Jimmy Akira Doi

Professor
jdoi@calpoly.edu
www.calpoly.edu/~jdoi

Department of Statistics
San Luis Obispo, CA 93407-0405
(805) 756 – 2901

1. EDUCATIONAL PREPARATION

July 2003	Ph.D., Statistics, North Carolina State University (NCSU) Advisor: Dr. Roger L. Berger Topic: Comparison of Exact Unconditional Methods for the Difference of Two Binomial Proportions
May 1998	Master of Statistics, North Carolina State University
December 1995	B.A., Mathematics (Pure Option), Calif. State University, Northridge (CSUN) Minor in Biology, Chemistry, and Japanese Honors in General Education

2. EMPLOYMENT/EXPERIENCE

April 2018 – Present	**Lecturer**, Center for Statistics and Information Rikkyo University, Tokyo, Japan
June 2016	**Foreign Visiting Researcher**, School of Statistical Thinking Institute of Statistical Mathematics, Tokyo, Japan Host Faculty: Dr. Satoshi Kuriki
Sept 2014 – Present	**Professor**, Statistics Department California Polytechnic State University , San Luis Obispo, CA
Sept 2009 – June 2014	**Associate Professor**, Statistics Department California Polytechnic State University , San Luis Obispo, CA
Sept 2003 – June 2009	**Assistant Professor**, Statistics Department California Polytechnic State University , San Luis Obispo, CA

Aug 2003 – Aug 2004 **Project NExT Fellow**
Mathematical Association of America,
American Statistical Association

Project NExT (**N**ew **Ex**periences in **T**eaching) fellows are new or recent Ph.D.s in the mathematical sciences interested in improving the teaching and learning of mathematics & statistics.

3. TEACHING RELATED ACTIVITIES

I (a) – [Cal Poly] Courses Taught

STAT 130	**Introduction to Statistical Reasoning** 2003 (Fl), 2005 (Fl), 2006 (Wt), 2008 (Fl), 2010 (Fl), 2011 (Fl) 2012 (Wt), 2013 (Wt)
STAT 150	**Introduction to Statistical Investigations** 2008 (Fl), 2009 (Fl), 2010 (Fl), 2011 (Fl), 2021 (Fl),
STAT 217	**Introduction to Statistical Concepts and Methods** 2003 (Fl), 2004 (Wt, Sp), 2005 (Wt, Sp, Sm), 2008 (Sp), 2013 (Fl) 2014 (Wt, Sp, Fl), 2015 (Wt, Sp, Fl), 2016 (Wt), 2017 (Wt) 2018 (Sp), 2019 (Wt, Sp), 2020 (Wt, Sp)
STAT 218	**Applied Statistics for the Life Sciences** 2007 (Fl), 2008 (Fl), 2009 (Fl), 2015 (Fl), 2016 (Fl), 2018 (Fl) 2019 (Fl)
STAT 312	**Statistical Methods for Engineers** 2004 (Sp, Fl), 2005 (Sp, Sm), 2007 (Wt, Sp), 2008 (Wt, Sp) 2009 (Sp), 2010 (Wt, Sp), 2011 (Wt, Sp), 2012 (Fl), 2013 (Sp) 2017 (Sp), 2018 (Sp), 2020 (Sp, Sm, Fl), 2021 (Wt, Sp, Sm, Fl) 2022 (Wt, Sp, Fl)
STAT 321	**Probability and Statistics for Engineers and Scientists** 2004 (Wt, Fl), 2005 (Sp)
STAT 322	**Statistical Analysis for Engineers and Scientists** 2005 (Fl), 2006 (Sp)
STAT 324	**Applied Regression Analysis** 2015 (Sp), 2018 (Sp), 2019 (Wt, Sp), 2020 (Wt)
STAT 330	**Statistical Computing I: SAS** 2005 (Wt), 2006 (Wt, Fl), 2007 (Fl), 2012 (Wt), 2013 (Wt) 2014 (Wt)
STAT 418	**Analysis of Cross-Classified Data** 2009 (Wt), 2010 (Wt), 2011 (Wt), 2015 (Wt), 2016 (Wt), 2017 (Wt) 2021 (Wt)
STAT 419	**Applied Multivariate Statistics** 2020 (Sp), 2021 (Sp), 2022 (Wt, Sp)

I (b) – [Rikkyo University] Courses Taught

FB 146	**Introduction to Statistics 1** 2018 (Sp), 2019 (Sp, Fl), 2020 (Sp, Fl), 2021 (Sp, Fl), 2022 (Sp, Fl)
FB 147	**Introduction to Statistics 2** 2018 (Fl), 2019 (Sp, Fl), 2020 (Sp, Fl), 2021 (Sp, Fl), 2022 (Sp, Fl)

II. Honors/Awards

2014	Mustang Mentor Award, Cal Poly Women's Basketball (2014-15 Season)
2013	Finalist for Cal Poly College of Engineering's Raytheon Excellence in Teaching and Applied Research Award
2013	Teacher Appreciation Award, Cal Poly Panhellenic
2011	Finalist for Distinguished Teaching Award, Cal Poly San Luis Obispo
2010	Finalist for Distinguished Teaching Award, Cal Poly San Luis Obispo

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III (a) – [Cal Poly] Contributions to Curriculum/Course Coordination

2022 – Present	Quarter to Semester Conversion – STAT I & II Group Leader
2013 – 2016	Departmental Curriculum Committee Member
2003 – Present	Course Coordinator for Stat 130
2008 – 2013	Course Coordinator for Stat 150
2009 – Present	Course Coordinator for Stat 312
2006 – 2009	Course Coordinator for Stat 321
2005 – Present	Course Coordinator for Stat 330
2009 – Present	Course Coordinator for Stat 418

III (b) – [Rikkyo University] Contributions to Curriculum/Course Coordination

2017	English translation and audio recordings of 30 statistics lectures, Center for Statistics and Information. See Section 4.II.1 Educational Materials for more details.

