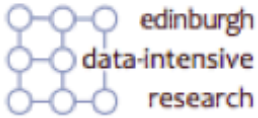
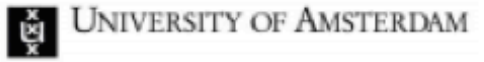
OPEN SCIENCE DATA CLOUD

PARTNERSHIP FOR **INTERNATIONAL RESEARCH** AND EDUCATION

Amsterdam Workshop, June 16-20, 2014





UNIVERSITEIT VAN AMSTERDAM

System and Network Engineering

Who am I?

Assistant professor at the UvA
SNE- System and Network Engineering group

See: http://staff.science.uva.nl/~grosso/

Organizer of the 2014 PIRE workshop in Amsterdam!

Italian, born in Ivrea (Turin, Piedmont)

Abroad since a long time:

- 6 years in California (Stanford/Palo Alto)
- - 10 years in the NL (UvA/Amsterdam)

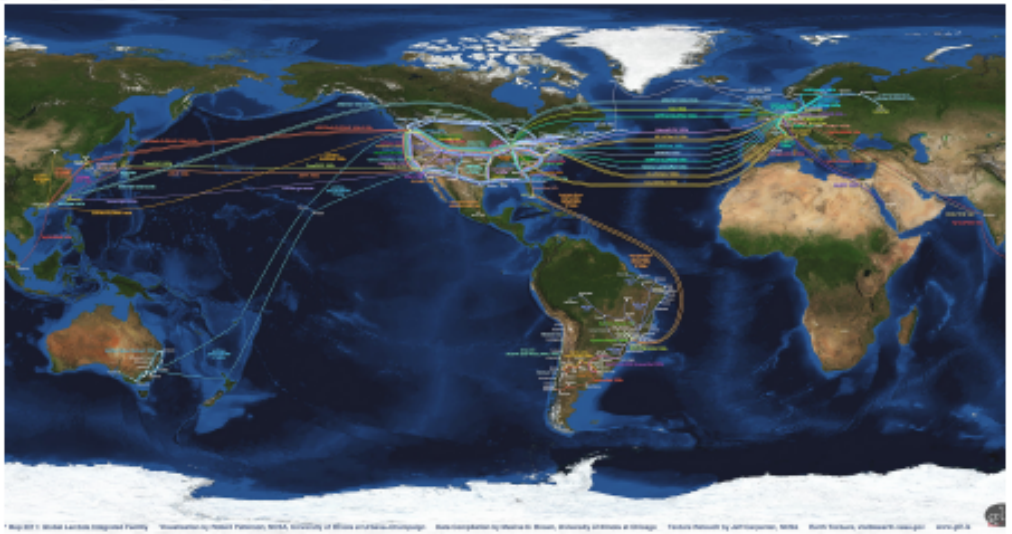
Married with children.
Like to travel, hike and run.

ENVRI

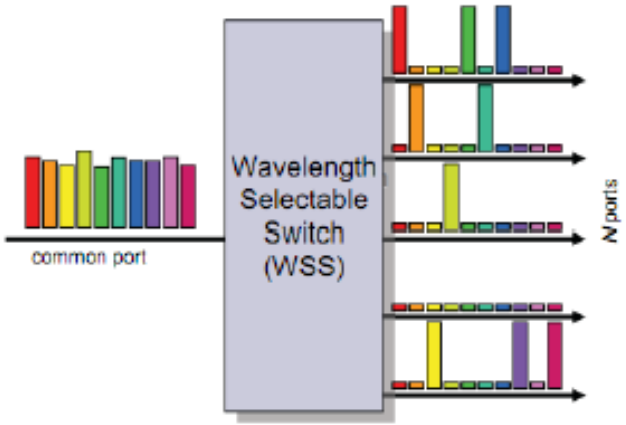
UNIVERSITEIT VAN AMSTERDAM

System and Network Engineering

Complex (network) infrastructures



….with more possibilities



ENVRI

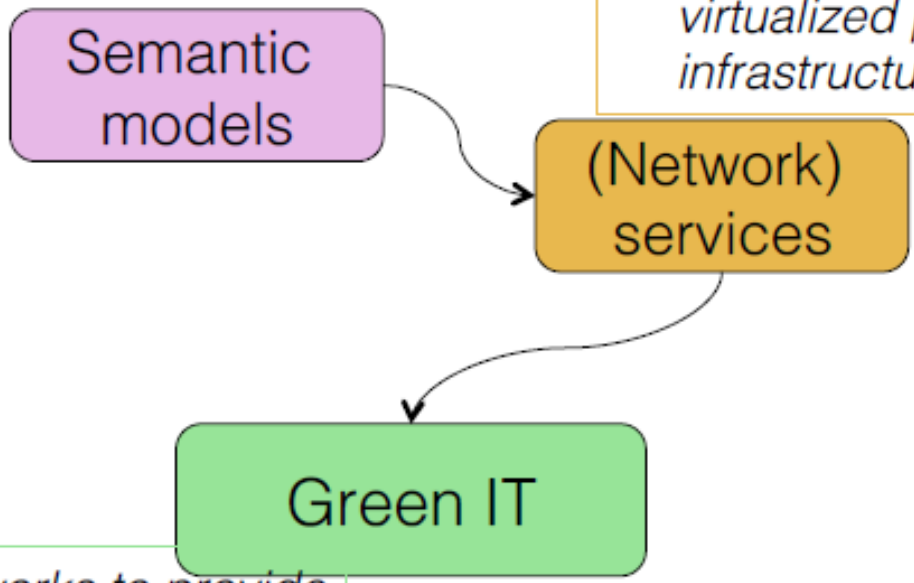
UNIVERSITEIT VAN AMSTERDAM

System and Network Engineering

My three research focus area.

- *How can we represent complex e-Infrastructure?*

- *How can compose end-to-end services that fully exploit virtualized programmable infrastructures?*



- *Can we use networks to provide support for application that run in a more sustainable manner?*

ENVRI

Cees de Laat

Prof. dr. ir. Cees T. A. M. de Laat,
System and Network Engineering research group
Informatics Institute, Faculty of Science,
University of Amsterdam
Science Park 904, room C3.152,
NL-1098 XH, Amsterdam, The Netherlands
Phone:_+31205257590
Fax:+31205257419
Secretariaat:+31205257464
Mail work:delaat->uva.nl
Mail private:cees->delaat.net

Mission

Can we create smart data processing infrastructures that are tailored to diverse application needs?


Freek
Victor
Blom
Noordende
Leon
Paola
Pieter
Taal
Bruijn
Ham
Radius
Spence
Inder
Marchal
Koning
Stancu
Mulmo
Mambretti
Farrell
Andree
Sloot
Hirstius
Cook
Holdrege
Robert
Adam
Demchenko
Bal
Oudenaarde
Zhao
Zwart
Koymans
Adriaans
Groep
Catalin
Vollbrecht
Travostino
Damien
Sjouw
Maassen
Peter
Martin
Jan-Philip
Gordon
Hertzberger
Simon
Maxine
Grosso
Guido
Olabarriaga
Hendrikse
David
Pat
Cristea
Fred
Wan
DeFanti
Koeroo
Li
Karst
Henri
Guevara-Masis
Derek
Ralph
Yakali
Erik
Gross
Silvia
Kees
Belleman
Meirosu
Stefan
Korkhov
Pol
Gommans
Xu
Wim
Lee
Brown
Velders
Joe
Buuren
Larry
Eijkel
Vladimir
Dobinson
George
Steven
Oscar
Bob
Gosso
Smarr
Andreas
Bert
Thomas
Piotr
Hans
Mihai
Rene
Olle
Groen
Snijders
Golonka
Arie
Dmitry
Meijer
Antony
Dijkstra
Ronald
Portegies
Tokmakoff
Belloum
Calhoun
Monga
Koot
Rudolf
Toonk
Hakan
Yuri
Franco
Vasunin
Jeroen
John
Strijkers
Zhiming
Zeger
Jason
Bas
Matthijs

Cees de Laat

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Mail work:delaat->uva.nl
Mail private:cees->delaat.net

Professor Robert Grossman
University of Chicago & OSDC PI

- Director, Open Science Data Cloud (OSDC)
- The OSDC hosts over 1 PB of research data in the physical, social & biological sciences with specialized applications disciplines, including:
  - -Matsu for earth sciences data
  - -Bionimbus for biological sciences data
- I'm a Core Faculty Member in the Institute for Genomics & Systems Biology and the Computation Institute.
- My research group focuses on big data, data science and data intensive computing.
- I have a particular interest in applications of big data to biology, medicine & health care.

THE UNIVERSITY OF CHICAGO

- Some of my current research projects on big data and cloud computing include:
  - -Tukey middleware for the OSDC
  - -Tukey portal for the OSDC
  - -Yates for infrastructure automation
  - -UDT and UDR high performance data transport
  - -Big data and software defined networks
- Some of my current research projects on big data and its applications to biology, medicine and health care include:
  - -Analyzing large collections of electronic medical records
  - -Text mining cancer genomics articles
  - -Geospatial analysis of biomedical data
  - -Analysis of cancer genomics data

Dr. Heidi Alvarez

OSDC Co-Principal Investigator

Heidi L. Alvarez is the Director at Florida International University's Center for Internet Augmented Research and Assessment (CIARA), where she facilitates high-performance next generation Research & Education (R&E) networking initiatives and other related cyberinfrastructure, such as cloud computing, to higher education and research institutions in the U.S., Latin America, and the Caribbean.

Current NSF Support:

Award# ACI-0963053, $7,744,790.00, 2010-2015, IRNC-ProNet: Americas Lightpaths: Increasing the Rate of Discovery and Enhancing Education across the Americas.

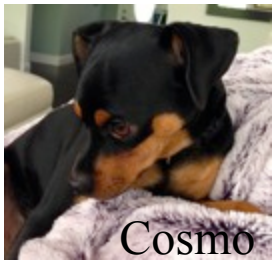
Award# IIA-1129076, $4,224,324.00, 2010 – 2015, PIRE: Training and Workshops in Data Intensive Computing Using The Open Science Data Cloud

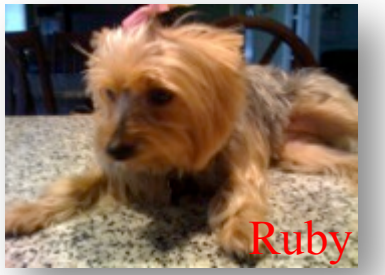
Award# ACI-1357928, $49,000.00, 2013-2014, Big Data, Big Networks: Big Opportunities for Collaboration between Mexico and the United States

Award# ACI-1246185, $500,000.00, 2012-2014, CC-NIE Network Infrastructure: FlowSurge: Supporting Science Data Flows Towards Discovery, Innovation and Education

Other Research & Social Interests

- e-Science Collaborations and Educational Outreach (e.g. Astronomy, High Energy Physics)
- Providing extraordinary opportunities for grad students!
- Fine food & wine plus lots of exercise
- My Daughters & Dogs





THE UNIVERSITY of EDINBURGH
informatics

cisa | Centre for Intelligent Systems and their Applications

Paul Martin

Centre for Intelligent Systems and their Applications

University of Edinburgh

www.inf.ed.ac.uk

THE UNIVERSITY of EDINBURGH
informatics

cisa | Centre for Intelligent Systems and their Applications

Paul William Martin

- BSc (Hons.) Artificial Intelligence and Computer Science.
- PhD Informatics in “Distributed Opportunistic Argumentation Guided by Autonomous Agent Interaction”.
- PDRA in Data Intensive Research group:
  - DISPEL workflow composition language (model and semantics).
  - ENVRI reference model (uh… model and semantics).
- Interests include:
  - Distributed argumentation;
  - Intelligent adaptive agent systems;
  - Reasoning about knowledge;
  - Constructing virtual worlds.

Research Agenda (choose one?)

- Building intelligent distributed brokers for federated research infrastructures.
- Designing adaptive mapping services between data curation domains.

- Implementing distributed workflow synthesis over autonomous, heterogeneous hosts.
- Developing a better workflow composition language.

- Formalising the refactoring of theories in response to contextual changes (in assumptions, scope and inference mechanism).

