

# NEWSLETTER

## IPAM ENABLES “COMPUTATIONAL FOLKLORIST” TO BECOME A LEADER AMONG HUMANISTS IN EMPLOYING QUANTITATIVE METHODS

Timothy Tangherlini had just completed a talk at UCLA on Old Norse mythology when he was approached by Peter Jones, a mathematics professor at Yale and member of IPAM’s Science Advisory Board who happened to be in attendance because of his interest in the topic. “He told me he knew some people who might be able to help me,” he recalls of the chance meeting, which took place in 2006.

Tangherlini, a professor in UCLA’s Scandinavian Section whose research focuses on Scandinavian folklore, thought nothing of the encounter until he returned to his office and received a call from Mark Green, then-director of IPAM, inviting him to attend an upcoming program called *Mathematics of Knowledge and Search Engines*.

“My first response was to say, ‘You clearly have the wrong person — you must be trying to reach a mathematician,’ ” Tangherlini recalls. But Green explained why he and Jones thought the program would be productive for Tangherlini.

“It was way out of my comfort zone, but I agreed,” Tangherlini says. “And that long program was probably the most transformative experience of my academic career.”

The idea that advanced math and computational methods could be integrated into his studies wasn’t new to Tangherlini. He grew up interested in stories and storytelling, but also in computing and artificial intelligence. After taking a college course in Danish folklore, he was hooked.

“These stories provided a fascinating window into the everyday lives of people in the 19th century, when the economic, political, and technological environments



Tim Tangherlini  
UCLA

(continued on page 7)

## IPAM WELCOMES DIMA SHLYAKHTENKO AS DIRECTOR



Russ Caflisch (left) and  
Dima Shlyakhtenko (right)

Dimitri (Dima) Shlyakhtenko assumed the directorship of IPAM on July 1, 2017. Shlyakhtenko has been a member of the faculty at the UCLA department of mathematics since 1998, and served as the department chair from 2012 to 2015. His research is on operator algebras and includes free probability theory, random matrix theory, as well as von Neumann algebras and  $L^2$ -invariants. He received his PhD from University of California, Berkeley in 1997 at the age of 22. He was the recipient of a Sloan Foundation Fellowship in 2001 and a Special Project Award from

the Clay Mathematics Institute in 2002. The UCLA department of mathematics presented him with the R. Sorgenfrey Distinguished Teaching Award in 2004. He gave an invited talk at the International Congress of Mathematicians in Hyderabad, India in 2010.

Outgoing director Russ Caflisch believes IPAM is in very good hands. “Dima was a superb chair of mathematics, and I am very confident IPAM will continue to flourish,” he said. ■

### FEATURES

|                                  |   |
|----------------------------------|---|
| Chemist Crosses Disciplines      | 2 |
| IPAM Impacts Young Mathematician | 3 |
| Latin@s in Math Conference       | 8 |

### REGULARS

|                      |   |
|----------------------|---|
| Director’s Note      | 2 |
| News and Recognition | 4 |
| Frontiers Society    | 5 |

### OTHER

|                     |   |
|---------------------|---|
| Upcoming Programs   | 6 |
| Call for Proposals  | 6 |
| Mark Your Calendars | 6 |

## NOTE FROM DIRECTOR DIMA SHLYAKHTENKO

As the new director of IPAM, I am delighted to have this opportunity to introduce myself. Over my nearly 20 years as a faculty member at UCLA, I have had many opportunities to attend talks at IPAM and interact with IPAM visitors, as well as organize a long program. I am thrilled at the chance to contribute to IPAM's long tradition of excellence as its Director.

I would also like to take this opportunity to thank Russ Caflisch, the former IPAM director, whose wise and energetic leadership over the last nine years has propelled IPAM to new heights. Russ is moving to his new role as the Director of the Courant Institute. He will be missed by all of his friends and colleagues at UCLA. However, I am confident that he will continue to be IPAM's trusted advisor for many years to come.

