LISA (Laboratory for Interdisciplinary Statistical Analysis)

Collaboration

Walk-In Consulting

Statistical Short Courses

2015-16 LISA Annual Report
August 8, 2016

www.lisa.stat.vt.edu
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This annual report was prepared by Eric Vance and Tonya Pruitt. It can be cited as:


The 2014-15 LISA Annual Report can be accessed on VTechWorks, operated by the Virginia Tech Library, at: http://hdl.handle.net/10919/72097
Executive Summary

This annual report summarizes the activities of LISA, Virginia Tech’s Laboratory for Interdisciplinary Statistical Analysis, during the fall and spring semesters of the 2015-16 academic year. It does not include activities or numbers during Summer 2016. LISA statistical collaborators helped 1217 researchers around Virginia Tech (the most ever for LISA for the fall and spring semesters of an academic year) for the three main services of Collaboration Meetings, Walk-in Consulting, and educational Short Courses (Figure 1).

Highlights of 2015-16:

- In October 2015, LISA hosted a campus-wide symposium to celebrate World Statistics Day.
- In March 2016, Dr. Chris Franck, LISA Assistant Director, was hired as a new tenure-track assistant professor in the Statistics Department, to begin August 2016.
- In March 2016, Statistics Department Head Dr. Ronald Fricker decided that LISA would be restructured; the contract of Dr. Eric Vance, LISA Director, would be terminated as of May 9, 2016; Dr. Chris Franck, LISA Assistant Director, would serve as interim director during Summer 2016; and a new director would be hired for the 2016-17 academic year.
- In May 2016, Tonya Pruitt, the LISA Administrative Specialist, announced that she was leaving the Department of Statistics to pursue another opportunity at Virginia Tech.
- For the sixth year in a row, LISA was featured in an invited session at the American Statistical Association’s (ASA) Joint Statistical Meetings (JSM). This year’s invited session was “The Extraordinary Power of Statistical Collaboration.”

![Graph of LISA Clients AYs 2005-16*](image)

**Figure 1.** Total number of clients for Collaboration, Walk-In Consulting, and Short Courses
Dr. Eric Vance, Director  
Dr. Christopher Franck, Assistant Director  
Tonya Pruitt, Administrative Specialist  
Celia Rose Eddy, Research Associate  
James Wrenn, Research Associate

### Lead Collaborators

<table>
<thead>
<tr>
<th>Adam Edwards</th>
<th>Matthew Keefe</th>
<th>Lin Zhang</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ting Guan</td>
<td>Yuhyun Song</td>
<td></td>
</tr>
</tbody>
</table>

### Associate Collaborators

<table>
<thead>
<tr>
<th>Rajesh Bawa</th>
<th>Daniel Lee</th>
<th>Xinyi Tan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daniel Berry</td>
<td>I Chen Lee</td>
<td>Hong Tran</td>
</tr>
<tr>
<td>Marcos Carzolio</td>
<td>Jiali Lin</td>
<td>Pingyuan (Van) Wang</td>
</tr>
<tr>
<td>Gavin Corral</td>
<td>Yi Liu</td>
<td>Ying Wang</td>
</tr>
<tr>
<td>Ian Crandell</td>
<td>Amanda McGough</td>
<td>Zhe Wang</td>
</tr>
<tr>
<td>William DeShong</td>
<td>Thomas Metzger</td>
<td>James Wrenn</td>
</tr>
<tr>
<td>Mohamed Elkhouly</td>
<td>Amanda Miller</td>
<td>Nathan Wycoff</td>
</tr>
<tr>
<td>Arindam Fadikar</td>
<td>Karen Narayanan</td>
<td>Weibin Xu</td>
</tr>
<tr>
<td>Wenyu (Tina) Gao</td>
<td>Richard Ngaya</td>
<td>Yunnan Xu</td>
</tr>
<tr>
<td>Jiangeng Huang</td>
<td>Kristopher Patton</td>
<td>Yin Yuan</td>
</tr>
<tr>
<td>Deolan Jalil</td>
<td>Elaine Perrin</td>
<td>Angang Zhang</td>
</tr>
<tr>
<td>Brandi Jones</td>
<td>George Rooney</td>
<td>Boya Zhang</td>
</tr>
<tr>
<td>Byung-Jun Kim</td>
<td>Sumin Shen</td>
<td>Man Zhang</td>
</tr>
<tr>
<td>Caleb King</td>
<td>Allison Steel</td>
<td>Xiang Zhang</td>
</tr>
<tr>
<td>Lata Kodali</td>
<td>Patrick Stewart</td>
<td>Yafei Zhang</td>
</tr>
</tbody>
</table>