Maria Patterson, PhD

Open Science Data Cloud
Center for Data Intensive Science
(CDIS)
University of Chicago

cdis
CENTER FOR
DATA INTENSIVE SCIENCE

THE UNIVERSITY OF
CHICAGO

About Maria

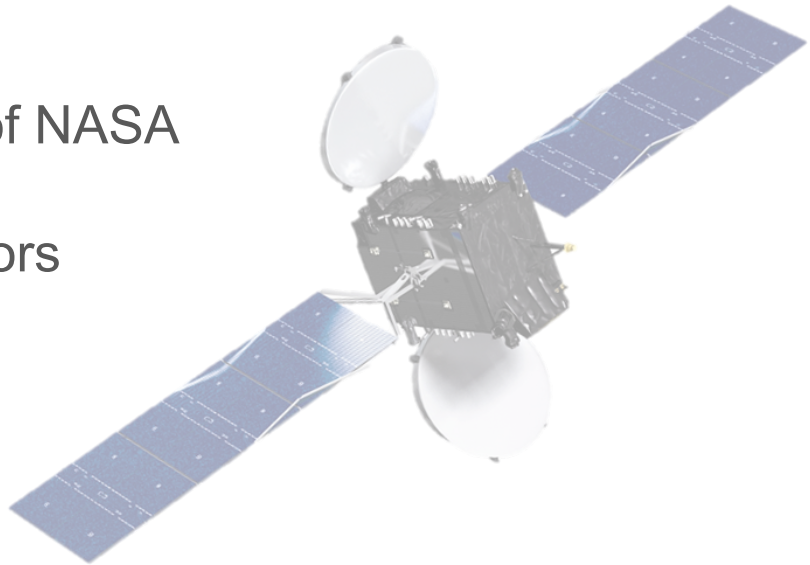
BA in Physics, Astrophysics

PhD in **Astronomy (that's my data! →)**

- PI for wide-field multi-band optical imaging survey of nearby galaxies for HALOGAS

UChicago lead on **Project Matsu**

- Cloud processing and analysis of NASA Earth satellite spectral imagery
- Researching environmental factors of disease incidence



Maria Patterson (mtpatter@uchicago.edu)

Center for Data Intensive Science, University of Chicago

More about Maria

- From Cleveland, (Go Spurs!!!)
- Loves University of Chicago
- Lazy dachshund

  named “Tweak” →

Follow me and friends on
Twitter: @OpenScienceCafe

Maria Patterson (mtpatter@uchicago.edu)

Center for Data Intensive Science, University of Chicago

Isao KOJIMA
小島　功
こじま　いさお

Linking Geospatial Data Workshop
#LGD14

Senior Research Scientist
Principal Research Manager
Senior Officer for Coordination

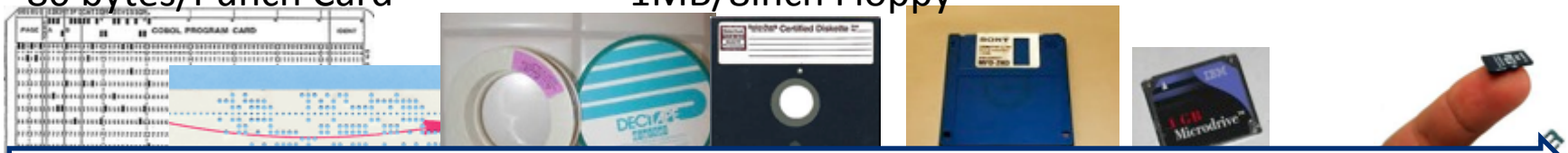
Information Technology Research Institute,
National Institute of Advanced Industrial Science and Technology (AIST)

National Institute of Advanced Industrial Science and Technology
AIST

産総研
独立行政法人産業技術総合研究所

80 bytes/Punch Card

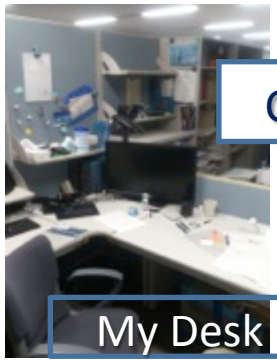
1MB/8inch Floppy



360 (PDP11/40) DEC20 (VAX11) (PERQ) SUN3&4 （Alpha） PCcluster

Trackpoint User for > 20 years

Thinkpad750(1992) -> 560(1997)->A21p(2001)->A31p(2004)->T42p->
T61p(2009) -> **W520(2012: Corei7, 32GBmem, 500GB SSD)**->?
(Sub: Sony VAIO C1, DEC Hinote Ultra, Thinkpad Tablet2&iPad)



Close Up

Research Topics: Database System

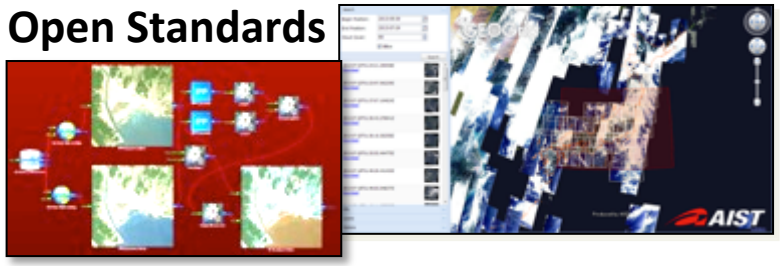
Distributed, Heterogeneous & Large Volume

Application: e-Science and e-Research

Recent Projects

①GEO Grid(2005~)

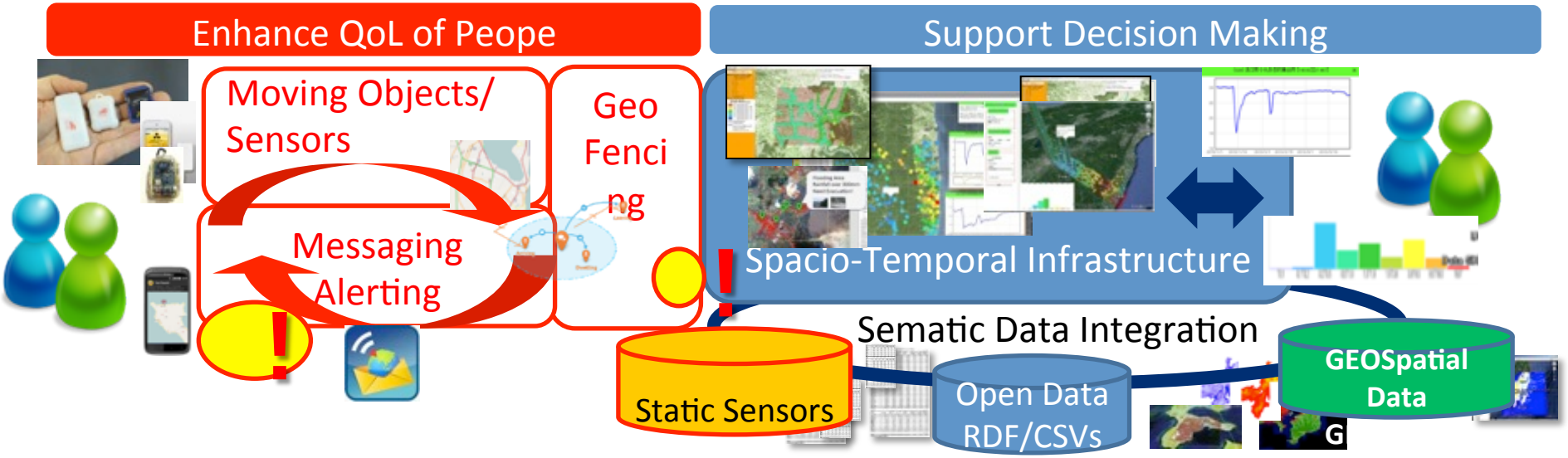
- Large Satellite Data Archiving
- Scientific Workflow
- Open Standards



②Liked Open Data/RDF(2008~)

- Distributed SPARQL
- Parallel Processing
- Applications

Now : ①+② with Mobile Sensors/Objects



UWI

OSDC OPEN SCIENCE DATA CLOUD

Brigitte Collins

University Chief Information officer

Mrs Brigitte Ann Collins has been the University Chief Information Officer (UCIO) at the University of the West Indies since November 2008. As the UCIO, Mrs Collins provides the overall leadership, vision, strategy, management, and accountability for enterprise-wide information, communication and technology (ICT) services.
www.uwi.edu/ucio/

Brigitte Collins- History

- Born in Kingston, Jamaica
- Attended The University of the West indies (BSc), The London School of Economics, University of London (MSc)
- Joined The University of the West Indies in 1997 as Senior Project Officer
- Previously a Senior Consultant in Information Systems at PricewaterhouseCoopers

Major Initiatives & Social Interests

- Leading the technical enhancements required for establishing a Single Virtual University Space at the UWI
- Providing a robust and seamless technical environment for teaching learning and research
- Swimming, walking and as much exercise as possible
- My Daughters, Colleagues, UWI Usain Bolt track

UWI

OSDC OPEN SCIENCE DATA CLOUD

Dr. Margaret Bernard

Senior Lecturer in Computer Science
The University of the West Indies
St. Augustine
Trinidad
TRINIDAD AND TOBAGO

- ✓ Over 25 years' experience in Computer Science education.
- ✓ Taught courses in Database Systems at undergraduate as well as postgraduate level.
- ✓ Have an active research program in the area of Data Management and Data Mining.

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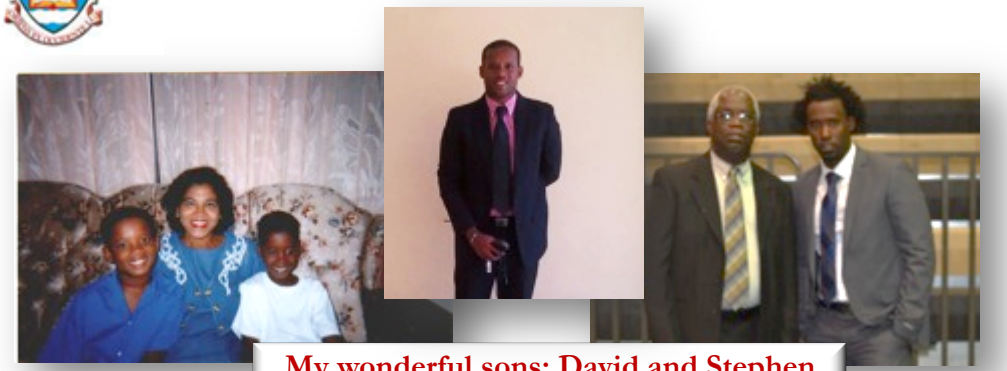
Research Projects

- **Educational Data Mining** (Data Mining algorithms for Moodle Learning Management System),
- **Computer Supported Collaborative Learning** (CSCL strategy games for problem solving for computer programmers)
- **Business Intelligence in the Natural Gas and Energy sector** (Big Data challenges of platform integration, data analytics and visualization in Business Intelligence).
- **Open Data repository for Agricultural** (and related) data and the development of several applications (web based and mobile) around that data
- **Support Vector Machine classification for fingerprint analysis**
- **A Peer-to-Peer repository for Sharing Learning Content**