IV. Senior Projects or Student Research Supervised

Under Associate Professor Rank

- **Senior Project: Jeremy Mulcahey – 2013-14**
  "*Statistical Analysis using Python with Applications to Dynamic/Streaming Data*"
- **Senior Project: Tyler Diestel – 2010-11**
  "*Advanced Topics from* ***An Introduction to Categorical Data Analysis***"

Under Assistant Professor Rank

2007-08

- **Senior Project: Justin Replogle**
  (Co-Advisor with Heather Smith and Dr. Jeff Sklar)
  "*Statistical Consultant Experience*"

- **Senior Project: John Meisse**
  "*SAS Programmer and Data Analyst with Farmer's Insurance (Summer Internship) and An Introduction to Generalized Linear Models*"

- **2007 Summer Research: John Meisse**
  "*Investigation of Mid-P-value Based Confidence Intervals for a Binomial Proportion*"

2006-07

- **Senior Project: Patrick Harrington**
  "*Comparison of Exact Confidence Interval Methods for a Binomial Proportion*"

  – Patrick later presented his work at the 2007 CSM Student Research Conference

- **Senior Project: Hagen Von Massenbach**
  (Co-Advisor with Dr. John Walker)
  "*Linear Regression Hypothesis Testing in the Presence of Non-Normal Errors*"

V. Miscellaneous

Spring 2021	Participant, Intro to Equitable and Inclusive Teaching Workshop
2021 – 2022	Effective Teaching Practices, ACUE Curriculum Workshop

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4. SCHOLARSHIP

A. Publications

I. Journal Publications

Under Full Professor Rank

1. Doi, J., Holladay, B., and Schilling, M. (2023) "Improved Interval Estimation of Negative Binomial Parameters: A Coverage Probability Approach", *Journal of Statistical Computation and Simulation*, DOI: 10.1080/00949655.2023.2235046

   [Date of Work] – **All work** done at Cal Poly during **Full Professor** rank.

[Journal] – *Journal of Statistical Computation and Simulation* is a peer reviewed journal.

[Background and Work Role] – I contributed to the development of the underlying theory of the paper, helped develop and compile required computational work, and was actively involved in the writing of the manuscript and its revision.

2. Doi, J. (2019) "Hypothesis Testing via Simulation". *Informatio*, 16, 97–116.

   [Date of Work] – **All work** done at Cal Poly during **Full Professor** rank.

   [Journal] – *Informatio* is a peer reviewed journal of the Edogawa Institute of Information Education.

   [Background and Work Role] – This article contains the lecture materials for a presentation I gave in summer 2018 at Kanonji Super Science High School located in Kagawa, Japan.

3. Doi, J. (2019) "Lecture Examples using Simulation-Based Inference and Active Learning". *Journal of Japan Society of Mathematical Education*, 101(3), 28–39.
   (in Japanese)

   [Date of Work] – **All work** done at Cal Poly during **Full Professor** rank.

   [Journal] – *Journal of Japan Society of Mathematical Education* is a peer reviewed journal for mathematics education in Japan.

   [Background and Work Role] – This article provides an overview of a statistics lecture I gave in summer 2017 at Takasaki Super Science High School located in Gunma, Japan. The lecture consisted of four topics: simulation-based inference (SBI), Benford's Law, longest run of heads or tails, and the Chaos Game. Each of the topics required active participation by the students. A complete description of each of the four lecture topics is provided including many relevant resources.

4. Doi, J., Potter, G., Wong, J., Alcaraz, I., and Chi, P. (2016) "Web Application Teaching Tools for Statistics Using R and Shiny". *Technology Innovations in Statistics Education*, 9(1). Link to online access: `escholarship.org/uc/item/00d4q8cp`

   [Author Info] – At the time of manuscript submission P. Chi and G. Potter were Assistant Professors of Statistics at Cal Poly, J. Wong and I. Alcaraz were undergraduate statistics students at Cal Poly.

[Date of Work] – **All work** done at Cal Poly during **Full Professor** rank.

[Journal] – *Technology Innovations in Statistics Education* is a peer reviewed journal and is the only one of its kind pertaining to technological advances in statistics education.

[Background and Work Role] – This work is based on web-based applications known as 'Shiny apps'. I recruited Drs. Chi and Potter and the two undergraduate students for this project. I took lead role by serving as project manager and I authored most of the manuscript. All participants have built Shiny app teaching tools (of which I have constructed six) and at the time of manuscript submission we created a total of 18.

Under Associate Professor Rank

1. Schilling, M., and Doi, J. (2014) A Coverage Probability Approach to Finding an Optimal Binomial Confidence Procedure. *The American Statistician*, 68, 133–145. Link to online access:

   `www.tandfonline.com/doi/abs/10.1080/00031305.2014.899274`

   The complete algorithm (written in R) and an archive of confidence intervals generated by this method can be found here:

   `www.calpoly.edu/~jdoi/LCO`

   Shiny app for algorithm and corresponding Shiny source files can be found under Educational Materials: Web Applications.

   [Author Info] – M. Schilling is Professor of Mathematics at Calif. State Univ. Northridge.

   [Date of Work] – **All work** done at Cal Poly during **Associate Professor** rank.

   [Journal] – *The American Statistician* is a peer reviewed journal. It is one of the most widely read and highly respected journals in statistics.

   [Background and Work Role] – I contributed to the development of the underlying theory of the paper, developed and compiled almost all of the required computational work (which was extensive), and was actively involved in the writing of the manuscript and its revision.

2. Berner, L., Becker, G., Wise, M., and Doi, J. (2013) "Characterization of Dietary Protein among Older Adults in the United States: Amount, Animal Sources, and Meal Patterns". *Journal of the Academy of Nutrition and Dietetics*, 113, 809-815.

[Author Info] – Louise Berner is Professor of Food Science and Nutrition at Cal Poly. Gabe Becker and Max Wise were undergraduate Cal Poly statistics students.

[Date of Work] – **All work** done at Cal Poly during **Associate Professor** rank.

[Journal] – *Journal of the Academy of Nutrition and Dietetics* is a peer reviewed journal. It is a high level and well respected journal in nutrition and dietetics. This paper was formally accepted in June 2013.

