Center for Science of Information
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Research Profiles

Undergraduate, Graduate, & Post-Doctoral members

Center for the Science of Information
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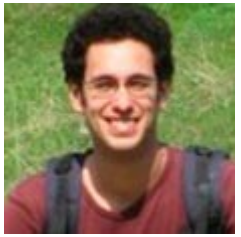
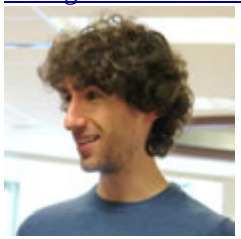
Document is keyword searchable (CNTL + F)

Name	Email	University	Advisor	Photo/Website	Research Area
Himanshu Asnani	asnani@stanford.edu	Stanford- Electrical Engineering	Tsachy Weissman, Balaji Prabhakar	http://www.stanford.edu/~asnani/	My research focuses on certain problems in Shannon Theory in two areas that have been inspired by and benefitted from control theoretic notions and mathematical tools: (A) Action in Information Theory: 1. Probes 2. Feedback logic (B) Sequential Encoding-Decoding Problems
Jose' Azar	jazar@princeton.edu	Princeton University- Economics	Christopher Sims	https://sites.google.com/site/joseazar/	Modeling connections among firms generated by common ownership by large investment funds and by common board membership. His work applies network theory and recently developed methods for inference about networks. I am a 5th year Ph.D. student in Economics at Princeton University. My research interests include Financial Economics, Macroeconomics, and Industrial Organization.
Yuval Benjamini	yuvalb@stat.berkeley.edu	UC Berkeley - Statistics	Bin Yu	http://www.stat.berkeley.edu/~yuvalb/YuvalWeb/Home.html 	Neuroscience, DNA Sequencing

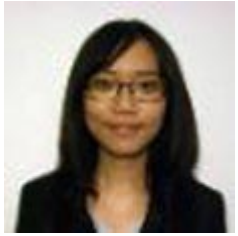
Jonathan Blair (Undergraduate)	jdblair@purdue.edu	Purdue- Mathematics	Mark D. Ward		Number theory, the idea of a Rational Distance Set.
Guy Bresler	gbresler@eecs.berkeley.edu	Berkeley- Electrical Engineering	David Tse	http://www.eecs.berkeley.edu/~gbresler/Main.html 	I work on information theory and the problem of communication subject to interference, as well as applied probability and mathematical biology.
Christina Cabrera (Undergraduate)	ccabrera@brynmawr.edu	Bryn Mawr- Mathematics and Computer Science	CSoI Fellow		
Luis Campos	luis@stat.berkeley.edu	UC Berkeley - Statistics	Bin Yu	http://www.stat.berkeley.edu/~luis/index.html	Luis worked on collaborative research in many topics including Fragile-X syndrome, Premutation, Fragile X-associated Tremor/Ataxia Syndrome (FXTAS), Epilepsy, Medicine, Genetics and Genomics. He also worked on independent methodology research in clustering, variable selection and high dimensional/small sample methods. Luis managed a relational database for the NeuroTheraputics Research Institute (NTRI).

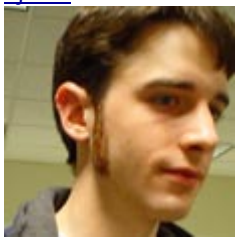
Marianne Catanho	catanho1@illinois.edu	University Illinois - Urbana-Champaign		http://mariannejcatanho.wordpress.com/about-me/	
Yuxin Chen	yxchen@stanford.edu	Stanford- Electrical Engineering	Andrea Goldsmith	http://www.stanford.edu/~yxchen/	Network Algorithms, High-dimensional Estimation, Wireless Networks and Communications, Sampling Theory, Statistical Learning, Graphical Model, Convex Analysis and Optimization
Yeow-Khiang Chia	ykchia@stanford.edu	Stanford- Electrical Engineering	Tsachy Wiessman	N/A	N/A
Raeed Chowdhury (Undergraduate)	chowdhu1@illinois.edu	Howard	Robert Rwebangira	N/A	