### LISA 2020 Fellows

| Dr. Ayele Taye Goshu  | Richard Ngaya    |                 |

### Statistics Faculty Collaborators

<table>
<thead>
<tr>
<th>Dr. Xinwei Deng</th>
<th>Dr. Ina Hoeschele</th>
<th>Dr. Bill Woodall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Anne Driscoll</td>
<td>Dr. Inyoung Kim</td>
<td>Dr. Xiaowei Wu</td>
</tr>
<tr>
<td>Dr. Marco Ferreira</td>
<td>Dr. Scotland Leman</td>
<td>Dr. Hongxiao Zhu</td>
</tr>
<tr>
<td>Dr. Ronald Fricker</td>
<td>Dr. JP Morgan</td>
<td></td>
</tr>
</tbody>
</table>
LISA was the Laboratory for Interdisciplinary Statistical Analysis at Virginia Tech. It was originally founded in 1948 as the Statistical Laboratory, reorganized and renamed in 1973 as the Statistical Consulting Center, and then again reorganized and renamed as LISA in 2008. **LISA’s mission was to train statisticians to become interdisciplinary collaborators, provide research infrastructure to enable and accelerate high impact research, and engage with the community in outreach activities to improve statistical skills and literacy.** LISA statistical collaborators were trained to help researchers design experiments; collect, analyze, and plot data; run statistical software; interpret results; and communicate statistical concepts. In the 2015-16 fall and spring semesters, LISA collaborated on 294 projects, answered questions for 468 researchers in walk-in consulting, and taught 455 attendees at educational short courses how to apply statistics in their research.

The LISA collaborators were faculty and students in the Department of Statistics. LISA’s full-time director, assistant director (mostly supported by funded projects), and research associate (primarily supported by funded projects) met with clients and—together with the LISA Administrative Specialist—oversaw a team of graduate and undergraduate student collaborators. In addition, the entire statistics faculty were potentially available for collaboration on a case-by-case basis.

Statistical assistance was free for Virginia Tech faculty, staff, and students. LISA was funded jointly by the Office of the Vice President of Research, the College of Science, the Graduate School, the Office of the Provost, and all seven other colleges (Agriculture and Life Sciences, Architecture and Urban Studies, Engineering, Liberal Arts and Human Sciences, Natural Resources and Environment, the Pamplin College of Business, and the Virginia-Maryland Regional College of Veterinary Medicine). The Department of Statistics also provided funding for many of the LISA statistical collaborators and provided other support for LISA’s activities.

Users of LISA engaging in sponsored research benefited from in-depth help and were encouraged to include statistical collaboration in grant proposals. This took the form of a full or partial graduate research assistantship, partial funding of a faculty member’s salary, or a direct-cost line item. LISA occasionally provided statistical consultation and collaboration on projects outside of Virginia Tech for a fee. Through StatCom (Statistics in the Community), students in the Department of Statistics also provided pro-bono statistical consultation and collaboration for researchers studying topics of local interest and for local community nonprofits, schools, and governmental organizations.

**This report summarizes LISA’s main activities for the 2015-16 fall and spring semesters. This will be the final annual report for LISA, as it is expected that the collaboration laboratory will change its name when the new director begins his or her leadership in fall 2016.**
Demand for LISA statistical collaboration and expertise continued to grow in 2015-16, though its funding and support did not. From all over Virginia Tech, 1217 faculty, staff, and students met with LISA statistical collaborators for assistance in designing experiments and studies; collecting, cleaning, plotting, and analyzing data; interpreting results of statistical analyses; developing new theories from these results; writing grant proposals and scholarly papers; answering quick questions about statistics; and for learning new statistical methods.

