

## CURRICULUM VITAE

Daijin Ko  
Professor

Department of Management Science and Statistics  
The University of Texas at San Antonio  
2017

### ACADEMIC TRAINING

- 1985                      Ph.D. Statistics  
University of Washington, Seattle, WA  
Supervising Professor: Dr. Peter Guttorp  
**Dissertation Title:** Robust Statistics on Compact Manifolds
- 1982                      M.S. Statistics  
University of Washington
- 1977                      M.S. Mathematics  
Yonsei University, Seoul, Korea
- 1974                      B.A. Mathematics  
Yonsei University, Seoul, Korea

**RESEARCH INTERESTS** Robust Statistics and Outlier Detection, Stochastic Modeling in Neuroscience, Data Mining/ Statistical Learning Methods, and Cyber Security, Bioinformatics, Directional Data Analysis, Epidemiology in Epilepsy.

### PROFESSIONAL EXPERIENCE

#### Academic

- 2003– Present                      Professor  
Department of Management Science and Statistics  
The University of Texas at San Antonio
- 2004-Present                      Adjunct Professor  
Epidemiology and Biostatistics Center  
University of Texas Health Science Center at San Antonio
- 2008-Present                      Professor  
The UTSA Neurosciences Institute
- 2000–2003                      Professor  
Department of Biostatistics

Medical College of Virginia/ Virginia Commonwealth University

1992–2000 Associate Professor  
Graduate Program Director  
Department of Biostatistics  
Medical College of Virginia/ Virginia Commonwealth University

1985–1992 Assistant Professor  
Department of Biostatistics  
Medical College of Virginia/ Virginia Commonwealth University

1979–1985 Teaching Assistant/Research Associate  
University of Washington, Seattle

1974-1978 Lecturer (First Lieutenant)  
Department of Mathematics  
Korean Air Force Academy, Seoul

**Administrative**

1992–2000 Graduate Program Director  
Department of Biostatistics  
Medical College of Virginia  
Virginia Commonwealth University

**Visiting**

2001–2002 Visiting Professor  
Institute of Psychiatric and Behavioral Genetics  
Richmond, Virginia

1995–1996 Visiting Associate Professor  
University of Virginia  
Charlottesville, Virginia

**Consulting**

1994-1996 United Network of Organ Sharing  
Richmond, Virginia

1984-1986 State of Alaska (North Slope Borough)  
Alaska

## PUBLICATIONS

### REFEREED JOURNAL ARTICLES

1. **Daijin Ko** and Matthew J. Wanat: Phasic dopamine transmission reflects initiation vigor and exerted effort in an action- and region-specific, *Journal of Neuroscience*, 36: 2202-2211, 2016
2. Gaval-Cruz, M., Goertz, R. B., Puttick, D. J., Bowles, D. E., Meyer, R. C., Hall, R. A., **Ko, D.**, Paladini, C. A. and Weinshenker, D., Chronic loss of noradrenergic tone produces  $\beta$ -arrestin2-mediated cocaine hypersensitivity and alters cellular D2 responses in the nucleus accumbens. *Addiction Biology*. 21(1):35-48, 2016
3. Brian P. Hermann, Kazadi N. Mutoji, Ellen K. Velte, **Daijin Ko**, Jon M. Oatley, Christopher B. Geyer, and John R. McCarrey: Transcriptional and Translational Heterogeneity among Neonatal Mouse Spermatogonia, *Biology of Reproduction*, 92(2) 54:1-12, 2015
4. Michael J. Beckstead, Sarah Y. Branch, Richard Brandon Goertz, Dr. Amanda L. Sharpe, Janie Pierce, Sudip Roy , **Daijin Ko**, Carlos A. Paladini: Food restriction increases glutamate receptor-mediated burst firing of dopamine neurons: *Journal of Neuroscience* **33**(34):13861–13872, 2013
5. Jose Bird and **Daijin Ko**: Combining Classifiers using class-specific Precision Index Function. *International Journal of Applied Pattern Recognition*, **1** (1): 3 – 26, 2013
6. **Ko, Daijin**, Wilson, Charles, Lobb, Collin and Paladini, Carlos: Detection of Bursts and Pauses in Spike Trains: *Journal of Neuroscience Methods*, **211** (1): 145-158, 2012
7. Patricia R Araujo, Kihoon Yoon, **Daijin Ko**, Andrew D Smith, Mei Qiao, Uthra Suresh, Suzanne C Burns, and Luiz O F Penalva: Before It Gets Started: Regulating Translation at the 5' UTR. *Comparative and Functional Genomics*, Volume 2012, Article ID 475731, 8 pages doi:10.1155/2012/475731, 2012
8. Myung Ko, Jan Clark and **Daijin Ko**: Investigating the Impact of 'Green' Information Technology Innovators on Firm Performance. *Journal of Information Technology Management* **22** (2), 1-12, 2011.
9. **Daijin Ko** and Brad Windle: Enriching for Correct Prediction of Biological Processes Using a Combination of Diverse Classifiers. *BMC Bioinformatics* **12**:189-201, 2011.
10. Nicole Lang Beebe, Jan Clark, Glenn Dietrich, Myung Ko, and **Daijin Ko**: Post-Retrieval Search Hit Clustering to Improve Information Retrieval Effectiveness: A Digital Forensic Case Study. *Decision Support Systems* **51** (4), 732-744, 2011.