Love and Interests

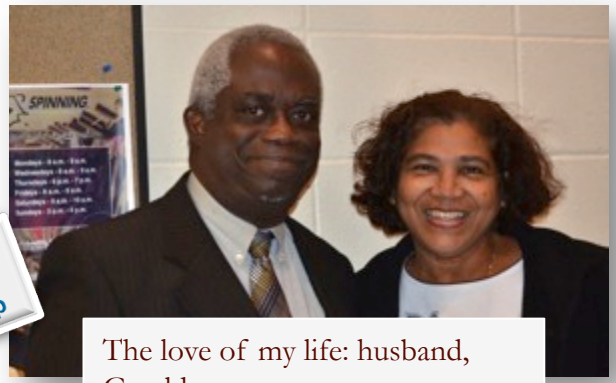


My wonderful sons: David and Stephen

The family at Kaiteur falls- Guyana

Our passion- bird watch and photography

Our way to make a difference- The Turning Point Camp



The love of my life: husband, Gerald

Port of Spain- Trinidad

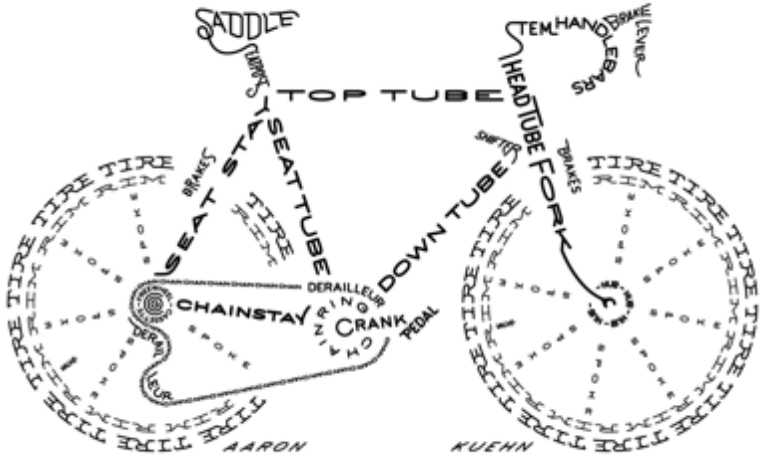
My work

Rafael Suarez

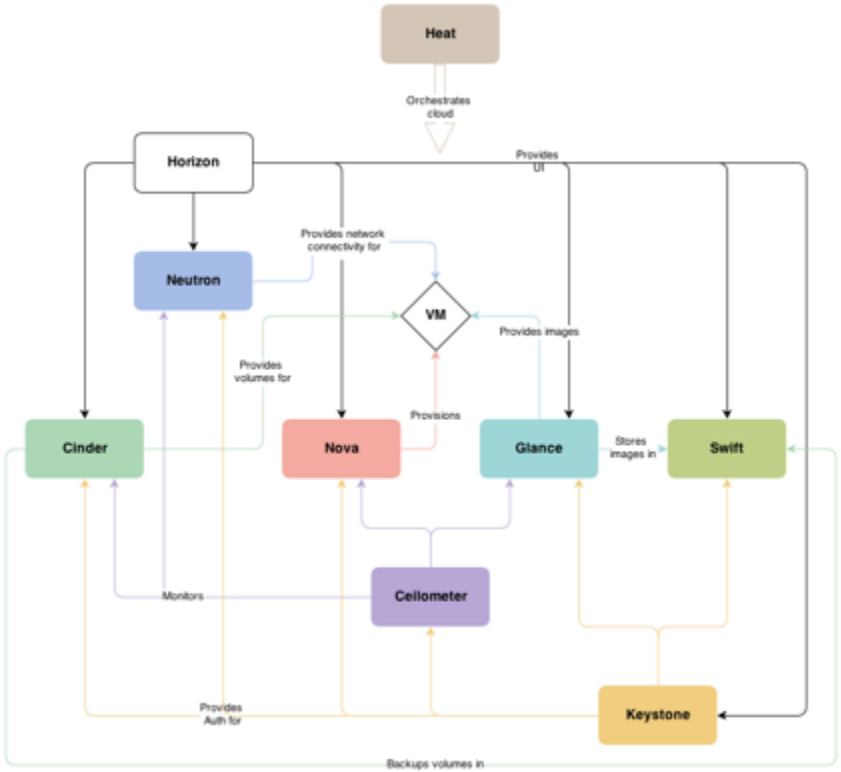
University of Chicago

System Structure

> 100 years



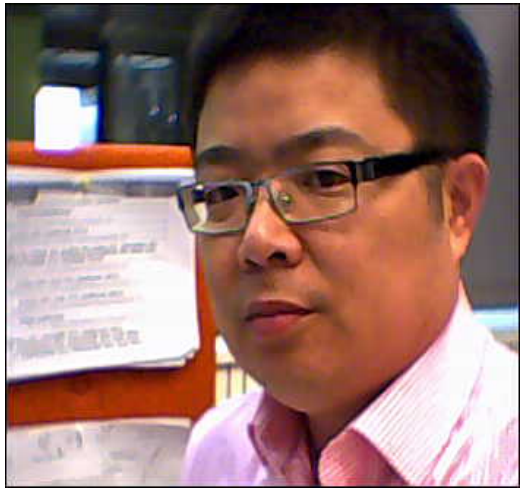
< 10 years



Dr. Zhiming Zhao

SNE- System and Network Engineering

UvA- University of Amsterdam



ENVRI

Big data research infrastructures-

Enable inter-disciplinary sciences at a system level

Programmable infrastructures for data sciences

Workflow

- Planning abstract workflows on programmable infrastructures
- SLA/QoS/QoE optimisation and control

Inter-operability

- Data/service harmonisation
- Data citation, tracing and publication.
- Reference model, ontological framework and linking

Data access delivery

- Advanced networking for data access and delivery: Software Defined Networking (SDN), e.g., Openflow and NSI, and Information Centric Networking (ICN).

YUAN (BEN) ZHAO

Born in Chicago, IL and currently lives in sunny SoCal

Studied BioE at MIT and currently studying Bioinformatics/ Systems Biology at UC San Diego

Previous research: molecular engineering, behavioral science, computational geophysics, modeling cellular community dynamics

OSDC-PIRE RESEARCH

ViewDock TDW: scalable, high-throughput software for visualizing virtual drug discovery

Build an HTML5-based application for the ViewDock TDW platform

Improve user interface for drug screening and data analysis

OSDC OPEN SCIENCE DATA CLOUD

Joshua Eisenberg

Ph.D Computer Science Florida International University (FIU) 2018

B.S. Computer Engineering FIU 2014

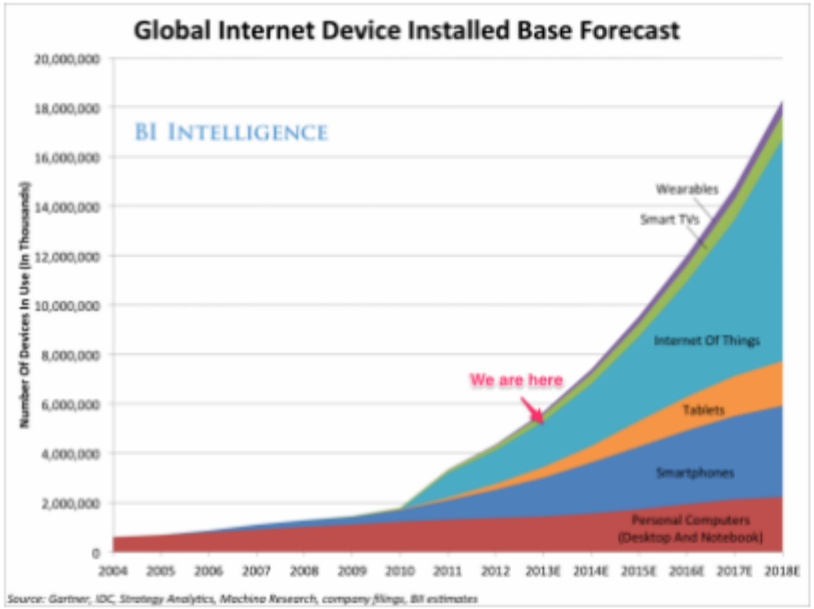
B.A. Mathematics Brandeis University 2012

Research Interests

- Theory of Quantitative Information Flow
- Information Theory
- Computational Complexity and the Theory of Computation
- Graph Theory
- Internet of Things
- Embedded Systems
- Zigbee Radio
- Compression Algorithms

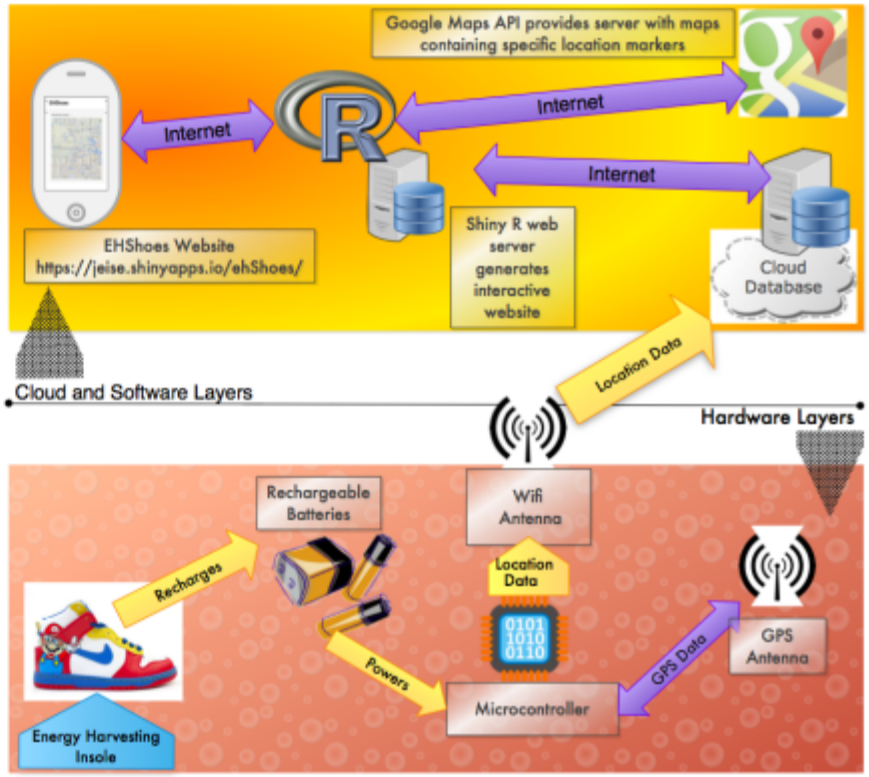
Embedded Systems and the Internet of Things

1.9 billion devices today, and 9 billion by 2018, according to BII estimates, roughly equal to the number of smartphones, smart TVs, tablets, wearable computers, and PCs *combined*. [Business Insider]



ehShoes

Energy Harvesting Shoes with Geospatial Location Tracking



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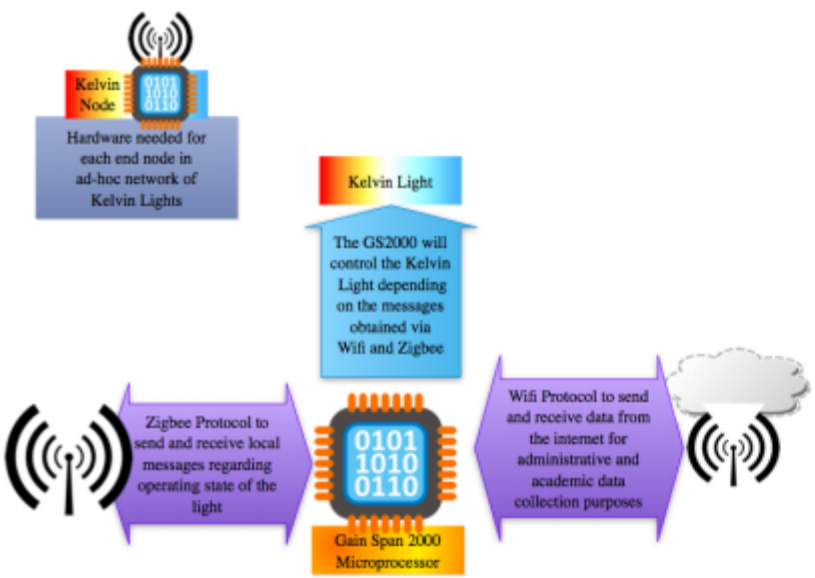
PLE and Rock Py

Personalized Learning Environments

- **A Wireless Ad Hoc Network with Wifi and Zigbee Radios for implementation in Miami-Dade County Public Schools**



FIU | Energy Power & Sustainability
Florida International University

PIRE 2013

- **Rock Py**
  - **A Python Library for Rock Physicists**
  - **Part of the EFFORT Project**

PIRE 2014

- **Writing a Python Wrapper for a set of compression algorithms for MPI, which are written in C.**

edinburgh data-intensive research

Cody Buntain

Computer Science Department +
Human-Computer Interaction Lab
University of Maryland, College Park