[Background and Role] – This research was based on the most recently available data from the National Health and Nutrition Examination Survey. The data sets required analysis using SAS and SUDAAN. I recruited statistics majors Gabe Becker and Max Wise to serve as SAS programmers on this project and supervised their work. I was responsible for confirming and directing all statistical analyses and helped write all relevant statistical analysis sections of the paper.

Under Assistant Professor Rank

1. Ohyama, T., Doi, J., and Yanagawa, T. (2008) "Estimating Population Characteristics by Incorporating Prior Values in Stratified Random Sampling/Ranked Set Sampling". *Journal of Statistical Planning and Inference*, 138, 4021-4032.

   [Author Info] – Dr. Takashi Yanagawa is Director of the Biostatistics Program at Kurume University. Tetsuji Ohyama was a biostatistics doctoral student at Kurume University.

   [Date of Work] – **All work** done at Cal Poly during **Assistant Professor** rank.

   [Journal] – *Journal of Statistical Planning and Inference* is a peer reviewed journal. It is a high level and well respected journal in statistics. This paper was formally accepted in March 2008.

   [Background and Work Role] – This work began during my one week visit to Dr. Yanagawa in March 2005. Dr. Yanagawa is Director of the Biostatistics Program at Kurume University located in Kurume, Japan. This research project involves new work unrelated to my doctoral dissertation. I contributed by helping in the development of the theoretical approach and also providing simulation results.

2. Curtzwiler, G, Singh, J., Miltz, J., Doi, J., and Vorst, K. (2008) "Characterization and Compression Properties of Injection Molded Carbon Nanotube Composites". *Journal of Applied Polymer Science*, 109, 218-225

   [Author Info] – G. Curtzwiler was an undergraduate chemistry student at Cal Poly. Dr. K. Vorst and Dr. J. Singh are professors of Industrial Technology at

Cal Poly and Dr. J. Miltz is professor of Biotechnology and Food Engineering at Technion-Israel Institute of Technology.

[Date of Work] – **All work** done at Cal Poly during **Assistant Professor** rank.

[Journal] – *Journal of Applied Polymer Science* is a peer reviewed journal. According to co-author Dr. Vorst, this journal is well respected and is considered to be one of the top tier journals in polymer science. The paper was formally accepted in February 2008.

[Background and Work Role] – In summer 2007 I served as statistical consultant for a data analysis project led by Dr. Vorst and Cal Poly undergraduate student Greg Curtzwiler. I was responsible for the statistical analyses. Later in the year we submitted a manuscript for this work to the Journal of Applied Polymer Science. I wrote all relevant statistical analysis sections of the paper.

II. Educational Materials

Under Full Professor Rank

1. Rikkyo University Lecture Translations and Recordings

   [Date of Work] – **All work** done at Cal Poly during **Full Professor** rank.

   [Background and Work Role] – I translated from Japanese to English a set of 30 lectures on introductory statistics. These lectures were originally created by Rikkyo University faculty at the Center for Statistics and Information (Tokyo). I also read and recorded English audio narrations to accompany each of the lectures. These translations and recordings will be used for their newly developed e-learning program which was launched in April 2018.

Under Associate Professor Rank

A. Textbook

1. Devore, J., Farnum, N., Doi, J. (© 2014). *Applied Statistics for Engineers and Scientists*, 3^{rd} ed. Belmont, CA: Cengage. ISBN-10: 113311136X

   [Author Info] – J. Devore is Professor Emeritus of Statistics at Cal Poly. N. Farnum is Professor Emeritus of Information Systems and Decision Sciences at Calif. State University Fullerton.

   [Date of Work] – **All work** done at Cal Poly during **Associate Professor** rank.

   [Publisher] – Cengage is a well respected publisher of many popular textbooks used in Statistics as well as many other disciplines.

   [Date of Publication] – August 2013

   [Background and Work Role] – This is an update to the successful book written by Devore and Farnum. I took lead role by serving as project manager and served as liaison with the publisher. I completely wrote two new sections in the book on (1) Fisher's Exact Test and (2) Multiple Logistic Regression. I was responsible for updating the book with roughly 200 new exercises and examples, most of which I generated by searching recent journal articles with real data.

B. Web Applications

Under Full Professor Rank

I have created the following interactive web applications known as **Shiny apps**.

1. **LCO Confidence Interval Generator**
   Summary: The LCO confidence interval generator is based on the algorithm I helped develop and program based on the article I co-authored with M. Schilling in 2014 (see Journal Publications).
   Shiny App Site: `jdoi.shinyapps.io/LCO-CI`
   Source Files: `gist.github.com/jimmydoi/dc513e9b8c47d0f4daf0`

2. **Longest Run of Heads or Tails**
   Summary: This app allows the user to simulate the outcomes of a fair coin flipped n times. Any heads/tails runs of a specified length are marked in color, and the length of the longest run is displayed. The predicted approximate length of the longest run and an approximate 95% prediction interval for the length of the longest run can also be displayed.
   Shiny App Site: `calpolystat.shinyapps.io/LongRun`
   Source Files: `gist.github.com/calpolystat/eee9a9e00dd4ddd68614`

3. **Benford's Law: Sequences**
   Summary: This app generates, for a given length, an additive sequence, a power sequence, and a sequence of prime numbers and applies a goodness of fit test of the observed frequencies of first digits to Benford's Law.
   Shiny App Site: `calpolystat.shinyapps.io/BenfordSeq`
   Source Files: `gist.github.com/calpolystat/f4475cbfe4cc77cef168`

4. **Benford's Law: Data Examples**
   Summary: This app considers several census variables and stock market variables from publicly available databases from the US Census Bureau, the Wall Street Journal, and an online archive of world stock market data. The app applies a goodness of fit test of the observed frequencies of first digits to Benford's Law.
   Shiny App Site: `calpolystat.shinyapps.io/BenfordData`
   Source Files: `gist.github.com/calpolystat/94fe941ab0d8a4f36d8b`

5. **Chaos Game: Two Dimensions**
   Summary: In the two dimensional version of the Chaos Game the app starts with a regular polygon (triangle, square, pentagon, hexagon) and marks selected points which will typically be the vertices. These points, referred to as *endpoints*, are marked in red. The game begins by randomly choosing a starting point and one of the endpoints. a new point is marked at a fixed distance ratio from the starting point to the endpoint (e.g., halfway to the endpoint). Another endpoint is selected at random and, with the most recently created point, the process is repeated to generate the next point, and the process continues. By applying the right distance ratio the resulting set of points will converge to *fractal*. For each polygon the required distance ratio to yield a fractal is provided.