Tolga Cukur (Post-Doc)	tolgacukur@gmail.com cukur@berkeley.edu	UC Berkeley- Neuroscience	Jack Gallant	http://www-mrsrl.stanford.edu/~cukur/index.html 	Neuroscience, biomedical imaging and signal processing. the development of novel data acquisition and reconstruction techniques for rapid magnetic resonance imaging (MRI)
Rhonda Davis (Undergraduate)	rhonda.davis@howard.edu	Howard	Robert Rwebangira	N/A	N/A
Frank DeVilbiss	fdevilbi@purdue.edu	Purdue University- Chemical Engineering	Ramki		Chemical Engineering - cell problems
Ronald Doku (Undergraduate)	rdoku@howard.edu ronald.doku@yahoo.com	Howard- Computer Science	Robert Rwebangira		Came up with a Pairing Algorithm for De Novo Sequencing of Tandem Mass Spectra
Andrew Drucker	adrucker@mit.edu	MIT- EECS	Scott Aaronson	http://people.csail.mit.edu/andyd/home.html 	I have broad interests within computational complexity.

Amin Emad	emad2@illinois.edu amin.emad@gmail.com	U. of Illinois- Electrical and Computer Engineering	Olgica Milenkovic		Termed symmetric group testing. Information-theoretic approach. Notion of disjunct (zero-false-drop) and separable (uniquely decipherable) codes to the case of symmetric group testing. Probabilistic methods, and provided construction methods based on coding theoretic ideas.
Yi Fang	fangy@purdue.edu fangy@cs.purdue.edu	Purdue- Computer Science	Luo Si	http://www.cs.purdue.edu/homes/fangy/ 	large-scale information retrieval, machine learning and data mining
Farzaneh Farhangmehr	fafarhan@ucsd.edu farzaneh@farhangmehr.net	UC San Diego- Mechanical and Aerospace Engineering	Shankar Subramaniam	http://farhangmehr.net/aboutme.html 	"My research focuses on information theory and its applications in biology. My main area of interests are in information theoretic-based methods to reconstruct biological networks from micro-array data and scale up complex systems by analyzing statistical dependency of edges and removing the weakest nodes. I am currently developing a reduced model of protein-cytokine network by applying the above-mentioned methods."
Michael Forbes	miforbes@mit.edu	MIT- Computer Science	Scott Aaronson	http://www.mit.edu/~miforbes/ 	His current focus is in the theory of computation, including algebraic and quantum models. He has proof-read a forthcoming textbook, graded a graduate class, and is currently looking forward to teaching a recitation in the fall.

Mohan Gopaladesikan	mohang@purdue.edu	Purdue- Statistics	Mark D. Ward		Combinatorial constructions, asymptotic and various techniques involved in computing it
Pulkit Grover (Post-Doc)	pulkit@stanford.edu	Stanford- Electrical Engineering	Andrea Goldsmith	http://www.stanford.edu/~pulkit/index.html	http://www.stanford.edu/~pulkit/research.html
David Harris (Undergraduate)	jays_423@msn.com	Howard - Computer Science	REU student with Robert Rwebangria	N/A	
April Harry	aharry@purdue.edu	Purdue- Statistics	No advisor yet		Statistics problems

Adnan Hassan	hassana@purdue.edu	Purdue- CS	Grama	http://www.cs.purdue.edu/people/graduate_students/hassana/ N/A	
Min Huang	huang3@purdue.edu	Purdue- Computer Science	Vernon Rego		Steganography and Steganalysis, Hiding based on stochastic, context-sensitive grammars, Blind steganalysis and machine learning
Wanya Huang (Undergraduate)	huang139@illinois.edu				
Yu-Jay Huoh	yjhuoh@stat.berkeley.edu	UC Berkeley- Statistics	Cari Kaufman		Performing sensitivity analysis on slow-to-evaluate stochastic functions. The methodology developed is intended to be applied on a 3-dimensional simulator of flow through fracture networks.
Alexander Huth (Undergraduate)	alex.huth@berkeley.edu	UC Berkeley- Neuroscience	Jack Gallant		Neuroscience