In the next few years, I would like to see IPAM continue to thrive, focusing on its core mission, which cannot be summarized better than by its slogan: "Math Changes Everything!" To do so, we will continue to

leverage and invest in our most important asset – the IPAM community. We rely on it to propose visionary ideas for our workshops and long programs, and on our scientific board to contribute its expertise in selecting and refining these ideas. We rely on our scientific visitors to contribute to IPAM's unique research atmosphere. And we count on our industry partners to inform us about real-life problems involving mathematics and to pursue research projects.

IPAM's strong ties with its community are apparent through our recent successes in fundraising. Through the generosity of the Schwinger Foundation, IPAM now has an endowment to support a series of workshops on multiscale physics. The first such workshop will be held this fall. Our ongoing campaign to raise an endowment for the IPAM Director's Fund has already yielded over \$196,000 including many private gifts and a \$100,000 gift from AMD. In an exceptional show of support, the Dean of Physical Sciences is matching the Schwinger Foundation gift and all contributions to the

Director's Fund. We are extremely grateful to our many loyal supporters and friends who helped us achieve our fundraising goals this year.

I hope that you will continue to be part of the IPAM community. Participating in a program or workshop, attending a public lecture, joining our Frontiers Society, and contributing to the Director's Fund are just a few of the ways that you can contribute. ■



**Dima Shlyakhtenko**  
IPAM Director

## CHEMIST CROSSES DISCIPLINARY BOUNDARIES TO BRING MACHINE LEARNING, OTHER INNOVATIONS TO MATERIALS SCIENCE



**Graeme Henkelman**  
University of Texas at Austin

As a theoretical chemist and materials scientist, Graeme Henkelman had little contact with mathematicians and computer scientists before 2005, when his postdoctoral

adviser at Los Alamos National Lab suggested that Henkelman attend an IPAM workshop on multiscale methods for materials, part of the three-month program *Bridging Time and Length Scales in Materials Science and Bio-Physics*.

"It was exactly the kind of meeting I love — unlike the big national meetings, there was only one thing happening at once, plenty of time for discussion, and with everyone going to the same talks, you had common experiences to talk about," says Henkelman, who went on to join the University of Texas at Austin faculty, where he is currently an associate professor. "But the main thing was that you got to step back from your daily work, where it's all about the details, and interact with people from other fields in ways that can lead to new ideas and new directions."

The interactions with math-minded colleagues at that meeting and the many IPAM experiences that followed have proved fruitful for Henkelman, whose field of interest has increasingly incorporated mathematical challenges. Henkelman's group focuses on computational methods for modeling reaction dynamics that are applied to developing new materials for energy applications, including catalysts and batteries. A fundamental challenge faced by Henkelman and his colleagues in these efforts is one of modeling over experimentally relevant time scales. Using molecular dynamics simulations, for example, can at best achieve a time scale of a nanosecond — too fleeting to have relevance for any question related to a battery, such as whether it will charge in 30 minutes or an hour.

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# IPAM PROGRAMS IMPACT CAREER OF YOUNG APPLIED MATHEMATICIAN

*Virginie Ehrlicher is a Researcher at École des Ponts ParisTech and INRIA.*

When my PhD advisors Eric Cancès and Tony Lelièvre suggested that I attend the 2012 long program on materials defects, excitement was my first reaction. As a PhD student, spending three months at IPAM sounded like a great opportunity, and the link between the topic of the program and my research on local defects in crystalline solids in quantum electronic structure models was natural.

The workshops in the program focused on issues related to defects in matter at different scales: quantum mechanics, molecular dynamics, mesoscale and macroscopic models. The speakers were mathematicians, physicists or chemists, and the program helped me to realize how enriching such a diverse audience can be. Even though the dialogue may be difficult to start, interdisciplinary discussions often lead to very interesting research topics. The

fact that IPAM encourages the speakers to prepare their talks so that they are accessible to researchers belonging to different communities is in my opinion one of the greatest strengths of these programs.

