim, **Changbeom Shim**, and Yon Dohn Chung,
“SkyFlow: A Visual Analysis of High-dimensional Skylines in Time-series,”
Journal of Visualization, 2021
- J5** **Changbeom Shim**, Gyuhyeon Sim, and Yon Dohn Chung,
“Cohesive Ridesharing Group Queries in Geo-Social Networks,”
IEEE Access, 2020
- J4** Wooil Kim, **Changbeom Shim**, Wan Heo, Sungmin Yi, and Yon Dohn Chung,
“Moving View Field Nearest Neighbor Queries,”
Data & Knowledge Engineering, 2019
- J3** **Changbeom Shim**, Wooil Kim, Wan Heo, Sungmin Yi, and Yon Dohn Chung,
“Nearest Close Friend Search in Geo-Social Networks,”
Information Sciences, 2018
- J2** Sungmin Yi, **Changbeom Shim**, and Yon Dohn Chung,
“Reverse View Field Nearest Neighbor Queries,”
Information Sciences, 2017
- J1** **Changbeom Shim**, Wooil Kim, Wan Heo, Sungmin Yi, and Yon Dohn Chung,
“ ℓ -Close Range Friends Query on Social Grid Index,”
IEICE Transaction on Information and Systems, 2017

International Conferences

- C2** Tran Thien Dat Nguyen, **Changbeom Shim**, and Wooil Kim,
“Biological Cell Tracking and Lineage Inference via Random Finite Sets,”
IEEE International Symposium on Biomedical Imaging (ISBI), 2021
- C1** Wooil Kim, **Changbeom Shim**, Ilhyun Suh, and Yon Dohn Chung,
“A Visual Explorer for Analyzing Trajectory Patterns,”
IEEE Conference on Visual Analytics Science and Technology (VAST), 2017

Patents

- P2** Yon Dohn Chung, **Changbeom Shim**, and Wooil Kim,
“Device for searching nearest close friends,”
Oct. 2020, Korea Registration Number: 10-2172236
- P1** Yon Dohn Chung, and **Changbeom Shim**,
“Device and method for recommending ride sharing group, recording medium for performing the method,”
Jan. 2020, Korea Registration Number: 10-2064376

Teaching Experiences at Korea University

Lecturer

FALL 2018 COSE214: Algorithm

Teaching Assistant

FALL 2017 COSE156: Python Programming
SPRING 2016 COSE213: Data Structure
FALL 2015 COSE242: Data Communication
FALL 2014 COSE102: Computer Programming

Technical Experiences

Computer Languages	Java, Matlab, Python
Others	PostgreSQL, MySQL, Hadoop