COMPUTER SCIENCE
UNIVERSITY OF MARYLAND

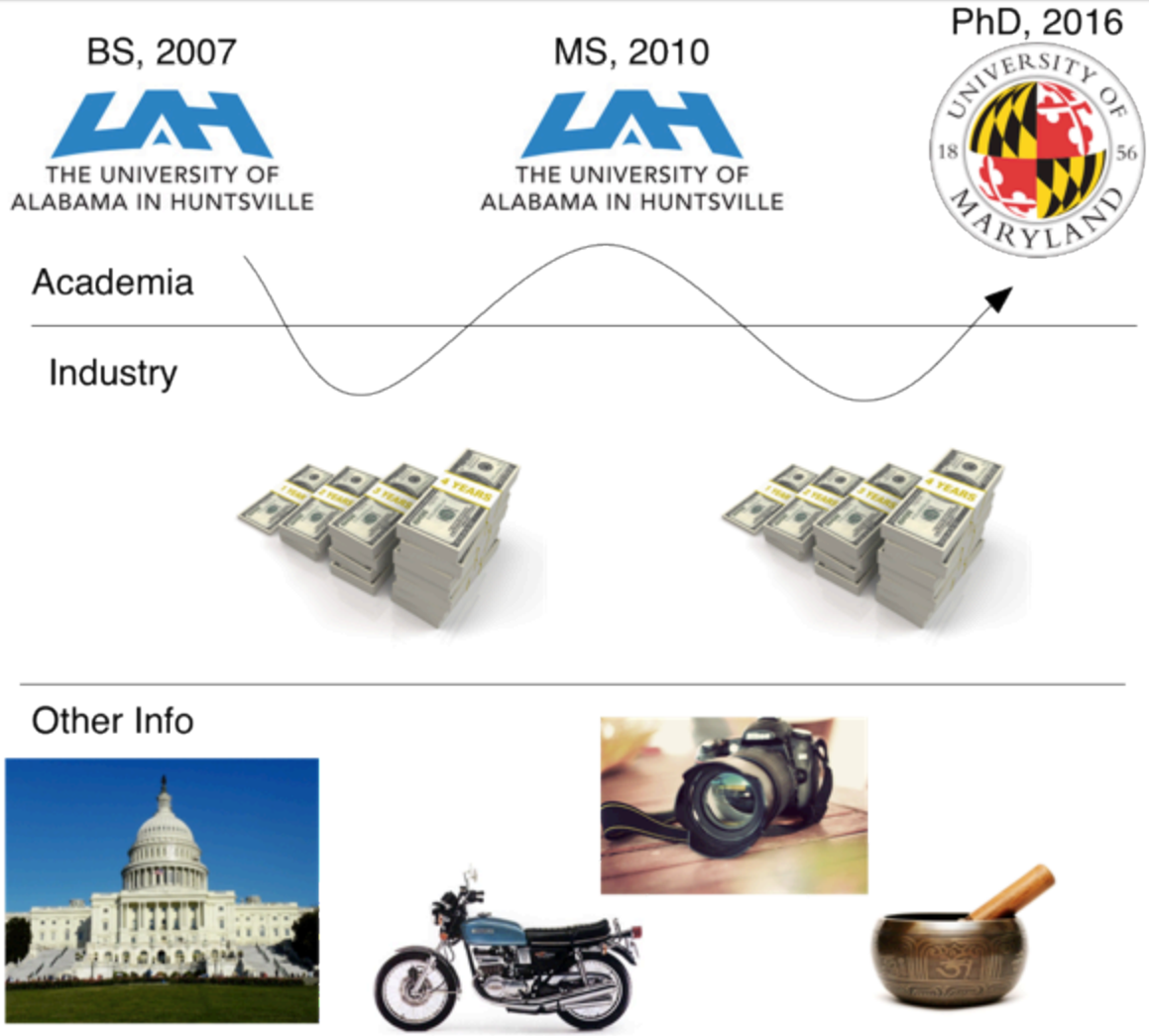
HCIL Human-Computer Interaction Lab

UNIVERSITY OF MARYLAND 18 56

Cody Buntain

Background

- Third-year PhD student, expected graduation in 2016
- Working with Dr. Jen Golbeck of the HCIL
- Researching near real-time event detection from social media streams
- BS in CS/Math in 2007 and MS in CS in 2010 from UAH



Cody Buntain

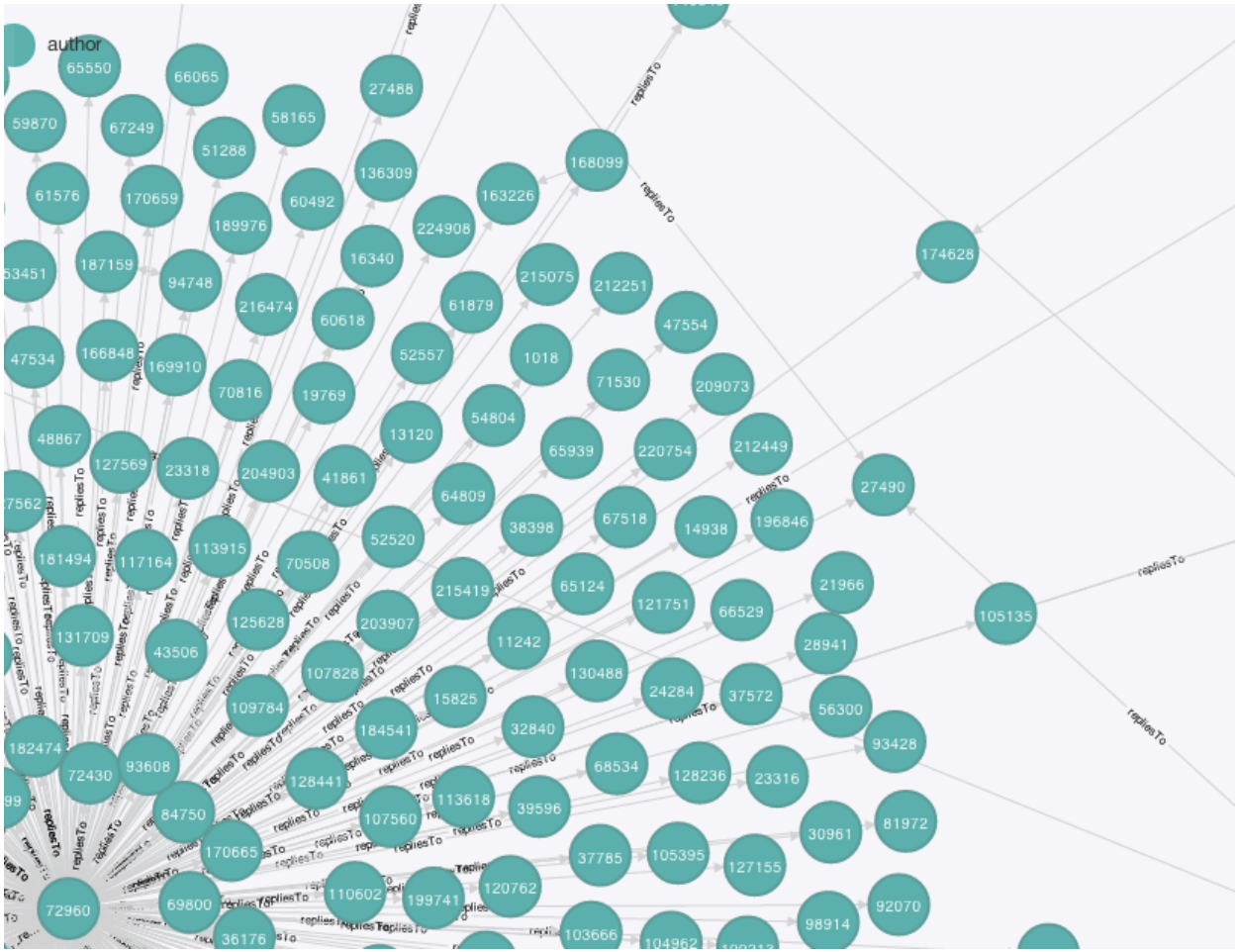
Research Interests

Current Research

- Near real-time event detection from streaming social media sources
- Thematic analysis and event amalgamation
- Credibility and trust evaluation of event data

Other Research

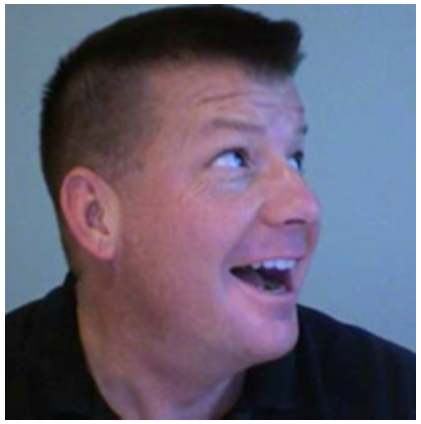
- Social network analysis
- Trustable agents and decision theory



Jeffrey Weekley

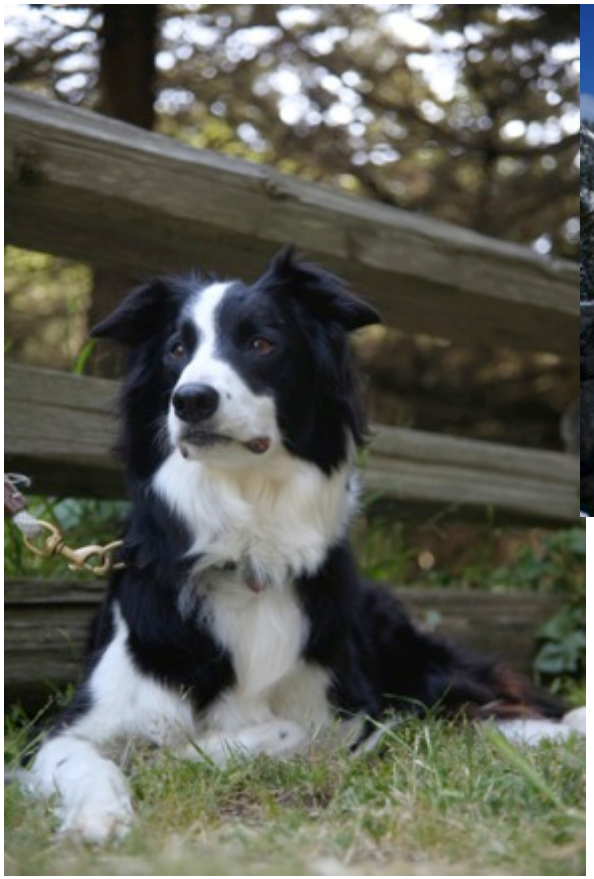
OSDC-PIRE 2014 Workshop Amsterdam

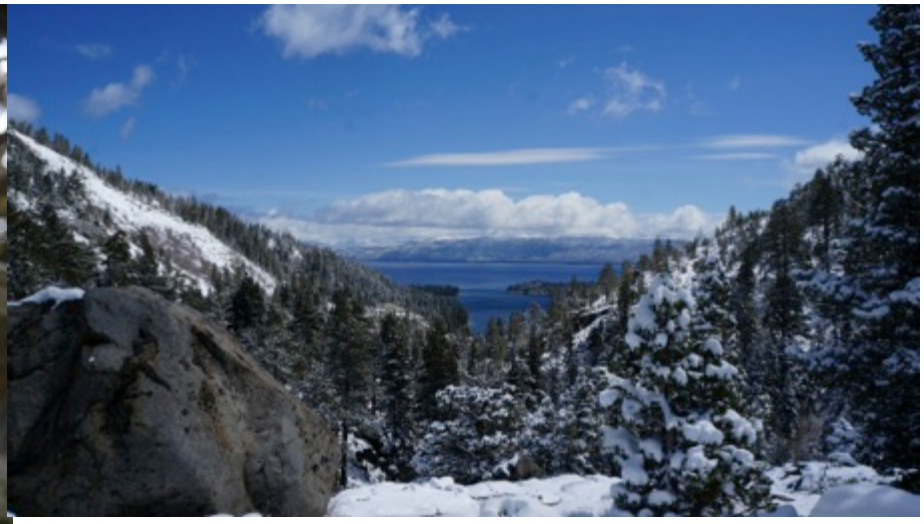
Research Interest



- Scientific Visualization and Visual Analytics
- High-performance Computing (Clusters, Grids, and Advanced Networks)
- SAGE OptIPortal Tiled Rendering Clusters
- Advanced Media Applications, focusing on network-distributed UHDTV (4K/8K) digital video for Science, Engineering and Art
- Preservation, Exchange and Management of Digital Media Materials
- Visual Effects and 3D Graphics