During the 2015-16 fall and spring semesters, the 50 statistical collaborators of LISA met with researchers for individual statistical collaboration meetings on 294 projects. During daily Walk-in Consulting hours, LISA met with 468 faculty, staff, and students to answer quick statistical questions on projects requiring less than 30 minutes of assistance. 15 LISA Short Courses were offered to teach 455 graduate students and other university members how to apply statistics in their research. Overall, LISA provided at least 4701 hours of statistical assistance and education to members of the Virginia Tech community. LISA statistical collaborators reported 3750.5 hours for statistical collaboration projects, 650.5 hours for Walk-in Consulting, and 300 hours for Short Courses. As in all years, the number of hours reported worked in 2015-16 fall and spring semesters is likely an underestimate of the total hours. This is especially true for 2015-16 because of the short time period available to tally and report hours worked.
In past years, LISA’s primary goal was to become the premier academic statistical collaboration laboratory. For most of 2015-16 our goal was to stay true to our mission to train our students to become effective collaborative statisticians, provide research infrastructure support for Virginia Tech researchers, and teach researchers statistical skills they could use to advance their research. In last year’s annual report for 2014-15, we listed six goals for 2015-16. The results are described briefly below.

**2015-16 Goals**

1. Secure adequate and stable funding for LISA.

Unfortunately, LISA did not meet with any upper administrators regarding funding for LISA despite repeated attempts to do so.

2. Build multilateral support for LISA and LISA 2020.

Support for LISA 2020 continues to grow. An advisory council was created and met in San Diego, CA in February 2016 to strategize about the LISA 2020 program. We did not feel that LISA and its mission was fully understood or supported by the new head of the Department of Statistics in 2015-16.


We hosted a successful event, highlighted by a talk from new Virginia Tech Provost Dr. Thanassis Rikakis. More information can be found here: http://www.lisa.stat.vt.edu/LISA2020/?q=world_statistics_day_2015

4. Continue LISA’s focus on training students.

We were able to continue LISA’s success with training graduate students to become effective collaborative statisticians.

5. Write papers for peer-reviewed publications about LISA and statistical collaboration to elevate statistical practice.

One paper on “Recent Developments and Their Implications for the Future of Academic Statistical Consulting Centers” was published by LISA director Dr. Eric Vance in *The American Statistician*.

6. Implement LISA Tutorial Office Hours to improve statistical skills and literacy around campus.

This idea was not supported.

Please see our previous annual reports for progress on past LISA goals.
As a laboratory for interdisciplinary statistical analysis, LISA created new knowledge in at least four ways:

1. We helped researchers answer questions they could not have answered without expert statistical advice.

2. Based on our understanding of the researchers’ goals and their data, we suggested novel questions their data could answer.

3. When we encountered new types of data for which standard statistical methods did not apply, we created new knowledge by developing novel statistical methods that enabled researchers to extract useful information from their data.

4. We researched the process of statistical collaboration itself, advancing knowledge in best practices for statistical collaboration and how to improve one’s statistical collaboration skills.

In collaboration meetings, we focused on points 1-3 above, contributing statistical expertise to research projects in many disciplines. Collaboration meetings typically lasted for one hour, with multiple follow-up meetings as necessary. LISA statistical collaborators met with researchers to discuss their research goals, the nature of the data collected or to be collected, how the data could be analyzed to answer the researcher’s specific questions, what the statistical results meant in terms of the research goals, and how the researcher could explain the results to his or her intended audiences. After and between meetings, LISA collaborators typically analyzed the clients’ data or conducted background research to determine the most appropriate statistical analysis for the client.

LISA met with researchers during the fall 2015 semester on 159 projects for a total of 1835.25 hours. In spring 2016, LISA met with researchers on at least 135 projects for 1915.25 hours. In total, LISA worked on 294 collaborative projects. Table 1 below summarizes these numbers.

Table 1. Collaboration clients and hours for the 2015-16 fall and spring semesters

<table>
<thead>
<tr>
<th>Collaboration</th>
<th>Fall 2015</th>
<th>Spring 2016</th>
<th>Summer 2016</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clients</td>
<td>159</td>
<td>135</td>
<td>--</td>
<td>294</td>
</tr>
<tr>
<td>Hours</td>
<td>1835.25</td>
<td>1915.25</td>
<td>--</td>
<td>3750.5</td>
</tr>
</tbody>
</table>
To offer assistance to Virginia Tech researchers who might not require the intense, personalized efforts of the collaboration meetings, LISA provided walk-in consulting for answering quick questions and giving statistical advice on smaller, simpler projects. Assistance was limited to less than 30 minutes when others were waiting.