This first positive experience at IPAM was closely followed by a second one: *Materials for a Sustainable Energy Future*, which took place a year later. Although I could only stay for three weeks this time, the talks and discussions were very enlightening, particularly the ones related to solar cell technologies. What I learned at IPAM helped me and my colleagues at CERMICS, an applied mathematics lab, write a research grant to the IRDEP. A PhD student who was working on mathematical models for solar cells was partially funded by this contract.

I had the chance to interact with a lot of talented researchers during these programs. In particular, I would like to warmly thank Christoph Ortner and Alexander Shapeev for sharing their scientific interests with a

freshly graduated student. The article we wrote — “Analysis of Boundary Conditions for Crystal Defect Atomistic Simulations” (ARMA, 2016) — was a direct consequence of the collaboration we started at IPAM.

I am very much looking forward to returning to IPAM this fall, five years after my first IPAM program. I am honored to be part of the organizing committee of the workshop, *Uncertainty Quantification for Stochastic Systems and Applications*. ■



**Virginie Ehrlicher**  
École des Ponts ParisTech and INRIA

## Innovations to Materials Science

*(continued from page 2)*

Catalysts present a similar problem. “For an experimentalist, a millisecond is quick, but that’s super slow for us,” Henkelman says. “We have to take a totally different approach to modeling the dynamics that we care about on these experimental time scales, and so it’s extremely useful to collaborate with mathematicians and computer scientists to come up with algorithms that work with this energy landscape and allow us to predict how materials will function.”

When Henkelman was starting his career in the early 2000s, the state-of-the-art approach was to identify a new material or catalyst, then perform calculations and conduct experiments to better understand it. Now, thanks to advanced algorithms and high-speed computing, Henkelman and his colleagues are approaching the problem inversely — seeking to purposefully design new and better materials. “Every catalyst and every battery material that is currently in use was designed by trial and error, which is a very slow process,” Henkelman says. “So there is now a great deal of excitement about the possibility of using computers to design materials in a more rational way, in conjunction with the experimentalists.”

After going to several one-week workshops, Henkelman attended his first IPAM long program in 2011. The program, *Navigating Chemical Compound Space*, included discussions about the mathematical aspects of designing materials on computers. Henkelman was among the initiators of an effort to employ machine learning for materials science applications — a dramatically new direction that is yielding

promising scientific results. “I had barely even heard of machine learning before that meeting, and now it comes up all the time,” Henkelman says. “It’s become an important tool in our toolbox.” The growing interest in machine learning is also reflected in many important national meetings. While 10 years ago there were only a few isolated talks describing machine learning techniques at major meetings such as the annual meeting of the American Physical Society or Materials Research Society, there are now entire multi-day symposia with many sessions dedicated to these topics.

Henkelman got so much out of the 2011 long program at IPAM that he volunteered to be a key organizer and speaker for *Materials for a Sustainable Energy Future*, held in 2013, and *Complex High-Dimensional Energy Landscapes*, which takes place this fall. Henkelman sees an important role for IPAM. “The language in science is so specific,” Henkelman says. “As a chemist, if I want to talk to a biochemist it can be hard, so imagine if you’re trying to talk to a mathematician. IPAM bridges the gap by forcing people from these different fields to rethink their work and describe it in a way that other audiences will understand. As a result, you get these incredible suggestions that you wouldn’t think about because the people you’re interacting with have such different perspectives. Every IPAM experience I’ve had has resulted in some new idea or collaboration that I never would have predicted. And so much of the most exciting work in science comes out of these cross-disciplinary collaborations.” ■

## NEWS AND RECOGNITION

### IPAM BOARD MEMBER NANCY POTOK NAMED CHIEF STATISTICIAN

IPAM Board of Trustees member Nancy Potok has been appointed chief statistician of the United States. Prior to this prestigious appointment, Potok had more than 30 years of public, private, and nonprofit senior management experience. She was Deputy Director and Chief Operating Officer (COO) of the U.S. Census Bureau, COO of McManis & Monsalve Associates, and Senior VP and Director of the Economic, Labor and Population Studies Department at the University of Chicago National Opinion Research Center. Her public service includes working in the Judicial, Legislative, and Executive Branches. Potok is an adjunct professor at George Washington University, where she earned her PhD in Public Policy and Public Administration, and a Fellow of the National Academy of Public Administration. She has been on IPAM's Board of Trustees since 2014.



