CIDR 2013 CONFERENCE SCHEDULE

Sunday January 6th, 2013

4pm Registration Opens

6pm Dinner

7pm Informal Evening Get-together

Monday January 7th, 2013

7:30am Breakfast

8:30am-10:15am ANALYTICS (Chair: TBD)

QPPT: Query Processing on Prefix Trees
Thomas Kissinger (TU Dresden); Benjamin Schlegel (TU Dresden); Dirk Habich (TU Dresden); Wolfgang Lehner (TU Dresden)

Progress Indicator Technology "on Steroids"
Jessie Li (University of Wisconsin); Rimma Nehme (Microsoft); Jeff Naughton (University of Wisconsin)

Differential Dataflow
Frank McSherry (Microsoft Research); Derek Murray (Microsoft Research); Rebecca Isaacs (Microsoft Research); Michael Isard (Microsoft Research)

MLbase: A Distributed Machine-learning System
Tim Kraska (Brown University); Ameet Talwalkar (UC Berkeley); John Duchi (UC Berkeley); Rean Griffith (VMware); Michael Franklin (UC Berkeley); Michael Jordan (UC Berkeley)

10:15am-10:45am Coffee Break

10:45am-12:30pm TRANSACTIONS and SECURITY (Chair: Alan Fekete)

LogKV: Exploiting Key-Value Stores for Log Processing
Zhao Cao (HP Labs China); Shimin Chen (HP Lab); Feifei Li (University of Utah); Min Wang (HP Labs China); Xiaoyang Sean Wang (Fudan University)

Executing Long-Running Transactions in Synchronization-Free Main Memory Database Systems
Henrik Muehe (TU Munich); Alfons Kemper (TU Munich); Thomas Neumann (TU Munich)

Message Futures: Fast Commitment of Transactions in Multi-datacenter Environments
Faisal Nawab (UCSB); Divyakant Agrawal (UCSB); Amr El Abbadi (UCSB)

Orthogonal Security with Cipherbase
Arvind Arasu (Microsoft Research); Spyros Blanas (UW-Madison); Ken Eguro (Microsoft Research); Raghav Kaushik (Microsoft Research); Donald Kossmann (ETH Zurich); Ravi Ramamurthy (Microsoft Research); Ramaratnam Venkatesan (Microsoft Research)

12:30pm-1:30pm Lunch

1:45pm-3:00pm MULTI-TENANCY (Chair: Ryan Johnson)

SQLVM: Performance Isolation in Multi-Tenant Relational Database-as-a-Service
Vivek Narasayya (Microsoft Research); Sudipto Das (Microsoft Research); Manoj Syamala (Microsoft Research); Badrish Chandramouli (Microsoft Research); Surajit Chaudhuri (Microsoft Research)

Caravan: Provisioning for What-If Analysis
Daniel Deutch (Ben Gurion University); Zachary Ives (University of Pennsylvania); Tova Milo (Tel Aviv University); Val Tannen (University of Pennsylvania)

How to Fit when No One Size Fits
Harold Lim (Duke University); Yuzhang Han (Duke University); Shivnath Babu (Duke University)

3:00pm-3:30pm Coffee Break

3:30pm-5:15pm LEAN and GREEN DBs (Chair: Alfons Kemper)

Green Databases Through Integration of Renewable Energy
Cheng Chen (Nanyang Technological Universit); Bingsheng He (NTU); Xueyan Tang (Nanyang Technological University); Changbing Chen (Nanyang Technological University); Yubao Liu (Sun Yat-sen University)

How Achaeans Would Construct Columns in Troy
Alekh Jindal (Saarland University); Felix Schuhknecht (Saarland University); Jens Dittrich (Saarland University); Karen Khachatryan (Saarland University); Alexander Bunte (Saarland University)

StatusQuo: Making Familiar Abstractions Perform Using Program Analysis
Alvin Cheung (MIT); Owen Arden (Cornell University); Sam Madden (MIT); Armando Solar-Lezama (MIT); Andrew Myers (Cornell University)

NUMA-aware Algorithms: The Case of Data Shuffling
Yinan Li (University of Wisconsin-Madison); Ippokratis Pandis (IBM Almaden Research Center); Rene Mueller (IBM Almaden Research Cente); Vijayshankar Raman (IBM Almaden Research Center); Guy Lohman (IBM Almaden Research Center)

6:00pm-7:00pm Dinner

7:15pm Gong Show (Chair: Yanlei Diao)

