YONGSUB LIM

CONTACT

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EDUCATION

Doctor of Philosophy, Computer Science — PRESENT
KAIST
Advisor: U Kang

Master of Science, Computer Science — FEB. 2011
KAIST
Advisor: Kyomin Jung

Bachelor of Science, Information and Computer Engineering — FEB. 2009
Ajou University

AWARD

Honor Prize, The 19th Samsung Electronics Humantech Thesis Prize, Feb. 2013.

ONGOING WORK

Community Detection in Graphs

We are developing an effective method to find good communities for graphs with a power-law degree distribution.

RECENT WORK

Constraint Energy Minimization in Computer Vision

We proposed an algorithm for minimizing an energy function with constraints. In the image segmentation problem, we showed that imposing statistics of the object being segmented can improve segmentation results, and it outperforms previous work in running time and error.

Measuring Structural Inequality in Social Networks

We proposed structral ineqaulity measures for social networks. We analyzed inequality of social neworks in various aspects, and suggested methods for relaxing inequality of networks.

CURRENT INTERSETS

Large Scale Graph Mining

PUBLICATION

Conferences

1. **Yongsub Lim**, Kyomin Jung, and Pushmeet Kohli, *Energy Minimization under Constraints on Label Counts*, The 11th European Conference on Computer Vision (ECCV), 2010.
2. **Yongsub Lim** and Kyomin Jung, *Decentralized Control for Intelligent Robot System to Avoid Moving Obstacles*, Fourth International Conference on Intelligent Systems, Modelling and Simulation (ISMS), 2013.

Others

1. **Yongsub Lim**, Kyomin Jung, and Pushmeet Kohli, *Constrained Discrete optimization via Dual Space Search*, NIPS Workshop on Discrete Optimization in Machine Learning (DISCML) 2011: Uncertainty, Generalization and Feedback, 2011.
2. Jungsoo Lee, **Yongsub Lim**, Woosang Lim, Kyomin Jung, and Dae-Shik Kim, *Hierarchical analysis in the human brain connectivity networks*, Society for Neuroscience, 2012 (only abstract).

TALKS

1. *Graph Cut Algorithm with Application to Computer Vision*, Winter School on Algorithms and Combinatorics, Yeongi, Korea, Jan. 2010
2. *Energy Minimization under Constraints on Label Counts*, Research on Software Analysis for Error-free Computing center workshop, Sokcho, Korea, Aug. 2010
3. *Submodular minimization with constraints using Lagrangian multipliers*, Research on Software Analysis for Error-free Computing center workshop, Paju, Korea, Jun. 2011
4. *Constrained MAP inference algorithm with bi-dimensional parametric minimum cuts*, The 14th Korea-Japan Workshop on Algorithms and Computation (WAAC), Busan, Korea, Jul. 2011

SELECTED GRADUATE COURSES TAKEN

CC511 Probability and Statistics	SPRING 2009
CS671 Machine Learning	FALL 2009
CS774 Markov Random Field: Theory and Application	FALL 2009
CS500 Algorithms: Design and Analysis	SPRING 2010
MAS583B Bayesian Statistical Methods	FALL 2011
KSE525 Data Mining and Knowledge Discovery	SPRING 2012

TEACHING EXPERIENCE

Network of Things, Teaching Assistant, KAIST	FALL 2011
Mathematics for Information Science, Teaching Assistant, KAIST	FALL 2012
Algorithms: Design and Analysis, Teaching Assistant, KAIST	SPRING 2010–2013

REFERENCES

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Dr. Pushmeet Kohli
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