**Nancy Potok**  
Office of Management & Budget

### IPAM NAMES FIRST SIMONS PARTICIPANT

In 2016, IPAM was awarded a five-year grant from the Simons Foundation that created Simons Participants, designed to free senior participants from teaching and other departmental duties so that they can fully participate in an IPAM long program. IPAM is pleased to announce that Mitchell Luskin will be the first Simons Participant. Luskin, a professor of mathematics at the University of Minnesota, was an invited speaker at the ICM in 2002 and is the editor

of the SIAM journal on Multiscale Modeling and Simulation. He is an organizer of the upcoming long program *Complex High-Dimensional Energy Landscapes*.

### IPAM ORGANIZERS AND BOARD MEMBERS ELECTED TO NATIONAL ACADEMIES

The following IPAM program organizers and Board members have been recognized in 2017 for their contributions to math, science and engineering. Daniel Spielman (Yale) is a new member of the National Academy of Sciences. The National Academy of Engineering recently elected Gerbrand Ceder (UC Berkeley), Jason Cong (UCLA), Stéphane Mallat (École Normale Supérieure), Arkadi Nemirovski (Georgia Tech), and Harry Shum (Microsoft). Finally, the American Academy of Arts and Sciences inducted Richard Baraniuk (Rice), Young-Keek Kim (University of Chicago), and Robert Kohn (NYU). IPAM congratulates them.

### RUSSEL CAFLISCH APPOINTED COURANT DIRECTOR

Former IPAM Director Russ Cafilisch has been appointed Director of the Courant Institute of Mathematical Sciences at New York University. He returns to Courant after a lengthy career at UCLA, where he was a professor of mathematics since 1989 (with a joint appointment in Materials Science and Engineering) and Director of IPAM since 2008. He received his master's and doctoral degrees from Courant, and later joined the Courant faculty before moving to UCLA. He was an Alfred P. Sloan research fellow and an invited lecturer at the 2006 International Congress of Mathematicians, and is a fellow of the American Academy of Arts and Sciences, AMS, and SIAM.

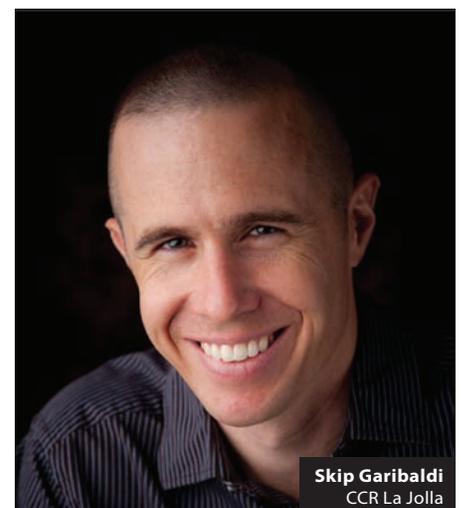
### SCHWINGER FOUNDATION GIFTS IPAM \$750,000

The Julian Schwinger Foundation for Physics Research (JSF) has gifted IPAM \$750,000, which will be matched by UCLA's Division of Physical Sciences, to form an endowment of \$1,500,000. Funds generated by this endowment will be used to support an annual series

of IPAM workshops on multiscale physics. Seth Putterman, President of the JSF and a professor of physics at UCLA, states that "Julian Schwinger was fascinated by multiscale issues, and would have enthusiastically supported these workshops. IPAM is the perfect place for them, because of its history of promoting the interaction of mathematics with physics and other disciplines." IPAM thanks Putterman and the Board of Directors of the Schwinger Foundation, as well as Dean Miguel García-Garibay (Physical Sciences, UCLA) for their efforts in building this partnership.