Tuesday January 8th, 2013

7:30am Breakfast

8:30am-9:30am **Keynote:** Arthur W. Toga, UCLA Laboratory of Neuro Imaging

The Informatics of Large Multisite Brain Mapping Projects

The ability to statistically and visually compare and contrast brain image data from multiple subjects is essential to understanding normal variability and differentiating normal from diseased populations. Most neuroimaging studies now include a diverse array of data types such as cognitive measures, biosample data and genetics. Taken together, these data present numerous challenges to creating usable databases, coupled analytics and efficient dissemination. Furthermore, these data pose considerable demands on storage, network and computational infrastructure. This talk describes the concerns that must be dealt with to maximize the value of data contained in databases. The problem is particularly acute when the ultimate goal is the synthesis of atlases, the creation of models and statistical comparisons across different cohorts. Data coming from multiple sources, subjects, protocols and devices must either be treated or described sufficiently to make it comparable. Legacy data presents unique problems as an accurate history may be unavailable. Newly acquired data affords the opportunity to create detailed metadata but must be extendable, as needed, to accommodate pre-processing and other data manipulations. The ever increasing size of emerging databases also poses challenges for automation and direct linkages between data archives and processing procedures. Examples of these and related issues will be illustrated in applications with several consortia and projects.

A good example of these and related issues is the Alzheimer's Disease Neuroimaging Initiative (ADNI). This is a large national consortia established to collect, longitudinally, distributed and well described cohorts of age matched normals, mci's and alzheimer patients. The dynamic changes that occur in brain structure and function throughout life make the study of degenerative disorders of the aged difficult. Alzheimer's disease (AD) is the most common neurodegenerative disease in the elderly. It results from the abnormal accumulation of misfolded amyloid and tau proteins in neurons and the extracellular space, ultimately leading to cell death and progressive cognitive decline. The consequences of this insult can be seen using a variety of imaging approaches. Perhaps one of the most sought after goals in the study of this degenerative disease is an imaging biomarker that is sensitive and precise to these neuropathological changes. Further, the objective is to enable reliable detection of these changes as early in its progression as possible, hopefully prior to behavioral and cognitive manifestations.

Bio: Arthur W. Toga is a Distinguished Professor of Neurology and University Professor at the University of California at Los Angeles (UCLA). His research is focused on neuroimaging, informatics, mapping brain structure and function, and brain atlasing. He also studies cerebral metabolism and neurovascular coupling. He was trained in neuroscience and computer science and has written more than 700 papers, chapters and abstracts, including eight books. Recruited to UCLA in 1987, he formed and directs the Laboratory of Neuro Imaging. This 120-member laboratory includes graduate students from computer science, biostatistics and neuroscience. It is funded with grants from the National Institutes of Health grants as well as industry partners. He has received numerous awards and honors in computer science, graphics and neuroscience. He is Associate-Director of the UCLA Brain Mapping Division within the Neuropsychiatric Institute, Associate Dean, Geffen School of Medicine at UCLA, Associate Vice Provost for Informatics and the founding Editor-in-Chief of the journal NeuroImage and holds the chairmanship of numerous committees within UCLA, NIH and a variety of international task forces.

9:30am-10:15am Outrageous Ideas and Vision I: Query Processing I (Chair: Hank Korth)

Understanding Local Structure in Ranked Datasets
Julia Stoyanovich (University of Pennsylvania); Sihem Amer-Yahia (CNRS, LIG, France); Susan Davidson (University of Pennsylvania); Marie Jacob (University of Pennsylvania); Tova Milo (Tel Aviv University)

A Data System for Feature Engineering
Michael Anderson (University of Michigan); Matthew Burgess (University of Michigan); Michael Cafarella (University of Michigan); Arun Kumar (University of Wisconsin); Feng Niu (University of Wisconsin); Christopher Re (University of Wisconsin); Ce Zhang (University of Wisconsin)

Mirror mirror on the wall, what is the query the fairest of them all?
Alkis Simitsis (HP Labs); Georgia Koutrika (HP Labs)

10:15am-10:45am Coffee Break

10:45am-12:30pm HUMAN/MACHINE INTEGRATION (Chair: TBD)

dbTouch: Analytics at your Fingertips
Stratos Idreos (CWI); Erietta Liarou (CWI)

Arnold: Declarative Crowd-Machine Data Integration
Shawn Jeffery (Groupon); Liwen Sun (University of California-Berkeley); Matt DeLand (Groupon); Nick Pendar (Groupon); Rick Barber (Stanford University); Andrew Galdi (Stanford University)

Data Integration and Data Exchange: It's Really About Time
Mary Roth (UC Santa Cruz); Wang-Chiew Tan (UC Santa Cruz)

Quantum Databases
Sudip Roy (Cornell University); Lucja Kot (Cornell University); Christoph Koch (EPFL)

12:30pm-1:30pm Lunch

1:30pm-4:00pm Free Time

4:00pm-5:45pm Outrageous Ideas and Vision II: Query Processing II (Chair: TBD)