Shiny App Site: `calpolystat.shinyapps.io/ChaosGame2D`
Source Files: `gist.github.com/calpolystat/d40a02fa87508ac5ac4b`

6. **Chaos Game: Three Dimensions**
   Summary: This app replicates the chaos game as described above but performed in three dimensions. The choices for the regular polyhedra are: tetrahedron, cube, and dodecahedron. Again, by applying the right distance ratio the resulting set of points will converge to *fractal*. For each polyhedron the required distance ratio to yield a fractal is provided.
   Shiny App Site: `calpolystat.shinyapps.io/ChaosGame3D`
   Source Files: `gist.github.com/calpolystat/1d63ae1c5c5e3a4a5969`

7. **Binomial Confidence Interval Comparisons**
   Summary: This app compares popular strict and approximate confidence interval methods for a binomial proportion. Comparisons are made across expected length, average length, and coverage probability (average and minimum).
   Shiny App Site: `IN PROGRESS`
   Source Files: `IN PROGRESS`

III. Manuscripts

IV. Conference Publications

Under Associate Professor Rank

- Ottesen, R., Doi, J., Lund, U., and McGaughey, K. (2011) "This is How We Do It: Teaching SAS in the Cal Poly Statistics Department" Contributed paper. Western Users of SAS Software Annual Meetings, October 2011, San Francisco, CA.

  [Date of Work] – **All work** done at Cal Poly during **Associate Professor** rank.

  The paper was awarded "**Best Contributed Paper Award**" for the Resources Section of the 2011 WUSS conference.

Under Assistant Professor Rank

- Doi, J. and Berger, R. L. (2003) "Exact confidence intervals for the difference of two binomial proportions." *Proceedings of the Biopharmaceutical Section of the American Statistical Association*, 1256 – 1263.

  [Date of Work] – **All work** done prior to arriving at Cal Poly.

  – This work was completed during the Ph.D. thesis. The article appears in the proceedings of the 2003 Joint Statistical Meetings. The co-author, Dr. Roger Berger, was my Ph.D. advisor. He is currently at Arizona State University.

V. Articles

Under Assistant Professor Rank

1. Doi, J. (2005) "Statistics Research Opportunities Abound in Japan." *Amstat News*, Nov 2005, Issue #341.

    - *Amstat News* is the monthly membership magazine of American Statistical Association. I was asked to contribute to their ongoing article series on 'International News'.

2. Berger, R. L., and Doi, J. (2001) "Letter to the Editor" on "Letter to the Editor" by Lehr (2000, *The American Statistician*). *The American Statistician*, **55**, 373 – 374.

3. Doi, J. (1999) "Comment on Three Statistical Business Simulations." *Journal of Statistics Education* [Online], 7(1).
(`http://www.amstat.org/publications/jse/contents99.cfm#april`).

B. Presentations

Under Full Professor Rank

I. External Presentation

1. *DEI (Diversity, Equity, Inclusivity) at ASA and Various US Universities* Invited talk. 17th Spring Meeting of the Japan Statistical Society. March 2023, Tokyo, Japan.

2. *Statistics/Probability Education and DEI (Diversity, Equity, Inclusivity)*
(Presented in Japanese) Invited talk. Edogawa University, July 2022, Chiba, Japan.

3. *Statistics/Probability Education and DEI (Diversity, Equity, Inclusivity)*
(Presented in Japanese) Invited talk. Rikkyo University, July 2022, Tokyo, Japan.

4. *Confidence Intervals for the Binomial Proportion* Invited Lecture, Rikkyo University, July 2022, Tokyo, Japan.

5. *Confidence Intervals for the Binomial Proportion* Invited Lecture, Tokyo University of Science, July 2022, Tokyo, Japan.

6. *Simulation-based Inference, Benford's Law, Longest Run, Chaos Theory, and Applications in Shiny.* Invited lecture (Presented in Japanese). Maebashi Super Science High School, July 2022, Maebashi, Japan.

7. *Simulation-based Inference, Benford's Law, Longest Run, Chaos Theory, and Applications in Shiny.* Invited lecture (Presented in Japanese). Hiroshima University Super Science High School, July 2022, Hiroshima, Japan.

8. *Simulation-based Inference, Benford's Law, Longest Run, Chaos Theory, and Applications in Shiny.* Invited lecture (Presented in Japanese). Kobe University Super Science High School, July 2022, Kobe, Japan.

9. *Simulation-based Inference and Random Sampling Lecture Example.* Invited presentation. Univ. of Tokyo, July 2019, Tokyo, Japan.

10. *Simulation-based Inference, Benford's Law, Longest Run, Chaos Theory, and Applications in Shiny.* Invited lecture (Presented in Japanese). Kanonji Super Science High School, July 2019, Kagawa, Japan.

11. *Simulation-based Inference.* Invited presentation. Rikkyo University, June 2019, Tokyo, Japan.

12. *Random Sampling, Simulation-based Inference, Benford's Law, Longest Run, Chaos Theory, and Applications in Shiny.* Invited lecture (Presented in Japanese). Takasaki Super Science High School, June 2019, Gunma, Japan.

13. *Active Learning Lectures for Statistical Understanding.* Invited talk (Presented in Japanese). Sixth Annual Meeting of the Information Education Research Group. Edogawa University, July 2018, Chiba, Japan.

14. *Active Learning Lectures for Statistical Understanding.* Invited talk (Presented in Japanese). Japanese Conference on Teaching Statistics, July 2018, Kyoto, Japan.

15. *Simulation-based Inference, Benford's Law, Longest Run, Chaos Theory, and Applications in Shiny.* Invited lecture (Presented in Japanese). Takasaki Super Science High School, July 2017, Gunma, Japan.