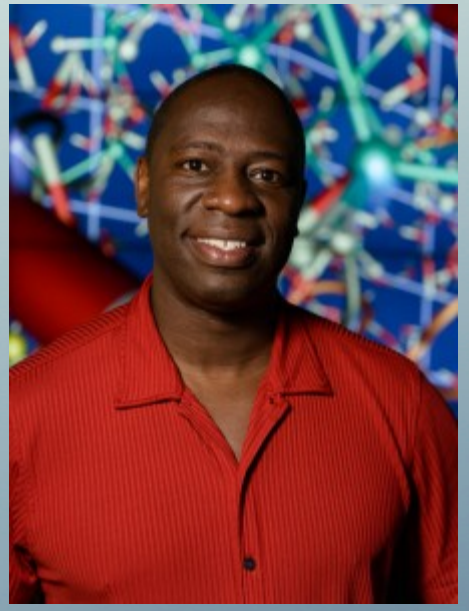
Social Interest





My Border Collie
Outdoor Activities
Fitness
Social Justice
Working on my house (never-ending)

Michael Lewis

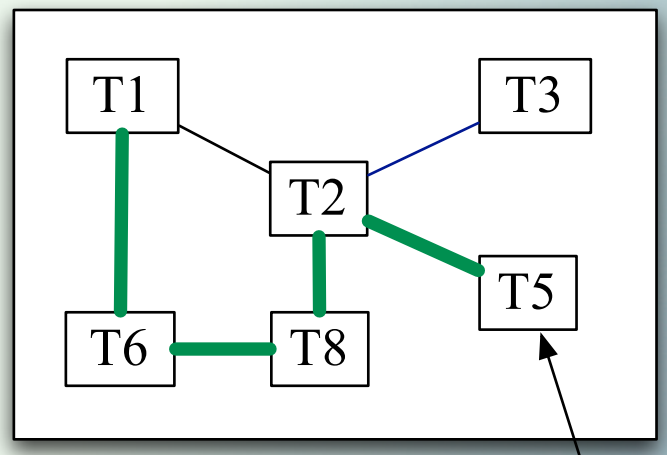


- PhD student at University of Illinois at Chicago
- Grew up in Oak Park – Suburb By Chicago
- Married , was recently our 7 year anniversary
- Life outside of the PhD
  - Enjoy cooking vegan dishes.
  - Playing the piano
  - Doing anything outside where I can enjoy the sun

PhD Research

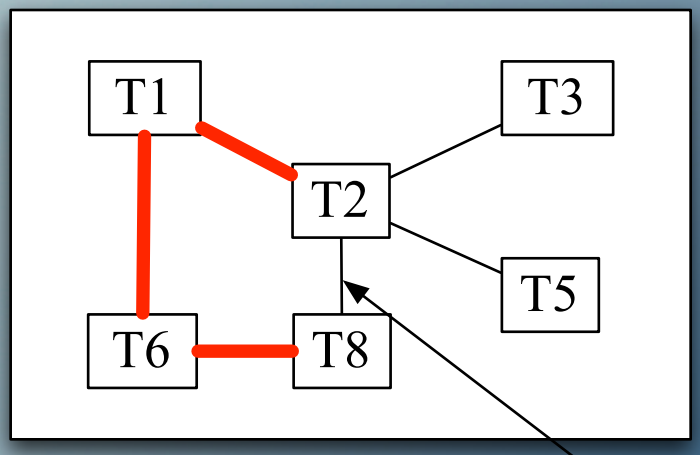
A Path Based Approach For Processing And Storing Large Scale Linked Data

- Eliminate expensive join operations across nodes
- Stream triples to the cloud framework
- Generate a distributed database graph from the streamed data.
- Triple Nodes are sharded across worker nodes
- Connect matching triples, create data joins during streaming



Computational Node 1
Paths from T1

Subject-Predicate-Object Statements

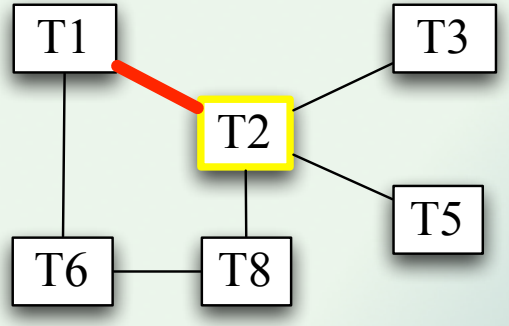


Computational Node 2
Paths from T2

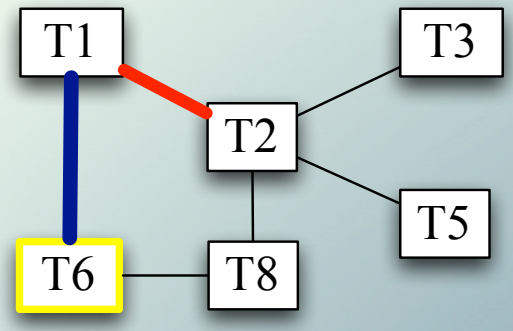
Join link

Path Generation from Triple Root Node T1

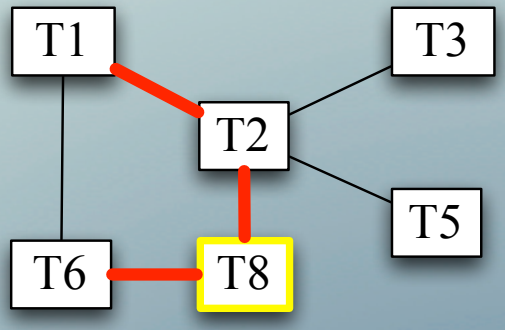
Incoming Triples: T1,T2,T6,T8,T3,T5



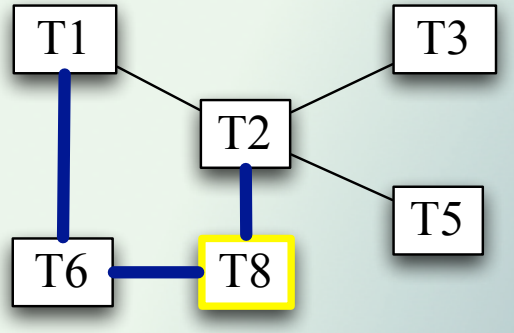
1. Path 1 is created



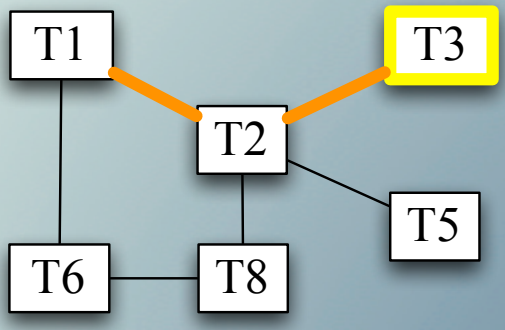
2. Path 2 is created



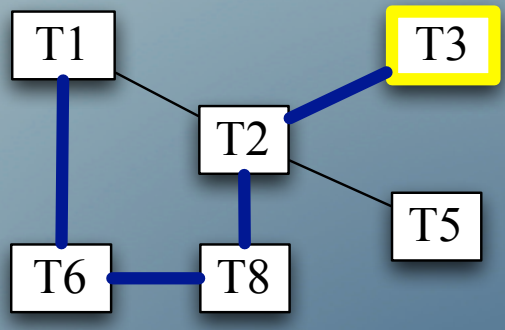
3. Path 1 is extend to T6



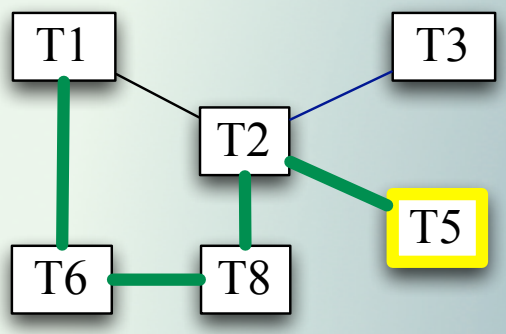
4. Path 2 is extend to T2



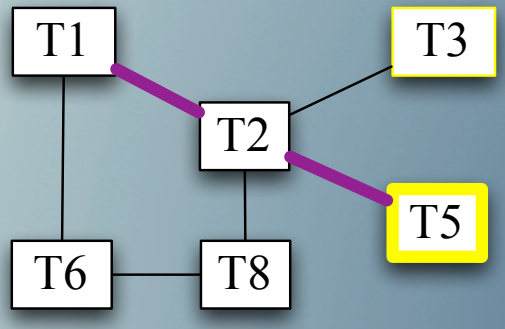
5. Path 3 is created



6. Path 2 is Extended



7. Path 4 is created



8. Path 4 is created

Christopher Natoli

University of Chicago

OSDC-PIRE 2014 Workshop Amsterdam

About

- Born and raised in Brooklyn, New York.
- Finishing a bachelor's degree at the University of Chicago, majoring in statistics, mathematics, and economics.
- Research assistant at Chicago Booth School of Business studying relationships between corruption, stock prices, and popular unrest during Egypt's Arab Spring.
- Studied the nonlinear dynamics of a simple heterogeneous agent-based model of nancial markets.

OSDC-PIRE Research

- Host university: University of Amsterdam.
- Program: OSDC and data interoperability, OSDC and SDN, OSDC and Big Data Issues.
- Implementing and analyzing algorithms to detect anomalies in multidimensional time series.
- In particular detecting \change points", at which the underlying probability distribution changes.

University of Oklahoma Research Domain: Hydrometeorology

- From: Washington, D.C.
- Bachelor's degree: Univ. of Southern California, studying geology
  - Paleo-climate reconstructions of the last 2000 years
  - Paleo-earthquake detection using LiDAR
- Current Master's research: probabilistic flash-flood forecasting using stormscale NWP ensembles
- Current job: National Weather Service (NWS) Warning Decision Training Branch
  - Hydrology focal point for teaching forecasters how to better issue flash flood warnings

Jill Hardy

Personal Background

Kyoto, Japan

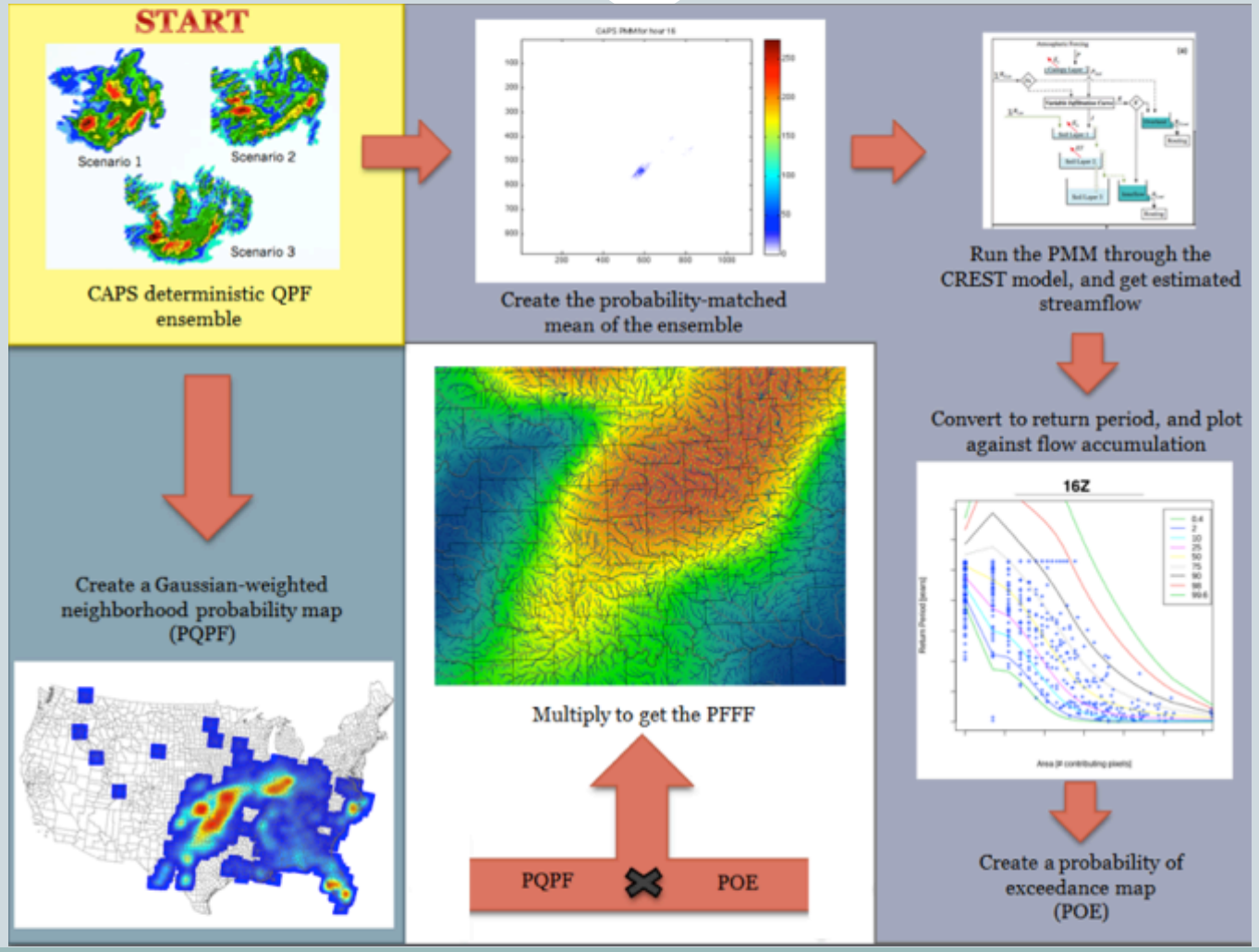
- Travel
- Softball
- Outdoor Activities
- Cooking (and eating!)