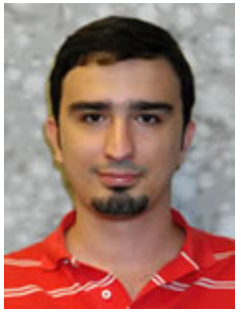
Amir Ingber (Post-Doc)	N/A	Stanford- Electrical Engineering	Andrea Goldsmith	N/A	N/A
Varun Jog	jogvarun@gmail.com	UC Berkeley-EECS	Venkat Anantharam	https://plus.google.com/102346526903566003430#102346526903566003430/about	N/A
Brendan Juba (Post-Doc)	bjuba@alum.mit.edu	MIT- Computer Science and Artificial Laboratory (CSAIL)	Madu Sudan	http://people.csail.mit.edu/bjuba/ 	My primary interest is computational complexity theory; I am particularly interested in applications of complexity theory, such as in the development of our theory of universal communication. (For more, see our paper: PDF|PS; for *even more*, see my thesis.) I have also spent some time working toward theories of consciousness and understanding.
Sudeep Kamath	sudeep.kamath@gmail.com	UC Berkeley- Electrical Engineering	Venkat Anantharam, David Tse	http://www.eecs.berkeley.edu/~sudeep/	Sudeep joined the EECS department at UC Berkeley as a graduate student in August 2008. He is co-advised by Prof. David Tse and Prof. Venkat Anantharam.

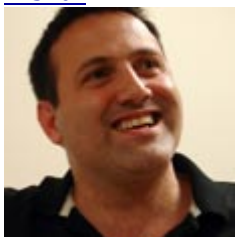
Venkat Kartik	kvenkat@stanford.edu kartikv6@ gmail.com	Stanford- Electrical Engineering	Tsachy Wiessman	http://www.stanford.edu/~kvenkat/ 	Wireless Communication & Networks, Information Theory, Algorithms, Distributed Control
Jeong-Ho Kim	jk@princeton.edu	Princeton University- Economics	Christopher Sims		linear-quadratic capital asset pricing model with a mutual information constraint connecting portfolio choices to information about returns
Kyung Dae Ko (Post-Doc)	kyung@scs.howard.edu	Howard- Computer Science	Chunmei Liu	N/A	N/A
Giorgos Kollias (Post-Doc)	gidiko@gmail.com giorgos@cs.purdue.edu	Purdue- Computer Science	Wojciech Szpankowski, Ananth Grama	http://www.cs.purdue.edu/people/faculty/gkollias/ 	dynamical systems, Problem Solving Environments, numerical linear algebra, asynchronous iterative methods, graph analysis and parallel computing

Victoria Kostina	vkostina@princeton.edu	Princeton- Electrical Engineering	Sergio Verdu	http://www.princeton.edu/~vkostina/About_Me.html	Information-theoretic, data compression in the finite block length regime.
Ankur Kulkarni (Post-Doc)	akulkar3@illinois.edu	UIUC- Electrical & Computer Engineering	P.R. Kumar	https://sites.google.com/site/kulkarniankur/	Computational neuroscience, particularly, understanding the physical principles that underlie neuronal function. His previous work was in game theory, mathematical programming and applied probability.
Gowtham Kumar	gowthamr@stanford.edu	Stanford- Electrical Engineering	Tom Cover	http://www.stanford.edu/~gowthamr/index.html	• Network Information Theory • Coordination via Communication • Information Theory and Gambling • Wireless Networks
Timothy LaFond	tlafond@purdue.edu tlafond@cs.purdue.edu	Purdue- Computer Science	Jennifer Neville		Developed randomization tests for detecting and distinguishing social influence and homophily effects in evolving network data.

Jaewoo Lee	lee748@purdue.edu	Purdue- CS	Chris Clifton	http://www.cs.purdue.edu/people/graduate_students/lee748/	
Emily Levine (Undergraduate)	eslevine@brynmawr.edu	Bryn Mawr- Computer Science and Biology	Deepak Kumar, Peter Brodfuehrer		models of epidemic networks
Hongwei Li	hwli@stat.berkeley.edu	UC Berkeley- Statistics	Bin Yu	http://www.stat.berkeley.edu/~hwli/	N/A
Han-Hsuan Lin	hanmas@mit.edu	MIT- Mathematics	Peter Shor	N/A	Quantum computing