### SKIP GARIBALDI NAMED INCOMING DIRECTOR OF CCR LA JOLLA

The Center for Communications Research (CCR) La Jolla has named Skip Garibaldi as Incoming Director. Garibaldi was an Associate Director at IPAM from 2013 to 2015, having taught at Emory University as the Winship Distinguished Research Professor and at various European institutions. In 2015, he became a Research Staff Member at CCR La Jolla. He serves on the Air Force Scientific Advisory Board and is well known for his work on the lottery, which received the Lester R. Ford Award and is the subject of a chapter in the popular book *Brain Trust*. Millions of people have seen him talk about his work on 20/20, CNN, and Fox & Friends, in addition to a public lecture hosted by IPAM in April 2014.



**Skip Garibaldi**  
CCR La Jolla

## CONTINUED

### TREVISAN, LIN JOIN IPAM'S SCIENCE ADVISORY BOARD

IPAM welcomes Luca Trevisan and Xihong Lin to the Science Advisory Board. Trevisan is a professor of electrical engineering and computer sciences and of mathematics at UC Berkeley and a senior scientist at the Simons Institute for the Theory of Computing. His research is in theoretical computer science. Lin is a professor of biostatistics in Harvard's School of Public Health. Lin applies statistical and computational methods to analyze high-throughput genetic and genomic data in epidemiological, environmental and clinical studies.

### GREEN FAMILY MAKES SECOND GIFT TO LECTURESHIP ENDOWMENT

Mark L. Green and Kathryn Kert Green have made a generous \$75,000 gift that will be matched by the Dean of Physical Sciences, to augment the existing Green Family Lectureship Endowment. "This is a wonderful lecture series, and we could not be happier with how it has worked out," Green says. Since 2012, the endowment has supported highly distinguished lectures at IPAM, including Walter Kohn, Wendelin Werner, Avi Wigderson, Andrew W. Lo, Ingrid Daubechies, and Edward Witten. This gift will enable IPAM to host two lecture

series per year. The 2018 Green Family Lecturers will be Fields Medalist Vaughan Jones and Facebook's AI expert Yann LeCun (see "Mark Your Calendars"). Mark Green is a co-founder and former director of IPAM.

### JEANNETTE WING TO LEAD COLUMBIA'S DATA SCIENCE INSTITUTE

IPAM Board of Trustees member Jeannette Wing was recently appointed the Avaneessians Director of Columbia's Data Science Institute and Professor of Computer Science. Wing will lead the University's research, scholarship, and teaching in data science, which involves more than 200 affiliated faculty members across Columbia's campuses. She served as corporate vice president of Microsoft Research from 2013 to 2017. She has been a member of IPAM's Board of Trustees since 2016.



## GIVE TO THE IPAM DIRECTOR'S ENDOWMENT FUND

As many of you know, the Dean of Physical Sciences will match all gifts and multi-year pledges of at least \$500 made to the IPAM Director's Endowment Fund this year. A special thanks to all of you who have contributed already. We have raised \$196,500 towards this fund so far, including a \$100,000 gift from AMD, arranged by IPAM Trustee Alan Lee, and many other commitments from our long-standing supporters who recognize the important role of IPAM in the scientific community and value our innovative programs. It's not too late! If you wish to be part of this campaign, please contact Sharon Chang at 310-206-6347 or at schang@support.ucla.edu. Remember, gifts can be pledged over five years.

To read about IPAM's other fundraising priorities and the Frontiers Society, and to make a contribution under \$500 to IPAM, please go to [ipam.ucla.edu/donate/](http://ipam.ucla.edu/donate/).

## FRONTIERS SOCIETY MEMBERS 2016-17

IPAM wishes to thank the following individuals who joined the Frontiers Society in the past year, and all others who donated to IPAM:

### CHAMPIONS (\$1000+)

Tanya Beder and Joseph H. Bretton  
 Mark L. and Kathryn Kert Green  
 Alfred W. and Virginia D. Hales  
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 Tom and Lolita V. Nykiel  
 Nancy A. Potok  
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IPAM also received gifts from AMD, The Aerospace Corporation, Los Alamos National Lab, Lawrence Livermore National Lab, Air Force Research Lab, Google, GumGum, and Microsoft. Foundation support this year included Julian Schwinger Foundation, Simons Foundation, the LAPD Foundation, and the Berland Foundation. Finally, grants from the NSF Office of International Science and Engineering and the Office of Naval Research supported specific IPAM programs.