In 2015-16 fall and spring semesters, LISA Walk-in consultants were available for 650.5 hours. Our standard time and location for Walk-in Consulting was Monday-Friday from 1-3PM in the Old Security Building. Additional times and locations were added to keep up with the heavy demand and new hours were added at VTC.

LISA Walk-in consultants met with 217 visitors during fall 2015 and 251 during spring 2016. During the 2015-16 fall and spring semesters, LISA Walk-in consultants met with a total of 468 clients.

<table>
<thead>
<tr>
<th>Walk-In</th>
<th>Fall 2015</th>
<th>Spring 2016</th>
<th>Summer 2016</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clients</td>
<td>217</td>
<td>251</td>
<td>--</td>
<td>468</td>
</tr>
<tr>
<td>Hours</td>
<td>324.5</td>
<td>326</td>
<td>--</td>
<td>650.5</td>
</tr>
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</table>
LISA taught a series of evening short courses each semester to help graduate students apply statistics in their research. The focus of these two-hour courses was on learning practical statistical techniques for analyzing or collecting data. Taught by graduate students and faculty from LISA and the Department of Statistics, these short courses proved to be very popular, with 455 students, faculty, and staff attending. The tables below describe the course titles, dates, and attendance for the 15 short courses. In 2015-16 fall and spring semesters, **LISA taught a total of 15 short course sessions**.

Table 4. LISA Short Course titles, instructors, and attendance for 2015-16

### Fall 2015

<table>
<thead>
<tr>
<th>Date</th>
<th>Title</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 29, 2015</td>
<td>Basics of R</td>
<td>48</td>
</tr>
<tr>
<td>October 6, 2015</td>
<td>T-tests &amp; ANOVA</td>
<td>38</td>
</tr>
<tr>
<td>October 13, 2015</td>
<td>Calculating Sample Sizes and Power for Research</td>
<td>37</td>
</tr>
<tr>
<td>October 27, 2015</td>
<td>Intro to SAS University Edition</td>
<td>15</td>
</tr>
<tr>
<td>November 3, 2015</td>
<td>Multivariate Clustering Analysis</td>
<td>26</td>
</tr>
<tr>
<td>November 10, 2015</td>
<td>Comparing Means and Other Measures of Location between Two Populations by Significance Tests and Effect Size</td>
<td>19</td>
</tr>
<tr>
<td>November 17, 2015</td>
<td>Data Analytics – Classification</td>
<td>17</td>
</tr>
<tr>
<td>December 1, 2015</td>
<td>Visualizing and Analyzing Spatial Data with R</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>215</td>
</tr>
</tbody>
</table>

### Spring 2016

<table>
<thead>
<tr>
<th>Date</th>
<th>Title</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 15, 2016</td>
<td>Comparing Means and Other Measures of Location between Two Populations by Significance Tests and Effect Size</td>
<td>21</td>
</tr>
<tr>
<td>March 22, 2016</td>
<td>Data Analytics – Classification</td>
<td>31</td>
</tr>
<tr>
<td>March 29, 2016</td>
<td>Basics of R</td>
<td>49</td>
</tr>
<tr>
<td>April 5, 2016</td>
<td>Statistical Analysis Using R</td>
<td>50</td>
</tr>
<tr>
<td>April 12, 2016</td>
<td>Better Data Visualization in R Using the ggplot2 Package</td>
<td>38</td>
</tr>
<tr>
<td>April 19, 2016</td>
<td>Introduction to Web Scraping in R</td>
<td>30</td>
</tr>
<tr>
<td>April 26, 2016</td>
<td>Introduction to Multivariate Analysis of Variance (MANOVA) in JMP</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td></td>
<td>240</td>
</tr>
</tbody>
</table>
LISA provides statistical support for sponsored projects and collaborates with researchers across disciplines on grant proposals. In 2015-16, LISA was funded on at least 16 grants.