Diakite Macire (Undergraduate)	macired@scs.howard.edu	Howard - Computer Science	Legand Burge	N/A	
Abram Magner	anmagner@purdue.edu	Purdue- Computer Science	Wojciech Szpankowski	http://www.cs.purdue.edu/people/graduate_students/anmagner/	information theory (specifically, a problem related to compression of graphical structures
Alexandros Manolakos	amanolak@stanford.edu	Stanford- Electrical Engineering	Tom Cover	N/A	N/A
Julien Marial (Post-Doc)	julien@stat.berkeley.edu	UC Berkeley- Statistics	Bin Yu	N/A	Feature selection in directed acyclic graphs. Address problem of predicting the response of neurons from the V4 area of the visual cortex, given a stimuli consisting of a sequence of natural images shown to a subject. Other projects (still preliminary) include - links between sparse recovery bounds in statistics and channel capacity - smooth analysis of the Lasso.
Alexandra Marrero (Undergraduate)	amarrero@brynmawr.edu	Bryn Mawr - Psychology (minor in Computer Science)	CSoI Fellow	N/A	

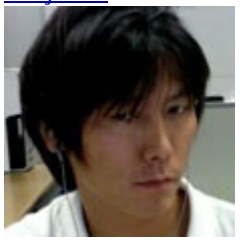
Reza Mirghaderi	reza.mirghaderi@gmail.com rezam@stanford.edu	Stanford- Electrical Engineering	Andrea Goldsmith	http://www.stanford.edu/~rezam/ 	· Wireless Communications · Information Theory · Economics of Information
Vinith Misra	vinith@stanford.edu	Stanford- Electrical Engineering	Tsachy Weissman, Abbas El Gamal	http://www.stanford.edu/~vinith/Biography/biography.htm 	"Distributed Scalar Quantization for Computing: High Resolution Analysis and Extension", Transactions on Information Theory. Significant progress made on establishing and proving a "capacity" for deterministic channels under finite-state encoding and decoding constraints.
Shahin Mohammadi	mohammadi@purdue.edu	Purdue- Computer Science	Ananth Grama		using synthetic genetic interactions and their application to uncovering system level organization of functional pathways in baker's yeast, Saccharomyces cerevisiae.
Seyed-Abolfazl Motahari (Post-Doc)	motahari@berkeley.edu motahari@eecs.berkeley.edu	UC Berkeley- EECS	David Tse	N/A	N/A

Kavitha Mukund	kmukund@ucsd.edu	UC San Diego- Bioinformatics	Shankar Subramaniam	N/A	My work currently focuses on investigating the functional mechanisms underlying the dystrophic skeletal muscle through a comparative co-expression network analysis, utilizing methods implemented in Weighted Gene Co-expression Network Analysis (WGCNA).
Hariharan Narayanan (Post-Doc)	hnarayan@princeton.edu	Princeton- Electrical Engineering	Sanjeev Kulkarni	http://www.princeton.edu/ee/people/display_person/?netid=hnarayan	N/A
Albert No	albertno@stanford.edu	Stanford- Electrical Engineering	Tsachy Weissman, Abbas El Gamal	N/A	1. Reliability of a Binary Channel with Feedback In channel uncertain binary messaging 2. Estimation on Poisson Channel 3. redundancy capacity theory, the optimal bayesian filter for several cases. 4. Develop real time Positron Emission Tomography(PET)
Yair Noam (Post-Doc)	noamyair@stanford.edu	Stanford- Electrical Engineering	Andrea Goldsmith	http://postdocs.stanford.edu/profiles/frdActionServlet?choiceId=facProfile&fid=19401 	N/A

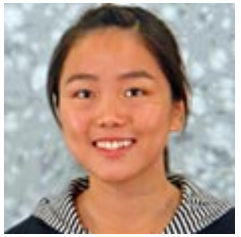
Idoia Ochoa-Alvarez	iochoa@stanford.edu	Stanford- Electrical Engineering	Tsachy Wiessman	http://www.stanford.edu/~iochoa/	Information theory, coding, communications and signal processing.
Oluwaseun Ademuwagun (Undergraduate)	oademuwagun@yahoo.com	Howard - Computer Science	REU student with Robert Rwebangria		Predicting Marked Code-switching in African Languages
Rotem Oshman	rotem@mit.edu	MIT- EECS	Nancy Lynch	http://people.csail.mit.edu/rotem/	mobile ad-hoc networks; computational power of such networks, complexity of performing classical distributed tasks such as reaching consensus, electing a leader, and computing functions of inputs to the nodes.
Stephanie Palmer (Post-Doc)	sepalmer@princeton.edu	Princeton-Physics/Economics		N/A	N/A