## UPCOMING PROGRAMS

### LONG PROGRAMS

Complex High-Dimensional  
Energy Landscapes  
*September 11 - December 15, 2017*

Quantitative Linear Algebra  
*March 19 - June 15, 2018*

Science at Extreme Scales: Where Big  
Data Meets Large-Scale Computing  
*September 12 - December 14, 2018*

Geometry and Learning from Data in  
3D and Beyond  
*March 11 - June 14, 2019*

### WORKSHOPS

Algorithmic Challenges in Protecting  
Privacy for Biomedical Data  
*January 10 - 12, 2018*

New Methods for Zimmer's Conjecture  
*January 22 - 26, 2018*

New Deep Learning Techniques  
*February 5 - 9, 2018*

### OTHER PROGRAMS

The Calculus of Comedy: Math in  
The Simpsons, Futurama, and The  
Big Bang Theory  
*October 25, 2017*

Latin@s in the Mathematical  
Sciences Conference  
*March 8 - 10, 2018*

Research in Industrial Projects  
for Students  
• *Los Angeles, June 25 - August 24, 2018*  
• *Hong Kong, June 11 - August 10, 2018*  
• *Berlin, July 2 - August 24, 2018*

Computational Genomics  
Summer Institute  
*July 16 - 20, 2018*

## Stay Connected



# CALL FOR PROPOSALS

IPAM seeks proposals from the mathematical, statistical, and scientific communities for long programs, winter workshops, summer programs, and exploratory workshops. Proposals are reviewed by IPAM's Science Advisory Board (SAB) at its annual meeting in November. To receive full consideration, please send your program idea to the IPAM Director at [director@ipam.ucla.edu](mailto:director@ipam.ucla.edu) by October 1.

### WINTER WORKSHOPS

Winter workshops are typically five days in length, with 20-25 presentations. The proposal should include a short description of the mathematical and scientific content, names of individuals to serve on the organizing committee, and names of individuals that you would like to invite as speakers or participants. The SAB will consider proposals for winter 2019 at its upcoming meeting.

### SUMMER SCHOOLS

Summer schools are one to three weeks in length and incorporate both tutorials (a series of 3-4 talks) and research talks illustrating applications. They are directed toward graduate students and postdocs. The requirements for summer school proposals are comparable to those for winter workshops.

### LONG PROGRAMS

Long Programs generally have two complementary streams: one mathematical and one (or more) from other related scientific disciplines where there is the potential for a fruitful and exciting interaction. Alternatively, this might be an interaction between two disparate branches of mathematics. A long program opens with tutorials, followed by three or four one-week workshops and a culminating workshop.

The proposal should include a brief description of the topic, names of individuals to serve on the organizing committee, and a preliminary list of faculty, postdocs, graduate students, and representatives of industry and government you would like to invite. A long program proposal template is available online. Proposals for academic year 2019-2020 will be reviewed at the next SAB meeting.

### EXPLORATORY WORKSHOPS

Exploratory Workshops address urgent problems that mathematics may help solve. They are two or three days long, and can be organized in less than a year. The proposal should follow the guidelines for winter workshops, above, and will be considered at any time.

## Mark Your Calendars

**December 1, 2017.** Edward Witten, Fields Medalist and professor of mathematical physics at the Institute for Advanced Study, will give his second Green Family Lecture, rescheduled from last spring.

**February 5, 2018.** Yann LeCun, Director of Artificial Intelligence Research at Facebook and NYU professor, will present two public lectures this week as part of the 2018 Green Family Lecture Series.

**February 12, 2018.** Application deadline for IPAM's Research in Industrial Projects for Students (RIPS) Program in Los Angeles, Hong Kong, and Berlin.

**April 30, 2018.** This week, Fields Medalist and Vanderbilt mathematics professor Vaughan Jones will give the second set of Green Family Lectures.

