



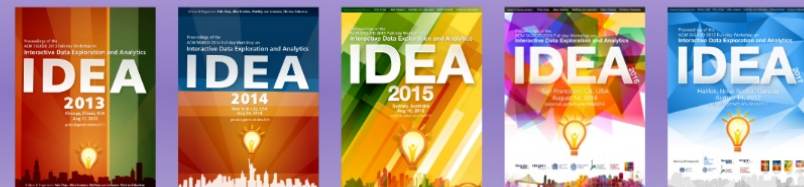
ACM SIGKDD 2018 Full-day Workshop on Interactive Data Exploration and Analytics

IDEA²⁰¹⁸

London, United Kingdom
August 20, 2018

poloclub.gatech.edu/idea2018

Submission: May 13



The IDEA:

address the need for
data mining techniques that allow users to
interactively explore their data

The challenge:

combine insight from

Data Mining **Visualization**

Human-Computer Interaction

and make the sum greater than its parts

Call for Papers

Topics of interests for the workshop include, but are not limited to:

- Data mining (DM)
 - Online, streaming, or any-time algorithms
 - Methods supporting interactive, iterative, or adaptive refinements
 - Methods enabling instantaneous results
 - User-specific results (preference, relevance, interestingness)
 - Pattern & model sampling
 - Theoretical/complexity analysis of instant data mining
- Human-computer interaction (HCI)
 - Smart and adaptive interfaces for scalable techniques
 - Methods, principles and mechanisms for incorporating user feedback
 - User intent models
 - Interfaces for explaining and interpreting analytics models and results
 - Interfaces for interactively exploring and querying very large data
- Visualization (VIS)
 - Interactive visualization of patterns and models
 - Visual analytics
 - Visualization for machine learning models
 - Exploration or recommendation of visualization
 - Visual user guidance
 - Principles and techniques for information transfer

We invite any type of contribution on these topics: new principles, methods, systems, empirical evaluations, etc.

Call for Papers

Topics of interests for the workshop include, but are not limited to:

- Data mining (DM)
 - Online, streaming, or any-time algorithms
 - Methods supporting interactive, iterative, or adaptive refinements
 - Methods enabling instantaneous results

Algorithms & data structures

- Theoretical/complexity analysis of instant data mining
- Human-computer interaction (HCI)
 - Smart and adaptive interfaces for scalable techniques
 - Methods, principles and mechanisms for incorporating user feedback

Interaction

- Interfaces for interactively exploring and querying very large datasets
- Visualization (VIS)
 - Interactive visualization of patterns and models

Visualization

- Exploration or recommendation of visualization
- Visual user guidance
- Principles and techniques for information transfer

Methods

Libraries

Systems

We invite any type of contribution on these topics: new principles, methods, systems, empirical evaluations, etc.

Submission Information

All papers will be peer reviewed, **single-blinded**. We welcome many kinds of papers, such as (and not limited to):

- Novel research papers
- Demo papers
- Work-in-progress papers
- Visionary papers (white papers)
- Appraisal papers of existing methods and tools (e.g., lessons learned)
- Relevant work that has been previously published
- Work that will be presented at the main conference of KDD

Program at a glance

Three keynotes



Prof. Min Chen
Oxford University

Building a Theoretical
Foundation for Visual
Analytics



Prof. Tijl De Bie
Ghent University

An information-theoretic
framework for data
exploration: From itemsets
to embeddings, from
interestingness to privacy



Prof. Daniel Keim
University of Konstanz

Solving Problems with
Visual Analytics: The Role of
Visualization and Analytics
in Exploring Big Data

Program at a glance

13 exciting contributed papers

- 6 oral presentations
- 7 (+6) interactive discussion at
2:30pm Poster + demo + networking session
(with coffee break)

All papers available on our website
poloclub.gatech.edu/idea2018
(google “**kdd idea**”)

Morning

8:15 Welcome to IDEA'18

8:30 Keynote 1



Prof. Min Chen

Oxford University

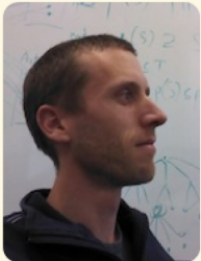
Building a Theoretical Foundation for Visual Analytics