Philip Ritchey	pritchey@cs.purdue.edu	Purdue- Computer Science	Vernon Rego	http://www.cs.purdue.edu/people/graduate_students/pritchey/ http://web.ics.purdue.edu/~pritchey/	Steganography and Steganalysis, Artificial Intelligence, MultiAgent Systems, Machine Learning, Philosophy and Science
Pablo Robles-Granda	problesg@purdue.edu	Purdue- Computer Science	Jennifer Neville	N/A	N/A
Wardell Samotshozo (Undergraduate)	wardell.samotshozo@howard.edu	Howard - Computer Science	REU student with Robert Rwebangria	N/A	
Angik Sarkar	sarkara@purdue.edu	Purdue- ECE	Supriyo Datta	http://web.ics.purdue.edu/~sarkara/	nanoelectronics and entails work in spintronics, magnetism and science of information. Magnetic based logic devices, which store information in nanomagnets, are being widely investigated as potential low power alternatives to charge-based digital electronics. (updated online by Mike Atwell 111101)
Srikanth Sastry (Post-Doc)	sastry@csail.mit.edu	MIT- CSAIL	Nancy Lynch	http://srikanth.sastry.name/about-srikanth-sastry.html	My research interests include distributed computing, fault tolerant algorithms, wireless systems, and the theory of computation.

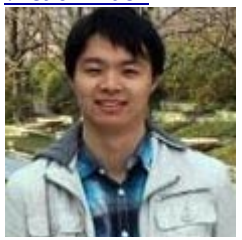
Arpita Sen	sen4@purdue.edu	Purdue- Biology	R. Claudio Aguilar		(1). Deregulated epsin function disrupts cell proliferation and leads to abnormalities in cell division, a hallmark of cancer and other developmental diseases. (2). We also devised a method to estimate the severity of this cell division defect based on the concept of circularity.
Melanie Shafer (Undergraduate)	mshafer@brynmawr.edu	Bryn Mawr- Computer Science	CSoI Fellow	https://plus.google.com/107405200584169501008#107405200584169501008/about 	
Shang Shang	sshang@princeton.edu	Princeton- Electrical Engineering	Sanjeev Kulkarni, Paul Cuff	http://www.princeton.edu/ee/people/display_person/?netid=sshang 	Rranking theory, with general exam project " Distributed Rank Aggregation ". "Incorporating Social Influence in Recommendation Models".Validation of the mathematic model of the recommendation models.
Emily Shen	eshen@csail.mit.edu	MIT-Electrical Engineering and Computer Science	Ron Rivest	http://www.csail.mit.edu/user/1158 N/A	Theory-bio

Nima Soltani	nsoltani@stanford.edu	Stanford- Electrical Engineering	Andrea Goldsmith	https://plus.google.com/101771782945202405011#101771782945202405011/posts	Research topic is trying to apply information theory/communications concepts to neuroscience. I am also setting up a project with the university's sleep clinic, applying the directed information methods Todd Coleman presented at the CSoI summer school to sleep EEG, specifically to find a trajectory/causality relationship across electrodes for a particular event (sleep spindles) found in sleep EEG.
Hyun-Seob Song (Post-Doc)	song@atom.ecn.purdue.edu songh@ecn.purdue.edu	Purdue- Chemical Engineering	Doraiswami Ramkrishna	https://engineering.purdue.edu/ChE/People/ptProfile?id=51679	Develop Ideas for the use of Information Theory on mining metabolic data towards conformance to a detailed Cybernetic Theory of Metabolism.We are now in the stage of formulating a basic problem of dynamic model-based gene clustering.
Choi Tai Jung	tjchoi@ucsd.edu	UC San Diego	Shankar Subramaniam	http://maeresearch.ucsd.edu/~tjchoi/ 	Inherently, biological systems have stochasticity due to spatial inhomogeneity and small system volume. Thus, we have developed some stochastic solving method for reaction-diffusion(-advection) processes for various biological systems. Now, we try to apply operator splitting algorithm to leukocytes rolling/adhesion/transmigration/chemotaxis processes in microcirculation system.