11. Christine Vogel, Raquel de Sousa Abreu, **Daijin Ko**, Shu-Yun Le, Bruce Shapiro, Suzanne Burns, San Boutz, Devraj Sandhu, Edward Marcotte, and Luiz O. F. Penalva: Sequence signatures and mRNA concentration explain two-thirds of protein abundance variation in a human cell line. *Molecular Systems Biology* **6**: **400**, 1-9, 2010.
12. Alex Bokov, **Daijin Ko**, Alan Richardson: The Effect of Gonadectomy and Estradiol on Sensitivity to Oxidative Stress. *Endocrine Research* **34**(1&2): 43-58, 2009
13. Raquel de Sousa Abreu, Patricia C. Sanchez-Diaz, Christine Vogel, Suzanne C. Burns, **Daijin Ko**, Tarea L. Burton, Dat T. Vo, Soudhamini Chennasamudaram, Shu-Yun Le, Bruce A. Shapiro, and Luiz O. F. Penalva: Genomic analyses of Musashi1 downstream targets show a strong association with cancer related processes. *Journal of Biological Chemistry* **284**: 12125-12135, 2009
14. Kihoon Yoon, **Daijin Ko**, Mark Doderer, Carolina Livi, Nathan Trinklein, Luiz O. F. Penalva.: Over-represented sequences located on 3' UTRs are potentially involved in regulatory functions. *RNA Biology* **5**:4, 255-262, 2008
15. M. Ko, J. Clark and **D. Ko**: Revisiting the Impact of Information Technology Investments on Productivity: An Empirical Investigation Using Multivariate Adaptive Regression Splines. *Information Resources Management Journal* **21**(3): 1-23, 2008
16. Starlings, R., Yoon, K., Kwek, S. and **Ko, D.**: The Origin and Importance of Chromosomal Imbalances in Neuroblastoma. *Cancer Genetics and Cytogenetics*; **176**(1): 28-34, 2007
17. **Ko, D.**, Xu, W., Windle, B. Gene Function Classification using NCI-60 Cell Line Gene Expression Profiles. *Computational Biology and Chemistry* **29**(6): 412-419, 2005
18. Chang, T., **Ko, D.**, Royer, J. and Lu, J. : Regression Techniques in Plate Tectonics: *Statistical Science* **15**(4):342-356, 2000
19. Waterhouse, E., Garnett, L., Towne, A., Morton, L., Barnes, T., **Ko, D.**, and DeLorenzo, R. : Prospective Population-Based Study of Intermittent and Continuous Convulsive Status Epilepticus in Richmond, Virginia: *Epilepsia* **40**(6):752-758, 1999
20. DeLorenzo, R., Garnett, L., Towne, A., Waterhouse, E., Boggs, J., Morton, L., Choudhry, M., Barnes, T., and **Ko, D.**: Comparison of status epilepticus with prolonged seizure episodes lasting from 10 to 29 minutes. *Epilepsia*, **40**(2):164-169, 1999
21. DeLorenzo, R., Waterhouse, E., Towne, A., Boggs, J., **Ko, D.**, DeLorenzo, G, Brown, A., and Garnett, L.: Persistent Nonconvulsive Status Epilepticus After the Control of Convulsive Status Epilepticus: *Epilepsia*, **39**(8):833-840, 1998