16. *Statistical Computing at Cal Poly San Luis Obispo* Invited talk. Workshop on Undergraduate Education of Data Science, Center for Data Science Education and Research at Shiga University, January 2017, Shiga, Japan.

17. *Data Science Education using Real Data* Invited talk. Workshop on Undergraduate Education of Data Science, Center for Data Science Education and Research at Shiga University, January 2017, Shiga, Japan.

18. *Teaching Statistics at Cal Poly San Luis Obispo* Invited talk. 75 Year Anniversary Conference, North Carolina State University, Statistics Department, October 2016, Raleigh, NC.

19. *Department of Statistics at Cal Poly San Luis Obispo: Overview and Recent Changes* Invited talk. SAS Institute, June 2016, Tokyo, Japan.

20. *Confidence Intervals for the Binomial Proportion* Invited Lecture for Mathematical Statistics Class, School of International Liberal Studies, Waseda University, June 2016, Tokyo, Japan.

21. *Department of Statistics at Cal Poly San Luis Obispo: Overview and Recent Changes* Invited talk. School of International Liberal Studies, Waseda University, June 2016, Tokyo, Japan.

22. *Web Application Tools for Statistics Using R and Shiny* Doi, J., Potter, G., Wong, J., Alcaraz, I., and Chi, P. Invited talk. Center for Statistics and Information at Rikkyo University, June 2016, Tokyo, Japan. (*Presented by J. Doi*)

23. *Department of Statistics at Cal Poly San Luis Obispo: Overview and Recent Changes* Invited talk. Center for Statistics and Information at Rikkyo University, June 2016, Tokyo, Japan.

24. *Web Application Tools for Statistics Using R and Shiny* Doi, J., Potter, G., Wong, J., Alcaraz, I., and Chi, P. Invited talk. Center for Data Science Education and Research at Shiga University, June 2016, Shiga, Japan. (*Presented by J. Doi*)

25. *Department of Statistics at Cal Poly San Luis Obispo: Overview and Recent Changes* Invited talk. Center for Data Science Education and Research at Shiga University, June 2016, Shiga, Japan.

26. *Web Application Tools for Statistics Using R and Shiny* Doi, J., Potter, G., Wong, J., Alcaraz, I., and Chi, P. Invited talk. Institute of Statistical Mathematics, June 2016, Tokyo, Japan. (*Presented by J. Doi*)

27. *Web Application Teaching Tools for Statistics Using R and Shiny* Doi, J., Potter, G., Wong, J., Alcaraz, I., and Chi, P. Contributed talk. 2015 UseR! Conference, July 2015, Aalborg, Denmark. (*Presented by G. Potter*)

II. Internal Presentation

1. *Web Application Tools for Statistics Using R and Shiny: A Presentation for Faculty and Students* Doi, J., Potter, G., Wong, J., Alcaraz, I., and Chi, P. Contributed talk. Cal Poly Dept. of Statistics Colloquium, March 2016, San Luis Obispo, CA. (*Presented by J. Doi*)

2. *A Coverage Probability Approach to Finding an Optimal Binomial Confidence Procedure* Schilling, M. and Doi, J. Cal Poly Dept. of Statistics Colloquium, November 2016, San Luis Obispo, CA. (*Presented by M. Schilling*)

Under Associate Professor Rank

I. External Presentation

1. *A Coverage Probability Approach to Finding an Optimal Binomial Confidence Procedure* Schilling, M. and Doi, J. Invited talk. UC Santa Barbara Statistics Seminar, February 2013, Santa Barbara, CA. (*Presented by M. Schilling*)

2. *This is How We Do It: Teaching SAS in the Cal Poly Statistics Department* Ottesen, R., Doi, J., Lund, U., and McGaughey, K. Contributed paper. Western Users of SAS Software Annual Meetings, October 2011, San Francisco, CA. (*Presented by J. Doi*)

   The presentation and corresponding paper was awarded "**Best Contributed Paper Award**" for the Resources Section of 2011 WUSS Conference.

3. *How Effective Are Normality Tests at Detecting Violations of the Least Squares Regression Assumptions?* Walker, J., Doi, J., Wang, H. Contributed paper. Joint Statistical Meetings, August 2010, Vancouver, British Columbia. (*Presented by J. Walker*)

4. *Dietary protein intake among adults in the United States and its relationship to select body composition measures* Parker, K., Berner, L., and Doi, J. Poster. Experimental Biology Annual Meeting, April 2010, Anaheim, CA. (*Presented by K. Parker*)

   - Abstract available at Federation of American Societies for Experimental Biology Journal, 2010 24:944.3

5. *Characterization of protein intakes in older adults in the US* Berner, L., Prakash, P., Becker, G., and Doi, J. Poster. Experimental Biology Annual Meeting, April 2009, New Orleans, LA. (*Presented by P. Prakash*)

   - Abstract available at Federation of American Societies for Experimental Biology Journal, 2009 23:548.1

Under Assistant Professor Rank

I. External Presentation

1. *Estimating Population Characteristics by Incorporating Prior Values in Stratified Random Sampling/Ranked Set Sampling* Ohyama, T., Doi, J., and Yanagawa, T. Contributed paper. Joint Statistical Meetings, August 2007, Salt Lake City, UT. (*Presented by T. Ohyama*)

2. *Costs and Benefits of ASA Membership: Student/New Faculty Perspective.* Invited Panelist. Joint Statistical Meetings, August 2005, Minneapolis, MN.

3. *Beyond the Ranked Set Sampling.* Yanagawa, T. and Doi, J. International Statistical Institute Conference, April 2005, Sydney, Australia. (*Presented by Dr. Takashi Yanagawa*)

4. *Exact Unconditional Methods for the Difference of Proportions.* Invited talk. North Carolina State University Statistics Seminar, November 2004, Raleigh, NC.

5. *Perspectives from Academics and Industry.* Invited talk. North Carolina State University Statistics Department, November 2004, Raleigh, NC.

The following talks were all based on work related to my doctoral thesis.

6. *Introduction to exact confidence interval for binomial proportions.* Invited talk. Cal State Northridge Mathematics Colloquium, March 2004, Northridge, CA.