Christine Task	ctask@purdue.edu	Purdue- Computer Science	Chris Clifton		Differentially private graph algorithms. Problem domain, read the background material, picked a few specific problems to focus on and found potential solutions for a couple of them.
Mikhail Tikhonov	tikhonov@Princeton.edu	Princeton-Physics/Economics	William Bialek, Thomas Gregor	http://tglab.princeton.edu/people/	Biophysics, his interests lie at the intersection of statistical physics, math, information theory and hopefully real life, which is why he finally settled on biophysics here at Princeton.
Madars Virza	madars@mit.edu madars@gmail.com	MIT-Electrical Engineering and Computer Science	Ron Rivest (?)	http://www.csail.mit.edu/user/2615 http://madars.console.lv/	Theory-bio
Congwen Wang (Undergraduate)	cwang@brynmawr.edu	Bryn Mawr-Biology	Mike Sears	N/A	

Guanchun (Arvid) Wang	guanchun@Princeton.edu	Princeton University- Electrical Engineering	Sanjeev Kulkarni, Vincent Poor	http://www.princeton.edu/~guanchun/website/ 	Developed algorithms to improve forecasting accuracy on various events by eliminating probabilistic incoherence. The research spans across electrical engineering, statistics, cognitive science and political science and has a wide range of applications in finance, economy, politics and engineering.
Shumiao Wang	wang845@purdue.edu wang845@cs.purdue.edu	Purdue- Computer Science	Mike Atallah		information security and algorithms, designing protocols for a client to outsource computation to powerful server without leaking important information
Tiance (Mark) Wang	tiancew@princeton.edu wangtiance@gmail.com	Princeton- Electrical Engineering	Sanjeev Kulkarni, Paul Cuff	http://www.princeton.edu/ee/people/display_person/?netid=tiancew 	1. Mutual information scheduling for noisy binary sorting 2. Ranking aggregation, computation and approximation of Kemeny score 3. Cooperative caching for urban mobile networks
Yu Wang (Post-Doc)	yuw006@ucsd.edu	UC San Diego- Bioengineering	Shankar Subramaniam, Jack Winters	N/A	N/A

Yao Xie	yaoxie@stanford.edu su06ee@gmail.com	Stanford- Electrical Engineering	Andrea Goldsmith, David Siegmund	http://www.stanford.edu/~yaoxie/	Multihop network and sparsity problems in communication systems. Fundamental tradeoff in robustness, data rate, and delay in the multihop networks. Reduced-dimension multiuser detection, The multi-sensor change-point detection problem is interdisciplinary that in encompasses stochastic process analysis (statistics) and EE.
Ming Yang	mingyang@princeton.edu	Princeton University- Economics	Christopher Sims, Stephen Morris	http://www.princeton.edu/~mingyang/	applies information-theoretic ideas to game theory and to modeling financial markets
Jieqi Yu	jieqiyu@princeton.edu	Princeton- Electrical Engineering	Sanjeev R. Kulkarn, Vincent Poori	http://www.princeton.edu/~jieqiyu/	Robust algorithms for ellipse fitting from point cloud and robust outlier elimination algorithm for curve and surface fitting. Rreconstructing trajectory and shape of rigid bodies. Sensor localization problem using distributed spring model algorithm.s
Dan Zhang	zhang168@purdue.edu	Purdue- Computer Science	Lou Si		Information Retrieval, Data Mining and Machine Learning. Multi-View Transfer Learning, sentiment analysis

Hearson (Wenyu) Zhang (Undergrad)	zhangw@purdue.edu	Purdue- Computer Science	Vernon Rego		
Zhuo Zhang	zhuoz@princeton.edu	Princeton- Electrical Engineering	Sanjeev Kulkarni	http://www.princeton.edu/ee/people/display_person/?netid=zhuoz 	N/A
Yao Zhu	yaozhu@purdue.edu	Purdue- Computer Science	Alan Qi		1. Predict pathway responsiveness from time course microarray data. 2. Bayesian deep learning 3. Classification face expression under different conditions. 4. Gaussian processes with sparse data-dependent eigenfunctions. 5. Mining the building blocks of crystal structure.
Leila Zilles (Undergraduate)	lzilles@brynmawr.edu	Bryn Mawr- Computer Science	CSoI Fellow	N/A	