Game Reserve north of Windhoek, Namibia

Bryce Canyon National Park in Utah

Golden Gate Bridge in San Francisco, CA

Current Research Interests: Probabilistic Flash Flood Forecasting



Race Clark

Graduate Research Assistant

Race Clark is a Graduate Research Assistant at the Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) and the National Severe Storms Laboratory (NSSL). He is pursuing a PhD in meteorology from the University of Oklahoma and is using NWP model data to develop new flash flood forecasting tools.

Personal Background

Waste gas incinerator controls and stack

M.S. Meteorology at OU (2012)

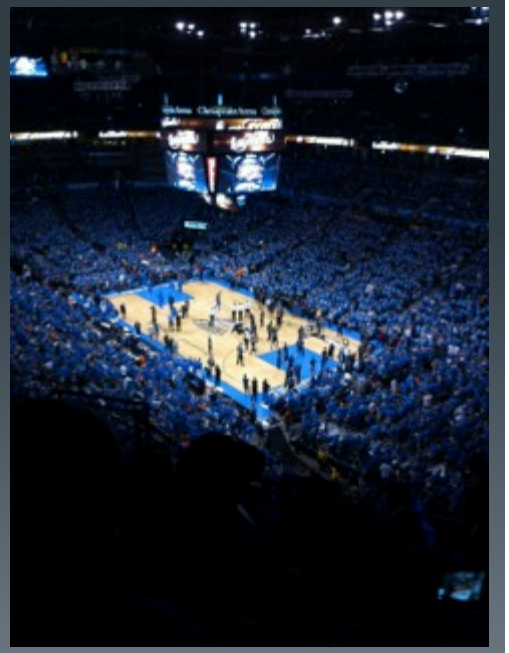
- flash flood observation database
- evaluation of flash flood forecast skill

B.S. Chemical Engineering at Oklahoma State (2010)

- oil and gas production processes
- combustion engineering

Storm Chasing
24 May 2011 EF-4 tornado

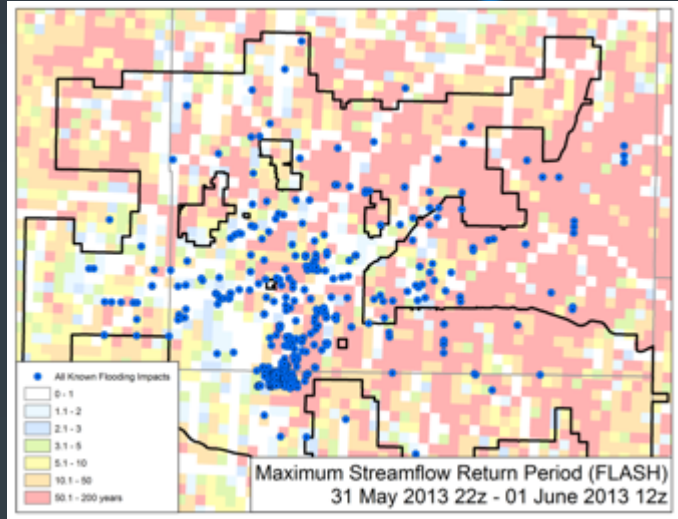
Exploring abandoned places

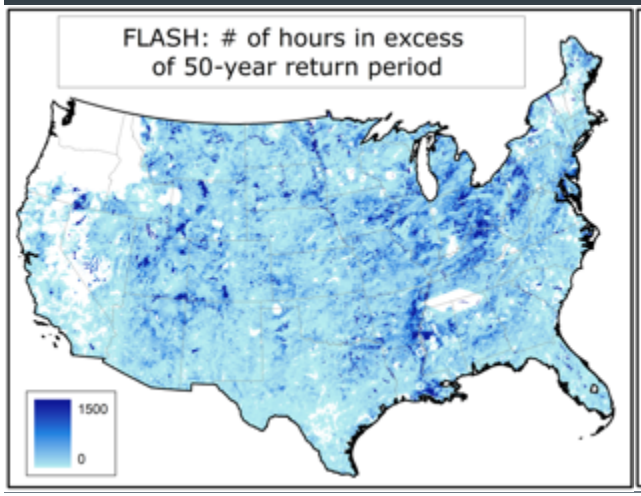


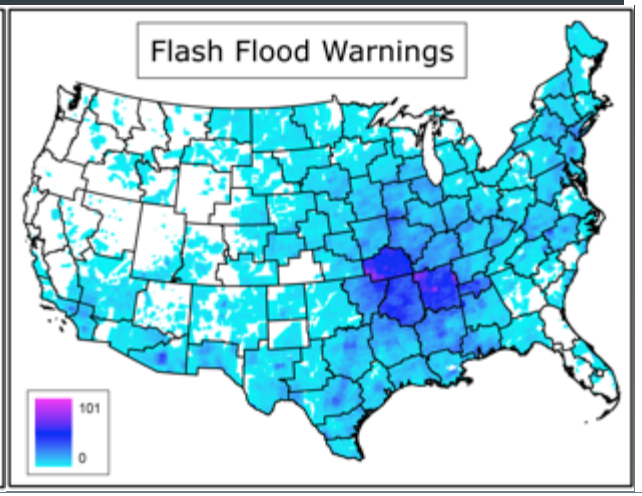
The Oklahoma City Thunder!

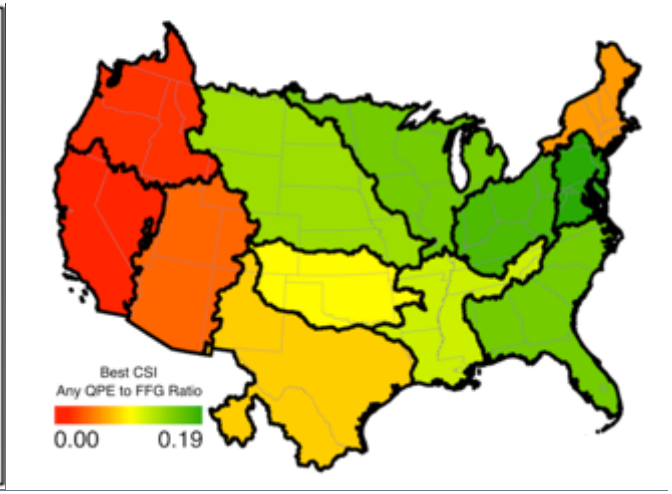
Research Interests

- All things flash flooding!
- Distributed hydrologic models (CREST)
- Expression of modeled flows as return periods (FLASH)
- International capacity building (Namibia Flood Dashboard)
- Research-to-operations (FFaIR and HWT-Hydro)
- Integrating vulnerability and natural hazard information
- Case studies of extreme events











Nathaniel R. Butler

Email: nbutl008@fiu.edu

Field of Study: Telecommunications/Computer Networking

FIU | FLORIDA INTERNATIONAL UNIVERSITY

Nate Butler

- Graduate Student
- Hands-on experience with Cisco equipment
- General Interest:
  - Information Technology
    - Network Security
    - Cloud Computing
    - Wireless Information Systems
  - Electronics
  - Business

FIU | FLORIDA INTERNATIONAL UNIVERSITY

OSDC OPEN SCIENCE DATA CLOUD

Dr. Shantenu Jha

Research Area: Cyberinfrastructure, Computational Science, Distributed Systems

Shantenu is an Assistant Professor at Rutgers University, a member of the Graduate Faculty in the School of Informatics at the University of Edinburgh (UK), and a Visiting Scientist at University College London. His research interests lie at the triple point of Applied Computing, Cyberinfrastructure R&D and Computational Science.

RUTGERS

OSDC OPEN SCIENCE DATA CLOUD

Dr. Shantenu Jha

Research Area: Cyberinfrastructure, Computational Science, Distributed Systems

Shantenu is the PI of RADICAL and the lead investigator of the SAGA project (http://www.saga-project.org), which is a community standard and is part of the official middleware/software stack of most major Production Distributed Cyberinfrastructure — such as US NSF's XSEDE and the European Grid Infrastructure".

RUTGERS

OSDC OPEN SCIENCE DATA CLOUD

Dr. Shantenu Jha

Research Area: Cyberinfrastructure, Computational Science, Distributed Systems

His research has been funded by multiple NSF awards, US National Institute for Health (NIH), US Department of Energy (DoE), as well as the UK EPSRC (OMII-UK project and Research theme at the e-Science Institute). Jha has won several prestigious awards at ACM/IEEE Supercomputing and the International Supercomputing Series. He was awarded a Rutgers Board of Trustees Fellowship for Scholarly Excellence.

RUTGERS

Introduction

My name is William Matthews, a Master of Science graduate from Physics/ Material Science at Fisk University. For my graduate degree, I worked on an alternative mechanism to produce carbon nanotube structures (CNTs).

I graduated with B.A. of Physics and worked 5 years in the biomedical field as a Research Assistant II. Currently,

I perform Atomic Force Microscopy (AFM), X-Ray Photoelectric spectroscopy (XPS), Fluorescence & UV-Vis spectroscopies, GC/MS and LC/MS; lab set-up and medicinal chemistry/polypharmacology analysis for the Modern Analytical Chemistry Lab at Fisk University.

Ni-catalyzed Carbon Nanotubes Synthesis by Diffusion of Amorphous Carbon

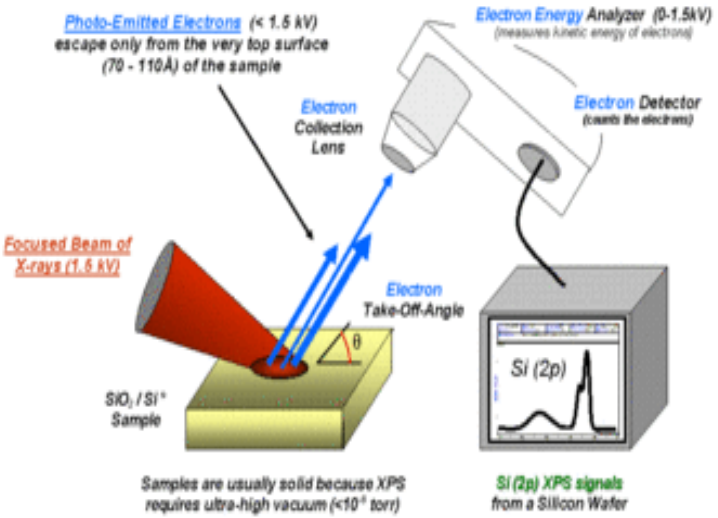
Willie Matthews1,2*, Roland L. Barbosa1,2, Edwina Clarke2, Warren Collins1, and Weijie Lu1,2

Fisk University

Highlights:

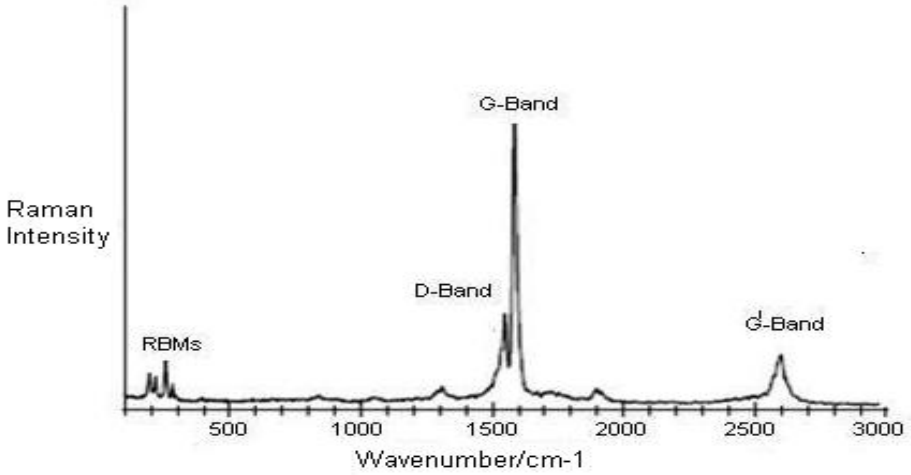
A preceding experiment for semiconductor fabrication to validate Moore's law for transistors…better circuitry and sensing devices.