7. *Comparison of unconditional exact methods for testing the difference of independent binomial proportions.* Invited talk. UC Santa Barbara Statistics Seminar, October 2003, Santa Barbara, CA.

8. *Comparison of unconditional exact methods for testing the difference of independent binomial proportions.* Invited talk. Institute of Statistical Mathematics Statistics Seminar, September 2003, Tokyo, Japan.

9. *Comparison of unconditional exact methods for testing the difference of independent binomial proportions.* Invited talk. Kyushu University Mathematics/Statistics Seminar, August 2003, Fukuoka, Japan.

10. *Exact confidence intervals for the difference of two binomial proportions.* Contributed paper. Joint Statistical Meetings, August 2003, San Francisco, CA.

C. Grants and Contracts

Applied Under Full Professor Rank,
Work to be Completed Under Full Professor Rank

Project Title:	Bayesian Methods for Clinical Trials
Project Director:	Dr. Jimmy Doi, Cal Poly Dept. of Statistics
Collaborators:	Dr. Yu Hayakawa, Waseda University (Tokyo, Japan) Dr. Roger Berger, Arizona State University Dr. Jared Lunceford, Merck Pharmaceuticals
Timeframe:	January 1, 2016 – August 1, 2016
Funding Sources:	Total $24,150 Long-Term Invitation Fellowship for Overseas Researchers Japan Society for the Promotion of Science (JSPS)
Grant Status:	Denied

Awarded Under Assistant Professor Rank,
Work Completed Under Associate Professor Rank

Project Title:	Characterization of Protein Intakes Among Older Adults in the US: Quantity, Meal Patterns, Food Sources, Predictors of Adequacy, and Relationship to Anthropometric & Physical Functioning Measures
Project Director:	Dr. Louise A. Berner, Cal Poly Dept. of Food Science and Nutrition
Collaborator:	Dr. Jimmy Doi, Cal Poly Dept. of Statistics
Students:	Graduate Student Priya Prakash (Food Science) Undergraduate Student Gabe Becker (Math/Stat)
Timeframe:	July 1, 2007 - September 30, 2010
Funding Sources:	Total $162,299 CSU Agricultural Research Initiative $74,763; Dairy Council of CA $44,127; National Cattlemen's Beef Association $43,409.
Grant Status:	Approved

Under Assistant Professor Rank

Project Title:	Predictive Growth Models for *Escherichia Coli* O157:H7 on Fresh Cut Produce During Transport and Cold Chain Distribution
Project Director:	Dr. Keith Vorst, Cal Poly Dept. of Industrial Technology
Collaborators:	Dr. Jay Singh, Cal Poly Dept. of Industrial Technology Dr. Eric Olsen, Cal Poly Dept. of Industrial Technology Dr. Elliot Ryser, Michigan Stat Univ. Dept. of Food Science and Human Nutrition Dr. Jimmy Doi, Cal Poly Dept. of Statistics Department
Students:	Graduate students will be recruited to assist in the data collection
Timeframe:	July 1, 2008 - December 31, 2011
Funding Sources:	Total $450,000 US Department of Agriculture.
Grant Status:	Grant submitted 1/1/2007. Reviewers recommended a resubmission during the next cycle. To address the need for a differential equations expert on this project, I asked math faculty member Dr. Al Jimenez to take my place on this project.

D. Consulting

Under Assistant Professor Rank

Clients: Cal Poly Faculty and Undergraduate/Graduate Students
Period: Winter 2008
Contribution: I served as departmental consultant for the first time this term. I had a total of ten clients. Due to my ongoing research projects with other Cal Poly faculty, I was not able to accept the additional collaborative opportunities that were made available through the consulting experience. It was an incredible learning experience and, though I will not be serving as consultant during the 2008–09 year, I hope to sit in on as many consulting sessions as possible to increase exposure to different problems and challenges.

Clients: Dr. Michael Geringer, Dr. Colette Frayne (both from Cal Poly Dept. of Management)
Period: Fall 2007 – Present
Contribution: I have been working with Dr. Geringer and Dr. Frayne in their study of the effectiveness of individual self-management training techniques for improving employee performance. I am in the process of analyzing their data using multivariate techniques such as canonical correlation and factor analysis using the SAS software. Our work is drawing to a close and I will write the statistical analysis section of the joint

paper we will be submitting to the Journal of Applied Psychology, considered to be a high-tier journal in their discipline.

Clients: Dr. Louise Berner (Cal Poly Dept. of Food Science and Nutrition)
Period: Fall 2007 – Fall 2010
Contribution: I agreed to join Dr. Berner in a multi-year study of protein intakes in adults and to look at associations of protein intakes with anthropometric and physical functioning measures. The data source is the most-recently available National Health and Nutrition Examination Survey (NHANES). Dr. Berner wrote a grant to support this research and set aside a line item to hire a statistician. I have been serving in that role.

[**Phase 1: July 2007 - December 2008**] Dr. Berner recruited her master's student Priya Prakash for this initial phase. Dr. Berner also wanted to recruit a statistics undergraduate to perform analyses using the SAS statistical software. I asked statistics major Gabe Becker to perform this task. During much of this period, Gabe spent a considerable amount of time cleaning the 2003-04 NHANES data and wrote complex SAS code to make the datasets ready for analysis. It was a difficult and non-trivial task. Once completed, we used SAS and the weighted regression software SUDAAN to create predictive models of protein based on various explanatory factors such as age, ethnicity, and meal pattern. We are reaching the end of this initial phase and we intend to submit our findings to the Journal of Nutrition by early 2009. According to Berner, this journal is well respected and is considered to be one of the top tier journals in nutrition. Including Dr. Berner and myself, both Priya Prakash and Gabe Becker will be listed as co-authors.

[**Phase 2: December 2008 - June 2009**] Dr. Berner has recruited her master's student Kerri Parker for this second phase. Gabe Becker has already graduated so I have recruited statistics major Maxwell Wise to serve as the SAS programmer. We will be performing the same analyses as in Phase 1, but based on the recently released 2005-06 NHANES data. In this phase, we may also consider any remaining research questions Priya may not be able to address by the time Phase 1 ends in December 2008.