A Social Network Database that Learns How to Answer Queries
Sara Cohen (Hebrew University of Jerusalem); Lior Ebel (Hebrew University of Jerusalem)

Resource and Performance Prediction for Building a Next Generation Database Cloud
Barzan Mozafari (MIT); Carlo Curino (Microsoft); Sam Madden (MIT)

D-Hive: Data Bees Pollinating RDF and Text
Srikanta Bedathur (Indraprastha Institute of Information Technology); Klaus Berberich (MPI for Informatics); Ioannis Patlakas (MPII); Peter Triantafillou (University of Patra); Gerhard Weikum (MPI for Informatics)

CrowdQ: Crowdsourced Query Understanding
Gianluca Demartini (University of Fribourg); Beth Trushkowsky (UC Berkeley); Tim Kraska (Brown University); Michael Franklin (UC Berkeley)

Query Steering for Interactive Data Exploration
Ugur Cetintemel (Brown University); Mitch Cherniack (Brandeis University); Justin DeBrabant (Brown University); Yanlei Diao (University of Massachusett); Kyriaki Dimitriadou (Brandeis University); Alex Kalinin (Brown University); Olga Papaemmanouil (Brandeis University); Stan Zdonik (Brown University)

Abstraction without regret in data management systems
Christoph Koch (EPFL)

6:00pm-7:00pm Dinner

7:15pm-9:00pm Outrageous Ideas and Vision III: Devices and Security (Chair: TBD)

The Necessary Death of the Block Device Interface
Matias Bjorling (IT University of Copenhagen); Philippe Bonnet (IT University of Copenhagen); Luc Bouganim (INRIA); Niv Dayan (IT University of Copenhagen)

WWHow! Freeing Data Storage from Cages
Alekh Jindal (Saarland University); Jorge Quiane (Saarland University); Jens Dittrich (Saarland University)

Bionic database systems are coming, but what will they look like?
Ryan Johnson (University of Toronto); Ippokratis Pandis (IBM Almaden Research Center)

Querying Without Keyboards
Arnab Nandi (The Ohio State University)

Trusted Cells: A Sea Change for Personal Data Services
Nicolas Anciaux (INRIA); Philippe Bonnet (IT); Luc Bouganim (INRIA; Benjamin Nguye); Iulian Popa (INRIA); Philippe Pucheral (INRIA)

Stop That Query! Why We Need to Monitor Data Use
Prasang Upadhyaya (University of Washington); Nick Anderson (University of Washington); Magdalena Balazinska (University of Washington); Bill Howe (University of Washington); Raghav Kaushik (Microsoft Research); Ravi Ramamurthy (Microsoft Research); Dan Suciu (University of Washington)

9:00pm-9:15pm Best Paper and Gong Show Awards Ceremony (Chair: Yanlei Diao)

9:15pm Lubricated Discussions

Wednesday January 9th, 2013

7:30am Breakfast

8:30am-10:10am SOCIAL NETS and GRAPHS (Chair: TBD)

Scalable Social Coordination with Group Constraints using Enmeshed Queries
Jianjun Chen (Google Inc); Ashwin Machanavajjhala (Duke University); George Varghese (Microsoft Research and UCSD)

BG: A Benchmark to Evaluate Interactive Social Networking Operations
Shahram Ghandeharizadeh (USC); Sumita Barahmand (USC)

Asynchronous Large-Scale Graph Processing Made Easy
Guozhang Wang (Cornell University); Wenlei Xie (Cornell University); Alan Demers (Cornell University); Johannes Gehrke (Cornell University)

VOGUE: Towards A Visual Interaction-aware Graph Query Processing Framework
Sourav S Bhowmick (Nanyang Technological Univ); Byron Choi (Hong Kong Baptist University); Shuigeng Zhou (Fudan University)

10:10am-10:30am Coffee Break

10:30am-12:10pm SYSTEM STORIES (Chair: Shel Finkelstein)

Data Curation at Scale: The Data Tamer System
Michael Stonebraker (MIT); Daniel Bruckner (MIT); Ihab Ilyas (QCRI); George Beskales (QCRI); Mitch Cherniack (Brandeis University); Stan Zdonik (Brown University); Alexander Pagan (MIT); Shan Xu (Verisk Analytics)

COD: Database / Operating System Co-Design
Jana Giceva (ETH Zurich); Tudor-Ioan Salomie (ETH Zurich); Adrian Schupbach (ETH Zurich); Gustavo Alonso (ETH Zurich); Timothy Roscoe (ETH Zurich)

Meet Charles, big data query advisor
Thibault Sellam (CWI); Martin Kersten (CWI)

Engagements: Building Eventually ACiD Business Transactions
Pat Helland; Don Haderle

12:10pm-12:30pm Outrageous Ideas and Vision Awards and Closing Remarks

12:30pm Lunch