**Funded Projects:**


One of LISA’s ongoing goals was to **contribute statistical thinking to interdisciplinary research projects**. The natural result of such collaborative projects is a co-authored publication or a series of publications. In 2015-16, LISA collaborators were co-authors on at least 15 peer-reviewed publications. **LISA students were co-authors on all 15 of these publications.**

**Selected Co-authored publications:**


**Selected Posters and Presentations:**

LISA collaborators were often invited to talk about statistics and/or LISA and to present work stemming from statistical collaborations and their own research on improving the process of statistical collaboration. The following are a selection of six posters and presentations by LISA collaborators in 2015-16:


LISA’s main activity was interacting with clients during collaboration meetings to help them advance their research through the collection, modeling, analysis, and interpretation of data. In fall 2010, **LISA began collecting and analyzing data on itself to improve collaboration meetings by video recording meetings, watching the videos, and then analyzing them** in a small group setting of typically 5-7 participants, including 1 faculty member, 1 note taker, 1-2 “stars” of the video, and 1 or more additional students.

Of the 50 LISA statistical collaborators who regularly met with clients in 2015-16, 41 had at least one collaboration meeting videoed and reviewed each semester they were active in LISA. Coaching and feedback in these review sessions focused on how to improve collaboration skills. Participants focused on three aspects of the meeting:

1. Interpersonal relationships between the client and collaborators
2. Intrapersonal attitudes and emotions
3. Technical aspects of the meeting, including whether the client understood the statistical advice.

After reviewing 35 collaboration meetings in 2015-16, we were pleased to discover that these **video coaching and feedback sessions continued to yield immediate benefits for the participants**, who learned what to stop doing (e.g., speaking before thinking, excess fidgeting, being disengaged) and what to start doing (e.g., ask the client what she wants from the meeting, paraphrase the overall research goals). Repeated video sessions offered opportunities for LISA statistical collaborators to practice new techniques and to verify if they actually worked in practice to improve statistical collaboration.

### Table 5. Video Coaching and Feedback Session totals for 2015-16

<table>
<thead>
<tr>
<th></th>
<th>Fall 2015</th>
<th>Spring 2016</th>
<th>Summer 2016</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Videos Watched</td>
<td>18</td>
<td>17</td>
<td>--</td>
<td>35</td>
</tr>
<tr>
<td>Collaborators Reviewed</td>
<td>27</td>
<td>25</td>
<td>--</td>
<td>69 (41)</td>
</tr>
<tr>
<td>Video Coaching and Feedback Sessions</td>
<td>18</td>
<td>17</td>
<td>--</td>
<td>35</td>
</tr>
</tbody>
</table>
LISA, Virginia Tech’s Laboratory for Interdisciplinary Statistical Analysis, is pleased to announce that the 2015 Outstanding LISA Collaborator of the Year is Lin Zhang, a fourth-year statistics Ph.D. student from Zhengzhou, the capital of Henan Province, in China.

LISA provided research infrastructure for Virginia Tech faculty, staff, and students to use statistics and data science in their research. LISA’s statistical collaborators were trained to help researchers design experiments; collect, analyze, and plot data; run statistical software; interpret results; and communicate statistical concepts to non-statisticians.

At the end of a collaboration project, clients were asked to complete a feedback survey about the quality of service they received and if they were satisfied. This survey provided clients the opportunity to nominate a statistical collaborator for the award as well as to provide feedback for the improvement of the collaboration service as a whole and for individual collaborators.

During 2015, LISA received 53 nominations for the Outstanding LISA Collaborator of the Year award.

Lin Zhang joined LISA in spring 2013 as an associate collaborator and also worked as an associate collaborator in spring 2014, collaborating on nine projects as the junior member of two-person LISA collaboration teams. In spring 2015, Lin was promoted to Pod Leader, leading collaboration projects and mentoring a team of six associate collaborators to help researchers apply statistics to answer their research questions. As a pod leader in spring 2015, summer 2015, fall 2015, and again in spring 2016, Lin led 74 collaboration projects, collaborating on a total of 83 collaboration projects during her career in LISA.

“What make Lin stand out is her desire for continual improvement as a statistical collaborator and leader,” said Dr. Eric Vance, Director of LISA. “She wants to get better, seeks out opportunities to improve, and then implements new ideas to become a better statistician, mentor, and leader.”

Tonya Pruitt, LISA Administrative Specialist, said, “Lin was continually working to improve her communication skills in 2015 and would often stop by my office to get advice on how to read the tone in a client's email or the tone and clarity of her email before she sent it to a client or collaborator that needed some guidance.”