Clients: Greg Curtzwiler (Cal Poly Dept. of Chemistry), Dr. Jay Singh, Dr. Keith Vorst (both from Cal Poly Dept. of Industrial Technology), Dr. Joseph Miltz (Technion-Israel Institute of Technology, Dept. of Biotechnology and Food Engineering)
Period: Spring 2007 – Summer 2007
Contribution: Provided analysis of carbon nanotube data obtained from Curtzwiler and Vorst. Also wrote the statistical analysis section in the joint paper submitted to *Journal of Applied Polymer Science*, considered to be a high-tier journal in their discipline. The paper was formally accepted in 2008.

Clients: Dr. Keith Vorst, Dr. Jay Singh, Dr. Eric Olsen (all from Cal Poly Dept. of Industrial Technology), Dr. Elliot Ryser (Michigan Stat Univ., Dept. of Food Science and Human Nutrition)
Period: Fall 2006 – 2008
Contribution: Helped write a grant for a study on predictive growth models for *Escherichia Coli* on fresh cut produce during transport and cold chain distribution. This grant was submitted to the US Department of Agriculture. This grant was submitted in January 2007 and I contributed by writing all sections related to the data analysis and experimental design.

This grant was not initially supported. The reviewers recommended that we resubmit the grant during the next cycle and use the traditional differential equation models that are popularly used in their field. Given that I am not a differential equations expert, I sought a replacement from the math department. Dr. Al Jimenez expressed interest in taking my place and I withdrew so that the group can maximize its chances of successful funding in the next cycle. I did, however, gain valuable experience through the planning stages of this project and also from the grant writing experience as well.

E. Honors/Awards

Professor Rank

2014 Mustang Mentor Award, Cal Poly Women's Basketball (2014-15 Season)

Under Associate Professor Rank

2013 Finalist for Cal Poly College of Engineering's Raytheon Excellence in Teaching and Applied Research Award
2013 Teacher Appreciation Award, Cal Poly Panhellenic
2011 Recipient of Best Contributed Paper Award for the Resources Section of 2011 Western Users of SAS Software Conference
2011 Recipient of Academic Scholarship Award for the 2011 Western Users of SAS Software Conference
2011 Finalist for Distinguished Teaching Award, Cal Poly San Luis Obispo
2010 Finalist for Distinguished Teaching Award, Cal Poly San Luis Obispo

E. Honors/Awards (continued)

Prior to Associate Professor Rank

2005	Nominated for Elected Membership to the International Statistical Institute
2003	2003/04 American Statistical Association Project NExT Fellow
2003	Outstanding Teaching Assistant Award, Universitywide, NCSU
2003	Outstanding Teaching Assistant Award, Dept. of Statistics, NCSU
2002	Outstanding Teaching Assistant Award, Universitywide, NCSU
2002	Outstanding Teaching Assistant Award, Dept. of Statistics, NCSU
2001	Outstanding Teaching Assistant Award, Universitywide, NCSU
2001	Outstanding Teaching Assistant Award, Dept. of Statistics, NCSU
2001	Paige Plagge Graduate Award for Citizenship, Dept. of Statistics, NCSU
2001	Nat'l Science Foundation VIGRE Graduate Fellow, Dept. of Statistics, NCSU
2001	So. Regional Council On Statistics Summer Research Conference Travel Award
2000	2000/01 Preparing the Professoriate Program, NCSU
2000	National Science Foundation Monbusho Summer Program in Japan
2000	2000/01 Graduate Student Fellow, NCSU Hewlett Initiative Program
1999	Calif. State Univ. Forgivable Loan/Doctoral Incentive Program
1999	Paige Plagge Graduate Award for Citizenship, Dept. of Statistics, NCSU
1999	Gamma Sigma Delta Agriculture Honor Society, NCSU
1998	Mu Sigma Rho Statistics Honor Society, NCSU
1998	Mendenhall Teaching Scholar Fellow, Dept. of Statistics, NCSU
1996	Outstanding Instructor Award, Dev. Math Program, Math Dept., CSUN

F. Other

I. Conferences

Under Associate Professor Rank

- 2011 Western Users of SAS Software Annual Meetings, San Francisco, CA.
  - Presentation during contributed paper session (see PRESENTATIONS)

Under Assistant Professor Rank

1. 2007 Joint Statistical Meetings, Salt Lake City, UT.
   - Presentation during contributed paper session (see PRESENTATIONS)
2. 2005 Joint Statistical Meetings, Minneapolis, MN.
   - Presentation during invited session (see PRESENTATIONS).

3. 2003 Joint Statistical Meetings, San Francisco, CA.

    - Presentation during contributed paper session (see PRESENTATIONS)

II. Refereeing

	Under Assistant Professor Rank
Dec 2005	"Teaching Multivariate Statistics in Graduate Courses with a Heterogeneous Audience", *International Conference on Teaching Statistics 7*
Dec 2005	"Statistical Graphs and Experimental Data", *International Conference on Teaching Statistics 7*
Dec 2005	"The Use of Advanced Visual Tools for Commuter European Data", *International Conference on Teaching Statistics 7*
Jun 2005	"Improved p-value tests for comparing two independent binomial proportions", *Journal of Statistical Planning and Inference*
Apr 2005	"The Relative R^2, Regression Through the Origin, and Weighted Least Squares", *The American Statistician*
Feb 2004	"Monte Carlo Power Calculations for a K-Sample Rank Test Under the Lehmann Alternative", *The American Statistician*

III. Book Review

	Under Assistant Professor Rank
Jul 2008	*Basic Statistics Using SAS Enterprise Guide: A Primer*, Geoff Der and Brian S. Everitt. First Edition. Cary, NC: SAS Institute, Inc., 2007 Review to appear in *The American Statistician*
Dec 2007	*Statistics: Concepts and Controversies*, David Moore and William Notz. Seventh Edition. NY, NY: W. H. Freeman and Co., 2009
Jul 2006	*Biostatistics*, Wetstone.