**More information will be available at [www.ipam.ucla.edu](http://www.ipam.ucla.edu).**

# Computational Folklorist

(continued from page 1)

were changing rapidly,” Tangherlini says.

As he delved further into the topic in graduate school in the early 1990s, Tangherlini began to see a need for better statistical measures. “We had thousands of stories, and no way to remember them,” he says. For his doctoral dissertation, Tangherlini introduced a statistical approach to determining what was “trending” in storytelling in late-19th-century Denmark. “Methodologically that was different,” he says. “But it was probably too simple on the statistics side, and too unusual on the folklore side, so there wasn’t a lot of uptake.”

Some 15 years later, when Tangherlini attended that first IPAM program, the landscape had changed. With advances in computing, the idea of developing computational techniques for analyzing folklore and other humanities subjects didn’t seem so unusual, and Tangherlini found the applied mathematicians, computer scientists and statisticians he met through IPAM to be more than willing to work with him. “The humanities can be almost monastic in its approach, where you might work 15 years creating a single-authored monograph,” Tangherlini says. “The culture at IPAM was one of collaboration and experimentation, which I found quite liberating. As long as I had an idea, and a question about a

particular technique, I could always find people to explain it to me — and as I became more confident, to collaborate with me.”

Tangherlini has become a singular presence at IPAM since the 2007 search engines program. He organized the highly successful digital humanities summer school *Networks and Network Analysis for the Humanities* (2010) and a follow-up conference (2011). He was also the lead organizer of the *Culture Analytics* program in 2016, which brought a vibrant mix of mathematicians, computer scientists, social scientists, humanists, and artists to IPAM to explore new ways to collaborate on questions of how cultures form and change, and what aspects can be measured.

Along the way, Tangherlini has become a leader among humanists in employing quantitative methods, often referring to himself as a computational folklorist. “People use stories as a way of understanding the environment around them, and as a way of shaping that environment, and we want to know what the relationships are between people, their everyday environments, and the stories they tell,” Tangherlini says. “When you have tens of thousands of stories told by thousands of people from a particular time and place, computational methods allow you to work at so many different scales.”

Tangherlini has forged productive collaborations from his IPAM interactions, including an ongoing partnership with a UCLA electrical engineering professor, Vwani Roychowdhury, to explore at the internet scale the narrative frameworks that drive certain discussions. As an example, Tangherlini and Roychowdhury have studied how vaccine skepticism and hesitancy can be understood through social media posts.

“Without IPAM, there is no way I would have met 150 leading data scientists in all sorts of different fields,” Tangherlini says. “But more than just meeting them, IPAM gives you a framework for working together. I would never have met people who do AI at Facebook and other social media companies, or are the leading scholars in machine learning, had it not been for IPAM. And I hope those individuals feel the same way — that they are fortunate to have gotten to know me as well as others like me, because it has helped them look at certain problems differently.” ■

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## NEWSLETTER

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math changes everything.

## **LATIN@S IN THE MATHEMATICAL SCIENCES CONFERENCE**

IPAM is proud to host the second *Latin@s in the Mathematical Sciences Conference* on March 8-10, 2018. The first one, held at UCLA in 2015, brought over 150 mathematicians and statisticians together to celebrate the contributions of Latino/as to mathematical research and laid the groundwork for a vibrant, active community. Tatiana Toro (University of Washington), Federico Ardila (UCSF), Mariel Vazquez (UC Davis), and Ricardo Cortez (Tulane University) will serve as organizers for the 2018 conference, with many others serving in other capacities. The planning is underway, including the selection of seven plenary speakers who represent some of the best Latino/a researchers in their fields. Sponsors of the conference include IPAM, UCLA, the Mathematical Sciences Institutes Diversity Initiative, and Facebook, with more to come.

Undergraduate and graduate students, postdocs, faculty at all levels, math teachers, and professionals are invited to attend the conference. Students and recent PhDs may apply for travel support, due January 8, 2018, and to present their research. Please consult [www.ipam.ucla.edu/lat2018](http://www.ipam.ucla.edu/lat2018) for more information. ¡Nos vemos en Los Angeles! ■