- Synthesized a better mechanism to generate carbon nanotube structures (CNTs) in comparison to present CVD methods.
- Can manipulate vertical CNTs growth on Silicon.



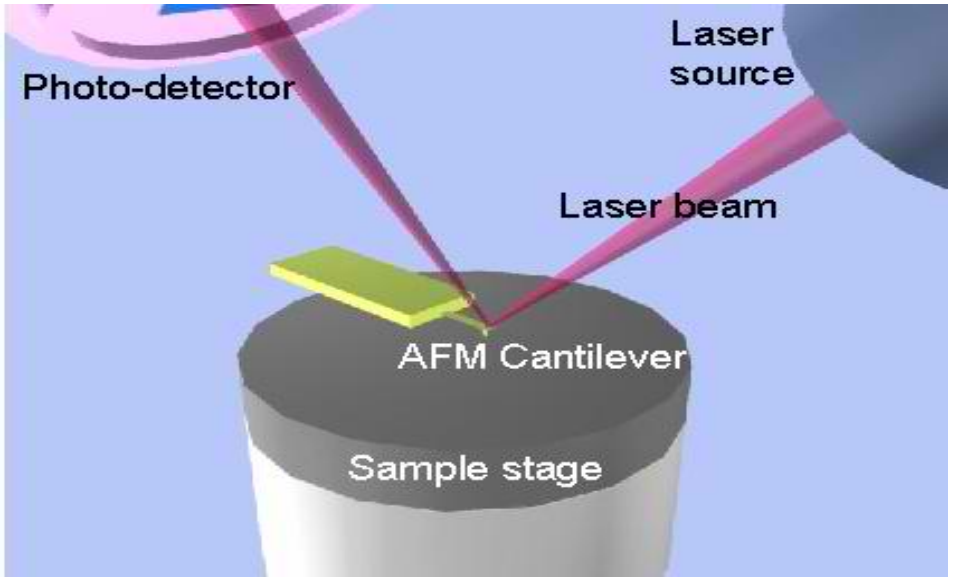
- X-ray photoelectron spectroscopy (XPS)

http://upload.wikimedia.org/wikipedia/commons/thumb/ff



Lit. CNT Parameters:

Adapted from R. Graupner, *J. Raman Spectrosc.*, 2007, **38**, 673



- Atomic Force Microscopy

http://www.livenano.org/page/7/

Alexander Moreno

OSDC-PIRE 2014 Workshop Amsterdam

About

- Current MS CS student at Georgia Tech, studying machine learning
- Worked with Tucker Balch on a memoization library
- Previously worked as a freelance iOS dev
- Undergrad math at University of Chicago

Interest

- Working with TerraCorrelator studying seismic noise correlation using Dispel4Py
- Understand performance of Dispel4Py using the TerraCorrelator, and develop optimisation strategies to speed it up

Fatemeh Abyarjoo

Florida International University

I am a PhD candidate in the Electrical and computer engineering department at Florida International University (FIU). Since 2012, I have been working as a research assistant in Digital Signal Processing (DSP) Laboratory . I got a master degree in Mechatronic engineering and completed my Bachelor's in Computer engineering.

Current project

- The general area of my research is on human body motion detection. We are developing a virtual reality glove to detect human hand motion in three dimensions using inertial and magnetic sensors. Three-axes MEMS accelerometer, gyroscope and magnetometer are attached to an ordinary glove. Based on extracted data from sensors implemented sensor fusion algorithm detects the hand and fingers motion.
- Following the vision of "internet of things (IOT)," we plan to put our sensor-mounted glove, on the map by connecting it to the Cloud. Therefore, the captured/ recorded data from our smart glove can flow through the Cloud to be analyzed and generate meaningful information, knowledge, and wisdom using the Cloud's High-Performance and Big Data facilities to be used for variety of applications.

Research Interest

- Wearable MEMS Sensors
- Digital Signal Processing
- Sensor Fusion
- Internet of Things
- Human Computer Interaction

Keval Shah

OSDC-PIRE 2014 Workshop Amsterdam

Research Interest

THE UNIVERSITY OF CHICAGO

Research Areas: Social Media Analytics

MSc Analytics Candidate at University of Chicago.

His research focuses on developing tools for visualization-based data discovery with social media analytics, especially the evolution of relationships in streaming data.

Keval Shah has information technology background and professional work experience as software developer.

Social Interest

Born and raised in Mumbai, India moved to Chicago, IL in 2011.

Fascinated by the way data, analytics and technology can be used to solve some of world's complex problems.

Enjoys trying out new restaurants and cuisines.

Likes Playing Tennis and living in Chicago.

Miroslav Zivkovic

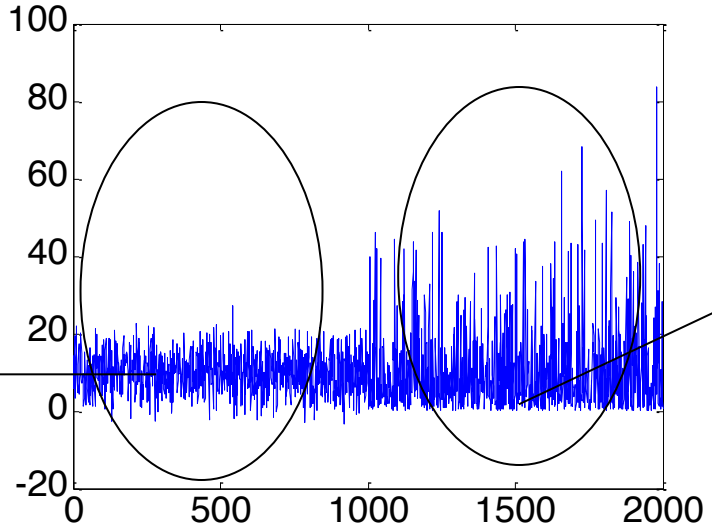
OSDC-PIRE 2014 Workshop Amsterdam

Research Interest

- Software defined networking
  - Multi-domain OpenFlow Topology Exchange
  - Performance engineering (resource allocation, utilization, etc.)

- Big Data**: Anomaly detection using statistical methods (changepoint detection)**

part of data described well by given model X (statistical description)



data structure changed – model X not valid anymore

Social Interest

- Dipl.-ing: Faculty of Electrical Engineering, University of Belgrade, Serbia
- PhD: University of Twente, the Netherlands
- Among other, worked as a Member of Technical Staff at Bell Laboratories (Alcatel-Lucent)
- Recently joined System and Network Engineering group at University of Amsterdam
- **PIRE**: Looking for opportunities to collaborate on AD and SDN

Marcel Worring

OSDC-PIRE 2014 Workshop Amsterdam

Associate Professor Informatics Institute
University of Amsterdam

Co-founder and associate director of the
Data Science Research Center Amsterdam

Research Interest

- Multimedia Analysis
  - Esspecialy focusing on the analysis of image/video data and their relation to other information channels (e.g. social media)
- Visual Analytics
  - Using information visualization to enhance the cognition of humans
- Multimedia Analytics
  - Bringing together multimedia analysis and visual analytics into solutions which create optimal synergy between the human and the machine

Social Interest

- Travelling
  - Have been to around 50 different countries and counting
- Sports
  - I have a black belt in Jiu Jitsu
- Music
  - Like to listen to many different styles of music (pop, easy listening, world music, classical music, jazz, ...)

OSDC-PIRE 2014 Workshop Amsterdam

Cees Hof

Netherlands Biodiversity Information Facility (NLBIF)

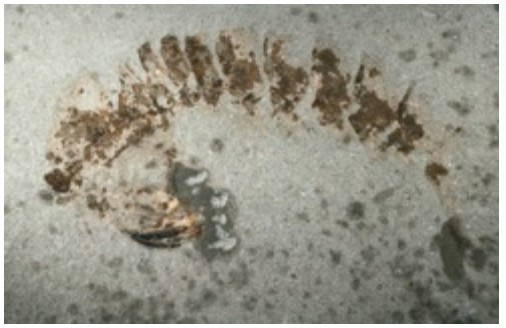
Dutch branch of the Global Biodiversity Information Facility (GBIF)

NLBIF is hosted by the University of Amsterdam

Research Interest

- Started in aquatic ecology / eco-toxicology (MSc)

- Taxonomy / palaeontology / evolutionary history of crustaceans (PhD + Postdoc)

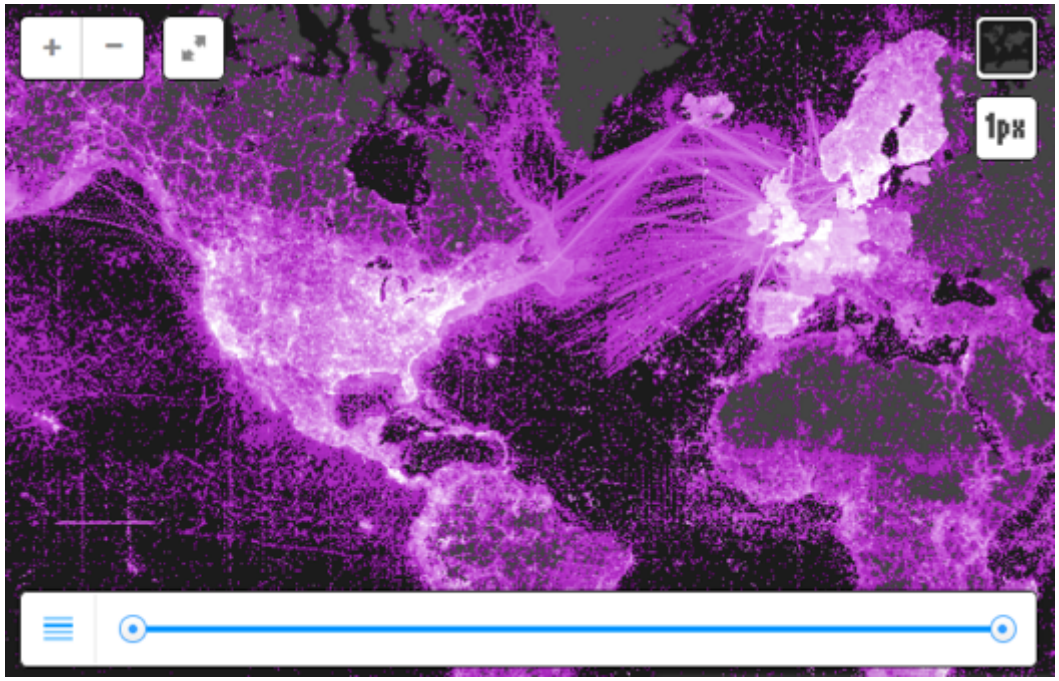


Current:

- Open access biodiversity data
- Building distributed data and data service networks
- Data standardisation, data interoperability, data publishing, data validation, data visualisation
- Social dynamics of data and information networks
- Exploring the aspect of “fit for purpose” of data

Social Interest: Green cities, clean water (for open water swimming…)

Challenges…



+ 400 million open access biodiversity records in GBIF

Data are being used in scientific publications, but what else is in there?