IV. Participation in Professional Associations and Organizations

- American Statistical Association
- International Biometric Society (ENAR)
- International Biometric Society (WNAR)
- Project NExT
- Section NExT (Southern California)

5. SERVICE AND UNIVERSITY CITIZENSHIP

A. University Service

	Under Full Professor Rank
Fall 2020 – Present	Advisor, Cal Poly EPIC, the Asian American Ministry of Cru
2020 – 2021	Advisor, Cal Poly Cru
Fall 2020	CSM Professional Leave Committee
Fall 2020	Led presentation for Cal Poly EPIC – "Puzzled"
Fall 2019	CSM Professional Leave Committee
May 2019	Led presentation for Cal Poly AACF (Asian American Christian Fellowship) – "Handcrafted"
Apr 2019	Participated in panel discussion hosted by CRU – "Real Life"
Apr 2019	Led presentation for Cal Poly Greek Row – "What is Next?"
Fall 2018	CSM Committee for Inclusion and Equity
2018 – 2019	Co-Chair, College Peer Review Committee (CSM)
2018 – 2019	Advisor, Cal Poly Asian American Christian Fellowship
May 2017	Participated in faculty panel discussion hosted by EPIC, the Asian American Ministry of Cru
Sep 2016 – Present	Volunteer Host for International Poly Hosts Program
2016 – 2017	Member, College Peer Review Committee (CSM)
2015 – 2018	Co-Advisor, Cal Poly Japanese Student Association
2014 – 2017	Advisor, Cal Poly EPIC, the Asian American Ministry of Cru
2014 – 2017	Member, Cal Poly Diversity Coalition
2014 – Present	Participated in Faculty Commons, Cal Poly Faculty/Staff Christian organization
2009 – 2014	Member, Cal Poly Asian Pacific Islander Faculty/Staff Assoc.
	Under Associate Professor Rank
Apr 2014	Led presentation for Cal Poly EPIC – "Love"
May 2012	Led presentation for Cal Poly EPIC – "The Great Commission"
2010 – 2014	Advisor, Cal Poly EPIC, the Asian American Ministry of Cru
2010 – 2014	Advisor, Cal Poly Japanese Cultural Exchange
2010 – 2014	Member, Cal Poly Diversity Coalition
2009 – 2014	Executive Planning Committee Member, Cal Poly Asian Pacific Islander Faculty/Staff Assoc.
2010 – 2011	Local Organizer and Main Coordinator for 2011 WNAR/IMS Biostatistics Conference held at Cal Poly
Jan 2011	Participated in panel "A Panel of Cal Poly Faculty" hosted by Cru at Mountain Brook Church
2010 – 2014	Participated in Faculty Commons, Cal Poly Faculty/Staff Christian organization

A. University Service (continued)

	Under Assistant Professor Rank
2005 – 2009	Member, Faculty Affairs Committee
2004 – 2009	Member, Japanese Cultural Exchange and Japanese Conversation Group

B. Department Service

	Under Full Professor Rank
2020 – 2022	Chair, Department Committee for Diversity, Equity, and Inclusivity
2019 – 2020	Department Hiring/Screening Committee
2019 – Present	Mentor, Bret Holladay – Lecturer, Statistics
2017 – Present	Mentor, Nianpin Cheng – Lecturer, Statistics
2016 – 2019	Mentor, Jay Olenowski – Lecturer, Statistics
2014 – 2015	Coordinator, Departmental Peer Review Committee
	Under Associate Professor Rank
2013 – 2014	Coordinator, Departmental Peer Review Committee
2013 – 2015	Member, Departmental Curriculum Committee
2013 – 2015	Mentor, Peter Chi – Asst. Prof., Statistics
2012 – 2014	Department Colloquium Coordinator
2012 – 2015	Department Faculty Workstation Program Coordinator
2012 – 2015	Chair, Technology Committee
2010 – 2011	Local Organizer and Main Coordinator for 2011 WNAR/IMS Biostatistics Conference held at Cal Poly
2009 – 2010	Committee Member for Master's Student Kerri Parker
2009 – 2016	Annual Presentation: Preparing for Statistics Graduate School
2009 – Present	Chair, Assessment Group #5
2009 – Present	Member, Assessment Group #8
2009 – Present	Kennedy Library Departmental Liaison
2003 – Present	Course Coordinator for Stat 130
2008 – 2013	Course Coordinator for Stat 150
2009 – Present	Course Coordinator for Stat 312
2006 – 2009	Course Coordinator for Stat 321
2005 – Present	Course Coordinator for Stat 330

B. Department Service (continued)

	Under Assistant Professor Rank
2007 – 2009	Committee Member for Master's Student Priya Prakash
2007 – 2009	Chair, Assessment Group #5
2007 – 2009	Member, Assessment Group #8
2007 – 2008	Annual Presentation: Preparing for Statistics Graduate School
Winter 2007	Access to Excellence, Domain 2 Member
Feb 2007	College Partner School Presentation
2005 – 2009	Kennedy Library Departmental Liaison
2004 – 2008	Annual Presentation: Introduction to LaTeX and Beamer
2004 – 2008	Advisor, Mu Sigma Rho Statistics Honor Society
2004 – 2008	Advisor, Statistics Club
2003 – 2009	Committee on High School Recruitment
2003 – 2009	Course Coordinator for Stat 130
2008 – 2009	Course Coordinator for Stat 312
2006 – 2009	Course Coordinator for Stat 321/322

C. Professional Service

	Under Full Professor Rank
2019, 2020, 2021	Invited External Advisor for Statistics Education, National Statistics and Data Utilization Conference, Kanonji Super Science High School, Kagawa, Japan
	Under Associate Professor Rank
2010 – 2011	Local Organizer and Main Coordinator for 2011 WNAR/IMS Biostatistics Conference held at Cal Poly
	Under Assistant Professor Rank
2002 – 2008	American Statistical Association Committee Membership Retention and Recruitment
Aug 2005	Joint Statistical Meetings Session Chair General Topics in Statistics Education
Jan 2004	Judge for Poster Session at Joint Mathematics Meetings

D. Community Service

	Under Full Professor Rank
2016 – Present	Volunteer math instructor at SLO Classical Academy