Bio

Abstract

9:30 Coffee

10:00 Keynote 2



Prof. Tijl De Bie

Ghent University

An information-theoretic framework for data exploration: From itemsets to embeddings, from interestingness to privacy

Bio

Abstract

Morning

11:00 Research Talks

Clustrophile 2: Guided Visual Clustering Analysis

Marco Cavallo and Çağatay Demiralp

Track Xplorer: A System for Visual Analysis of Sensor-based Motor Activity Predictions

Marco Cavallo and Çağatay Demiralp

End-to-End Active Learning for Computer Security Experts

Anael Beaugnon, Pierre Chifflier and Francis Bach

Hierarchical Incident Clustering for Security Operation Centers

David Silva, Matteo Dell'Amico, Michael Hart, Kevin Roundy and Daniel Kats

12:00 Lunch

12:55 Re-welcome

Afternoon

1:00 Research Talks

How Developers Iterate on Machine Learning Workflows -- A Survey of the Applied Machine Learning Literature

Doris Xin, Litian Ma, Shuchen Song, Rong Ma and Aditya Parameswaran

A User Study on the Effect of Aggregating Explanations for Interpreting Machine Learning Models

Josua Krause, Adam Perer and Enrico Bertini

1:30 Keynote 3



Prof. Daniel Keim

University of Konstanz

Solving Problems with Visual Analytics: The Role of Visualization and Analytics in Exploring Big Data

Bio

Abstract

2:30 Closing words

2:35 Posters + Interactive Demo + Networking Session + Coffee

13 posters total, including those for oral presentations

PolicyFlow: Interpreting Policy Diffusion in Context

Yongsu Ahn and Yu-Ru Lin

Towards a generalized similarity service

Anuradha Bhamidipaty, Daniel Gruen, Jeffery Kephart, Siva Sankalp Patel, Justin Platz, Danny Soroker, John Vergo and Alan Webb

Visual Exploration and Interaction with Scientific Data in Virtual Reality

Giannis Evagorou and Thomas Heinis

M-Boost: Profiling and Refining Deep Neural Networks with Topological Data Analysis

Gregory Naitzat, Namita Lokare, Jorge Silva and Ilknur Kabul

A Peek Into the Hidden Layers of a Convolutional Neural Network Through a Factorization Lens

Uday Singh Saini and Evangelos Papalexakis

ProcessExplorer: An Interactive Visual Recommendation System for Process Mining

Alexander Seeliger, Timo Nolle and Max Mühlhäuser

Data Cleaning via Question Asking

Xinyang Zhang, Yujie Ji, Chanh Nguyen and Ting Wang

Program Committee

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Tijl De Bie (Ghent U, Belgium)
Xu Chu (Georgia Tech, USA)
Zhiyuan (Jerry) Lin (Stanford U, USA)

Many thanks to ...

our invited speakers,
our program committee,
all authors,
and *you*

for this successful IDEA!

poloclub.gatech.edu/idea2018

Organizers



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Sister workshops

HILDA 2018

Workshop on Human-In-the-Loop Data Analytics

Co-located with **SIGMOD 2018** (10 June 2018, Houston, TX, USA)



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Tweet #hilda2018

Past workshops: **HILDA 2016** | **HILDA 2017**



Monday, October 22, 2018

Visualization in
Data Science

DSIA: Data Systems for Interactive Analysis

This is the website for the Workshop on Data Systems for Interactive Analysis (DSIA). The [first edition of DSIA](#) was held at [IEEE VIS 2015](#) and the [second edition of DSIA](#) was held at [IEEE VIS 2017](#). We are thrilled to announce a third edition of the workshop, to be held at [IEEE VIS 2018](#) in Berlin.

Now

8:30 Keynote 1



Prof. Min Chen

Oxford University

Building a Theoretical Foundation for Visual Analytics

Bio

Abstract

Abstract

In this talk, the speaker will first provide an overview of the theoretical discourses in the field of visualization and visual analytics, discussing the aspects of the Theoretical Foundation of Visual Analytics, including taxonomies and ontologies, principles and guidelines, conceptual models and theoretic frameworks, and quantitative laws and theoretic systems. The speaker will then make an argument that information theory can potentially bring the four main components of visual analytics (i.e., statistics, algorithms, visualization, and interaction) together under the same theoretic framework.