- Advance data statistics…
- Combining with other info domains (geography, climate, infrastructure, etc.)
- Data streamlining…
- “Fit for purpose” how to meet the needs of data users…

Nelson Auner

University of Chicago

OSDC-PIRE 2014 Workshop Amsterdam

THE UNIVERSITY OF CHICAGO

Research Interests

Text Mining

Economic Modeling

Statistical

Finance

With:

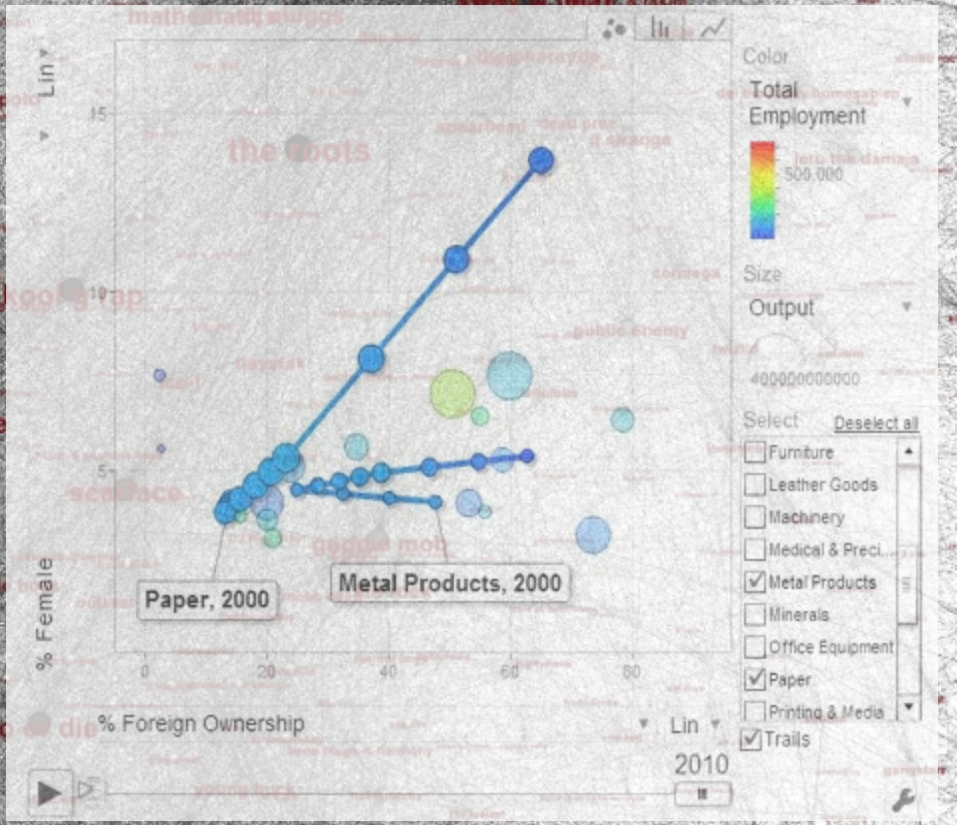
Amazon EC2/

Parallelization/

Efficient algorithms

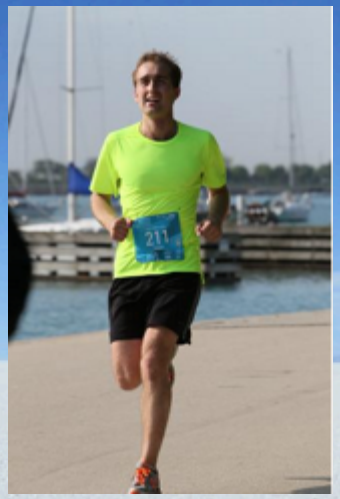
and data storage

Data Visualization



Travel & Sports

korea & running



THE UNIVERSITY OF CHICAGO

University of Nebraska Medical Center

Weiwei Zhang

BS in Computer Science
MA in Optics
MS in Mathematics
PhD student in Bioinformatics

Research Interests

- Identify genetic changes that drive indolent follicular lymphoma into an aggressive transformed lymphoma.
- High-throughput next generation sequencing.
- Analyze human DNA mutation and transcriptome variation through HPC.
- Statistical approaches in analysis.

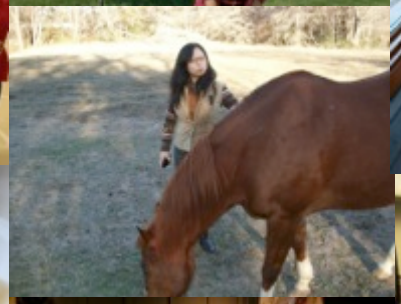
Social Interests

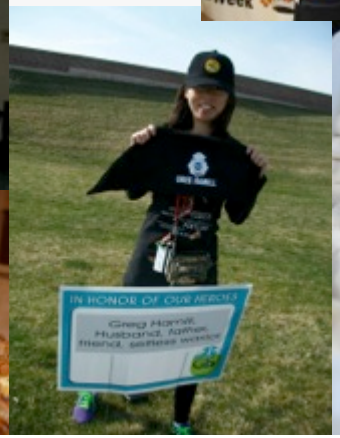
- Cooking
- Exercise
- Animals
- Different cultures
- Countryside








USP

LARC

OSDC PIRE

Fernando Frota Redigolo

LARC – USP

Laboratory of Computer Architecture and Networks

Department of Computer and Digital System Engineering

USP University of São Paulo – Brazil

fernando@larc.usp.br

Who am I ?

- **History**
  - Bachelor's and Master's: USP
  - Split-site PhD: IBM Research (Yorktown Height, NY) & USP

- **Present**
  - Collaborating Professor: USP
  - Research Project Coordinator: LARC-USP

My Research

- **Future Internet**
  - Brazil / EU Joint FI Testbed (FIBRE)
  - Federation with GENI & other FI projects
- **Infrastructure for Collaborative Research**
  - Science DMZs (both inside Brazil and internationally)
  - Collaborative Visualization Portals for High-Definition Content (eh.: 4K, 8K)
- **Cloud Computing**
  - Security
  - Big Data

International Partner - Brazil

Laboratory of Computer Networks and Architecture:

- undergraduate and graduate courses
- research and projects
- Staff: over 50 professionals (Ph.D. and Master candidates, engineers, researchers, and interns)

Some of current projects/partnerships:

- Cloud Computing and Internet of Things
- Mobile Health
- FIBRE (Future Internet testbeds / experimentation between Brazil and Europe)
- SAGE (Scalable Adaptive Graphics Environment)
- OSDC PIRE

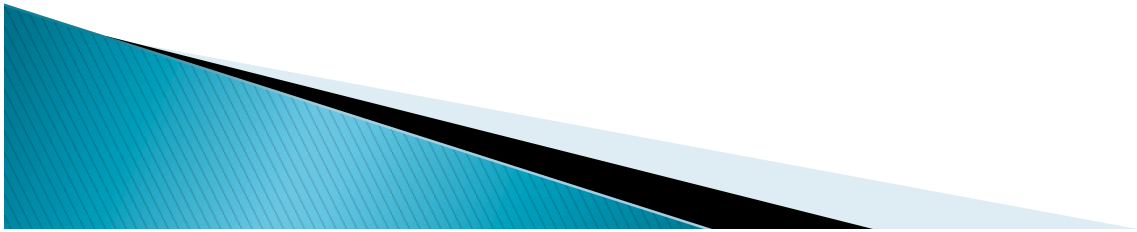
Eric Griffis

Research Domain: Programming Languages, Distributed Systems
University of California Los Angeles

Eric is currently a Masters student at UCLA, where he also completed the BS in Mathematics of Computation in 2011. Before entering higher education, Eric spent a decade in ISP systems automation, Web application development, enterprise software consulting, and entrepreneurial venturing. Eric is a tool maker and inventor by nature. His research focuses on graph models, programming languages, and distributed computing systems as tools for digital information management. More generally, Eric is working to decentralize and enhance the interoperability of common social computing tasks like webmail, instant messaging, and social networking in order to improve operational costs and resilience to catastrophe for small or highly dynamic networks. In the future, Eric plans to dominate high-tech industry and establish new information production/consumption markets through orders-of-magnitude reduction in software system complexity.

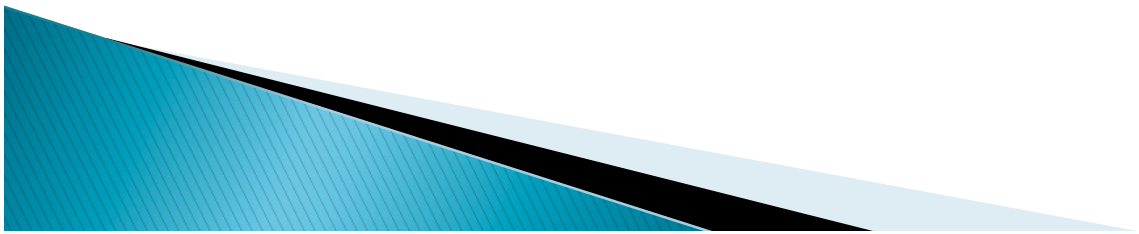
Personal Interests

- Programming Languages
  - Graph Rewriting Models
  - Concurrent / Distributed Primitives
- Distributed Software Systems
  - Social Software
  - Dynamic Visualization



Program Focus

- Dataflow Programming (DISPEL4PY)
  - Formal Specification
  - Provenance Tracking Extension



Vasilka Chergarova

OSDC Coordinator

Florida International University

- Native from Bulgaria
- OSDC-PIRE Fellow 2011 Sao Paulo, Brazil
- Graduated with a BS in Computer Science from FIU
- MS Management of Information Systems FIU
- Interested in BigData analytics and data visualization
- Planning to start PhD in Medical IT

Interest

- Travel – I did travel for around 5-6 years
- Art (sculpture, painting, photography, art craft)
- Sport (from marshal art to Zumba)

SCOTT J. KRIEDER

- 4th year Computer Science Ph.D. Student at Illinois Institute of Technology
- Research Assistant in the DataSys Lab
- Teaching Assistant for the Department of Computer Science
- Guest Graduate Researcher at Argonne National Laboratory

DataSys
Data-Intensive Distributed Systems Laboratory

ILLINOIS INSTITUTE OF TECHNOLOGY

Argonne NATIONAL LABORATORY

History

- B.S.C.S., Creighton University, 2010
- M.S. Computer Science, Loyola Chicago, 2011
- Ph.D. Computer Science, Illinois Institute of Technology, May 2016 (tentative graduation)

Creighton UNIVERSITY

LOYOLA UNIVERSITY CHICAGO

ILLINOIS INSTITUTE OF TECHNOLOGY

Research/Other Interests

- Many Task Computing on Hardware Accelerators
- ○ NVIDIA GPUs, Intel Xeon Phi
- Other: High Performance Computing
- Cloud Computing Accelerators and Coprocessors
- Interests: Fencing, Running, Golf, Traveling, and Coffee.

Creighton UNIVERSITY

LOYOLA UNIVERSITY CHICAGO

ILLINOIS INSTITUTE OF TECHNOLOGY

Massimo Argenti

massimo.argenti@esa.int

16 June

OSDC-PIRE 2014 Workshop Amsterdam

Massimo Argenti

European Space Agency consultant

European Commission projects:

- DEWS (Tsunami Alerting)
- CHORIST (Civil Protection Alerting)
- ISTIMES (Sensor network SWE)
- GENESI-DEC (Data federation infrastructures)
- ENVRI (ESFRI harmonised solutions)
- SCIDIP-ES (LTDP reference platform)

Massimo Argenti

Research interests:

- Semantic ontologies & infrastructures
- Long term data preservation
- Metadata & data harmonisation
- Social alerting

Who am I

Now:

Postdoctoral researcher in the Informatics Institute, Universiteit van Amsterdam, Systems and Network Engineering group

Earlier:

- Rijksuniversiteit Groningen (HPDC expert),
- Vrije Universiteit Amsterdam (PhD, MSc)
- Politechnica University, Bucharest, Romania (BSc)

Expertise and interests:

- Cloud computing
- User-centric, application-centric infrastructure
- Stochastic scheduling
- Pareto-optimality of application deployment

Hobbies:

- Jewellery making
- Dancing
- Travelling

OSDC-PIRE interests

- Tools interoperability: from ENVRI to OSDC
  - Weiwei, co-supervised with Massimo
- Data interoperability: within OSDC data sets
  - Willie

OPEN SCIENCE DATA CLOUD

PARTNERSHIP FOR **INTERNATIONAL RESEARCH** AND EDUCATION

THANK YOU FOR THE INVITATION!!!