Clients describe Lin as a great communicator and very professional. Tiffany Jebson, a graduate student in Geosciences, wrote in a feedback evaluation, “Lin communicated well to both my adviser and myself. We are not statisticians and she really explained things in a way that we understood. As I learn more about the statistics being performed, I develop more questions about the methodology, which Lin always explains well.”
Lauren Kennedy, a graduate student in Virginia Tech’s Translational Biology, Medicine, and Health program, wrote:

“Lin is an excellent statistician and collaborator. I was very grateful for her help. Lin’s strengths are her patience, her ability to explain things in a very basic way, and her generosity of time and willingness to help. I think there may have been times when Lin was not as organized as she needed to be and consequently made mistakes, but she was quick to correct them because she cares so much about her job and the project.”

There were three other finalists for the 2015 Outstanding LISA Collaborator of the Year award: Yuhyun Song, Adam Edwards, and Matthew Keefe. Below are quotes received from clients for each of these honorees.

Jeff Feldhaus, a graduate student in Forest Resources and Environmental Conservation, wrote: “My meeting with Yuhyun Song was very productive and helpful. She was very experienced and knowledgeable and communicated with me clearly how to best proceed in my study. Yuhyun provided good perspective and thoughts on what statistical analyses would be appropriate for my project and did a great job of asking questions to get a better understanding of the project, the data collected, and how it can and should be analyzed. At the end of the meeting, she reviewed the best steps for me moving forward and made sure I understood all of her recommendations. Finally, she made me feel very welcomed and offered to provide help as I continue the work on this project.” In 2016-17, Yuhyun will be entering her sixth year as a graduate student in the Department of Statistics.

Adam Edwards spent six months in Morogoro, Tanzania as a LISA Ambassador, helping the Sokoine University of Agriculture Laboratory for Interdisciplinary Statistical Analysis (SUALISA)—a member of the LISA 2020 network—grow and become more sustainable. While still at Virginia Tech, one of his clients, Cory Brozina, who earned his Ph.D. in Engineering Education at Virginia Tech, wrote: “Caleb and Adam were very accommodating for setting up meetings. They also did a great job understanding what I wanted out of LISA help and explained very practical ways to answer the questions I wanted to answer. Additionally, they showed me more advanced methods to make my work more rigorous.” In 2016-17, Adam will be entering his fourth year as a graduate student in the Department of Statistics.

Amanda Van Haitsma, a graduate student from Geosciences, wrote about Matthew Keefe and his partner: “I went to my first LISA meeting not really sure what it was I needed help with, only that it related to statistics. My collaborators did a great job of talking to me about my project and together we figured out what exactly I needed help with. They were extremely patient and were great about explaining different statistical options to me. If I hadn’t gone to LISA I believe I would still be stuck on the same problem I had last semester. Having LISA available is wonderful. Thank you. Also, they were really good at giving me options and explaining why some would work better than others.”

Matthew Keefe will be a fifth-year graduate student in the Department of Statistics in 2016-17. In addition to being a finalist for the 2015 award, Matthew received the 2016 Outstanding LISA Collaborator of the Year award (see page 18).

Honorable mentions for the 2015 Outstanding LISA Collaborator of the Year award are (in alphabetical order): Daniel Berry, William DeShong, Mohamed El Khouly, Wenyu (Tina) Gao,
Ting Guan, Caleb King, Justin Loda, Thomas Metzger, Ana Maria Ortega Villa, Kristopher Patton, Elaine Perrin, Liang (Sally) Shan, Allison Steele, Patrick Stewart, James Wrenn, Weibin Xu, Zhe Wang, Angang Zhang, Xiang Zhang, and Yafei Zhang. Congratulations to all outstanding LISA collaborators!
LISA, Virginia Tech’s Laboratory for Interdisciplinary Statistical Analysis, is pleased to announce that the 2016 Outstanding LISA Collaborator of the Year is Matthew Keefe, a fourth year statistics Ph.D. student from Middletown, Delaware.

LISA provided research infrastructure for Virginia Tech faculty, staff, and students to use statistics and data science in their research. LISA’s statistical collaborators were trained to help researchers design experiments; collect, analyze, and plot data; run statistical software; interpret results; and communicate statistical concepts to non-statisticians.

At the end of a collaboration project, clients were asked to complete a feedback survey about the quality of service they received and if they were satisfied. This survey provided clients the opportunity to nominate a statistical collaborator for the award as well as to provide feedback for the improvement of the collaboration service as a whole and for individual collaborators.

