

3 IDEAS

Integrated Data-Driven Discovery
in Earth and Astrophysical Sciences

Northwestern

C I E R A
CENTER FOR INTERDISCIPLINARY EXPLORATION
AND RESEARCH IN ASTROPHYSICS



A Look Back at IDEAS³ in 2017:

Since the program's inception in 2016, IDEAS has been growing rapidly. In 2017, IDEAS doubled its ranks, welcoming six new Trainees for another year of exploration in the field of data-science.



Trainee Vicky Yang discusses her internship with Airbnb during a weekly cohort meeting.

Internships

Our first cohort members took advantage of IDEAS' Summer internship initiatives. Trainees Vicky Yang, Vivian Tang, Neda Rohani, and Arjun Punjabi spent their summers working with Airbnb, IRIS Data Management Center, Chase Bank, and Argonne, respectively; growing their expertise and professional experience outside of the classroom.

Conferences

IDEAS participated in the 2017 Grace Hopper Celebration of Women in Computing, sponsored by the AnitaB.org Institute. Taking advantage of conference support the IDEAS program provides, Trainees Niharika Sravan, Neda Rohani, Vicky Yang, and Alice Lucas were able to experience this massive, and unique event in Orlando, Florida. There, the trainees networked with peers and industry experts, and attended presentations featuring exemplars in their fields.

Meet-ups

IDEAS Trainees Niharika Sravan and Mike Zevin took up the reins on Northwestern's Machine Learning Meetups initiative.

Together they organized three talks lead by different industry professionals, and [a panel discussion with the data-science consultants of Clarity Insights](#).

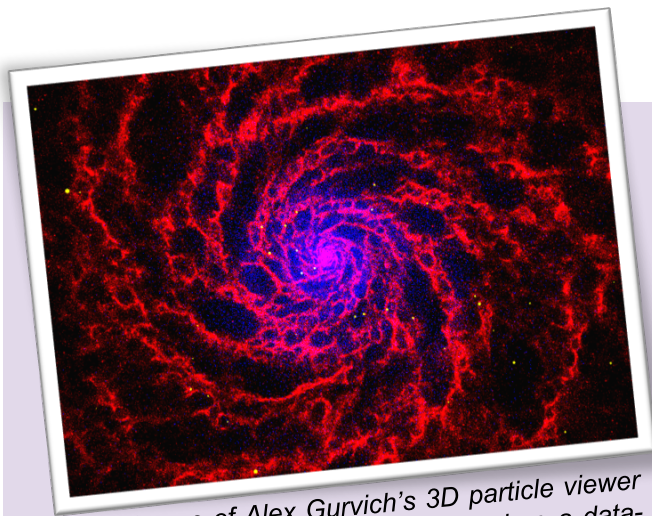


Communication Training

Trainees Jordan Nelson, Jimmy Kim, Alex Gurvich, and Michael Katz [participated in IDEAS' affiliate RSG Research Communication Program](#). The RSG program brings in experts from theatre, journalism, education, marketing, and design to coach researchers (graduate students, postdoctoral fellows, and faculty) in oral communication skills. These skills are invaluable to professionals of all backgrounds—but particularly to those in STEM fields, who can experience difficulty in making their research accessible to a wide variety of audiences.



Trainee Michael Katz presents his research during the RSG program's "Seven Minutes of Science" event.



Still image of Alex Gurvich's 3D particle viewer "Firefly"; which allows users to explore a data-simulated universe of gas and star particles.

Focused Summer Schools

IDEAS' Focused Summer School in Visualizations welcomed CIERA Postdoc Aaron Geller as a new instructor, and he – along with Mitch Barklage (Research Associate, EPS) – led Trainees Alex Gurvich, Michael Katz, Jordan Nelson, Jimmy Kim, and Boris Rösler through a two-week long intensive boot-camp focused on creating interactive and effective data-driven graphics.

Several of the final projects developed during this course grew into larger opportunities for the Trainees own research. Boris Rösler says

of his project, "I am currently working on a website to display the surface-wave radiation pattern of earthquakes, and the knowledge obtained during the visualization course was crucial for it." Alex Gurvich, meanwhile, is working in sequence with the Adler Planetarium, tweaking his final project into "a version [that will reside] in the space visualization lab with a few different available datasets, so that presenters can use it during their talks." You can find more information about all of the [2017 FSS visualizations projects](#), as well as the offered Programming FSS, on the IDEAS website (<http://www.ideas.ciera.northwestern.edu/>).

Facility and computing support for the visualizations course is provided through Northwestern's Earth and Planetary Science (EPS) department.

TGS Certificate

This year, six students became the first group to complete the necessary coursework, and be recognized by the university for earning their [TGS Integrated Data Science Certificate](#).

We are extremely proud of the efforts of our 2017 cohort, and are eager to see how future Trainees will take advantage of everything the IDEAS program has to offer!

Applications for the 2018 IDEAS cohort are due April 6, 2018.