During 2016, LISA received 11 nominations for the Outstanding LISA Collaborator of the Year award.

Matt Keefe joined LISA for the first time in fall 2014 as an associate collaborator and continued as an associate collaborator in spring 2015, collaborating on 17 projects as primarily the junior member of two-person LISA collaboration teams. In fall 2015, Matt was clearly ready to become a Pod Leader and was promoted to that position, leading collaboration projects and mentoring a team of 5-6 associate collaborators to help researchers apply statistics to answer their research questions. As a pod leader in fall 2015 and spring 2016, Matt showed outstanding leadership guiding 50 collaboration projects and mentoring his teams of associate collaborators. Matt collaborated on a total of 67 projects during his career in LISA.

“Matt’s enthusiasm, technical skills, ability to structure a collaboration meeting, willingness to help, and excellent communication make him stand out,” said Dr. Eric Vance, LISA Director.

Dr. Chris Franck, LISA Assistant Director, writes: “I think Matt is singularly exceptional. Matt has a track record of giving concise, accurate, useful advice to his peers in LISA meetings. He does a wonderful job presenting projects when he takes the board. He asks clarifying questions about projects which crisply bring important scientific details to the attention of the group. His advice reflects a consistent, deep knowledge and appreciation of the practice of statistics.”

Clients appreciate that Matthew takes the time to understand their research. “Matthew understood what I was trying to do and was very enthusiastic about helping out,” wrote Elyse Clark, a graduate student in the Department of Crop and Soil Environmental Science.

Melanie Avery a Doctoral Intern at Virginia Tech’s Cook Counseling Center, wrote:
“I would like to express my highest compliment for Matthew and Pingyuan’s ability to listen to my concerns and help me truly understand my statistical analysis. They were very patient and were able to explain material in a way that made sense to me at my statistical level. As a result of my meetings, I feel confident in my ability to explain my statistical analysis during my defense meeting. I think that this is an amazing service and Matthew and Pingyuan exceeded my expectations! Thank you all so much. Matthew especially was very diligent in making sure that he understood each of my requests. He was very organized, detailed, patient, able to explain complex statistics in layman’s terms. Matthew was amazing!”

There were three other finalists for the 2015 Outstanding LISA Collaborator of the Year award: Ting Guan, Lin Zhang, and Adam Edwards. Below are selected quotes received from clients for these honorees.

Jessica Talmadge, an MFA student in Arts Leadership, complimented Ting Guan: “Ting is very smart, and clearly know stats. She was able to suggest things we did not even think of which we were thankful for. She was accommodating with her schedule and was very fast to reply to emails which we appreciated.” In 2016-17, Ting will be starting her sixth year as a graduate student in the Statistics Department.

Lin Zhang, the winner of the 2015 Outstanding LISA Collaborator of the Year award (see page 15), was described by A.K. Ward-Bartlett, an assistant professor in the Department of Management, as, “Very understanding. Lin easily understood my problem and could figure out solutions. She was friendly, patient, and not at all condescending.”

Adam Edwards became a Pod Leader in spring 2016, leading and mentoring five associate collaborators to help clients apply statistics to advance their research. “Adam was a strong contributor to the weekly LISA meetings, introducing interesting projects to the group and providing sound statistical advice to other LISA members on their projects,” said Dr. Eric Vance, LISA Director. Adam will enter 2016-17 as a fourth-year Ph.D. student in the Department of Statistics.

Honorable mentions for the 2016 Outstanding LISA Collaborator of the Year award are (in alphabetical order): Lata Kodali, Sumin Shen, Zhe Wang, and Yafei Zhang.
Because Dr. Eric Vance, the director of LISA from 2008-2016, will no longer be at Virginia Tech, and because Tonya Pruitt, the LISA Administrative Specialist, and Dr. Chris Franck, the LISA Assistant Director, will also no longer be part of LISA, future plans will be left to Department Head Dr. Ronald Fricker and the new director he hires, hopefully with input from the faculty of the Department of Statistics and its current students. **We hope the stat lab that succeeds LISA in 2016-17 will continue LISA’s mission to train statisticians to become interdisciplinary collaborators, provide research infrastructure to enable and accelerate high impact research, and engage with the community in outreach activities to improve statistical skills and literacy.**
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