22. Lu, J., **Ko, D.**, and Chang, T.: Standardized Influence Matrix and its application. *Journal of American Statistical Association*, **92**:1572 - 1580, 1997
23. Jaitly, R., Sgro, J., Towne, A., **Ko, D.** and DeLorenzo, R.: Prognostic Value of EEG Monitoring after Status Epilepticus: A prospective adult study. *Journal of Clinical Neurophysiology*, **14**: 326 – 334, 1997
24. DeLorenzo, R., Hauser, W., Towne, A., Boggs, J., Pellock, J. Penburthy, L., Fortner, C., and **Ko, D.**: A prospective population-based epidemiological study of status epilepticus in Richmond, Virginia. *Neurology* **46**: 1029-1035, 1996
25. Chang, T. and **Ko, D.**: M-estimates of rigid body motion on the sphere and in Euclidean space. *Annals of Statistics*, **23**: 1823-1847, 1995
26. Towne, A., Pellock, J., **Ko, D.** and DeLorenzo, R.: Determinants of mortality in status epilepticus. *Epilepsia*, **35**(1): 27-34, 1994
27. Eich, D., Nestler, J., Johnson, D., Dworkin, G., **Ko, D.**, Wechsler, A and Hess, M. : Inhibition of accelerated coronary atherosclerosis with dehydroepiandrosterone in the heterotopic rabbit model of cardiac transplantation. *Circulation*, **8**: 261-269, 1993
28. **Ko, D.** and Chang, T.: Robust M-estimators on spheres. *Journal of Multivariate Analysis*, **45**: 104-136, 1993
29. DeLorenzo, R., Towne, A., Pellock, J. and **Ko, D.**: Status Epilepticus in children, adults and the elderly. *Epilepsia*, **33**(Suppl. 4): 515-525, 1992
30. **Ko, D.**: Estimation of the concentration parameter of von Mises-Fisher distributions. *Annals of Statistics*, **20**: 917-928, 1992
31. Eich, D., Thompson, J., **Ko, D.**, Hastillo, A., Lower, R., Katz, S., Katz, M. and Hess, M. : Hypercholesterolemia in long-term survivors of cardiac transplantation: An early marker of accelerated coronary disease. *J. Heart Transplant*, **10**: 45-49, 1991
32. Eich, D., Johnson, D., Hastillo, A., Thompson, J., Barnhart, G., **Ko, D.**, Lower, R. and Hess, M.: Chapter 13: Accelerated Coronary Arteriosclerosis in Cardiac Transplantation. *Cardiac Transplantation* edited by M Thompson, F.A. Davis Company, Philadelphia, pp. 199-211, 1990 (cardiovascular clinics)
33. David M. Eich · Danna E. Johnson · John E. Nestler · **Daijin Ko** · Michael L. Hess · A. S. Wechsler Inhibition of cardiac allograft atherosclerosis by dehydroepiandrosterone. *Journal of the American College of Cardiology* 02/1990; 15(2). DOI:10.1016/0735-1097(90)92228-T, 1990

34. Enters, K., Guo, H., Pandey, U. **Ko, D.** and Robinson, S.: The effect of prenatal methadone exposure on development and nociception during the early postnatal period of the rat. : *Neurotoxicology and Teratology*, **13**: 161-166, 1991
35. Nakano, M., Kainer, G., Foreman, J., **Ko, D.**, and Chan, J. : The effects of exogenous rat growth hormone therapy on growth of uremic rats fed an 8% protein diet. *Pediatric Research*, **26**: 204-207, 1989
36. Krogman, B., Rugh, D., Sonntag, R., Zeh, J., and **Ko, D.**: Ice-based census of bowhead whales migrating past Point Barrow, Alaska 1978-93. *Marine Mammal Science*, **5**(2): 116-138, 1989
37. **Ko, D.** and Guttorp, P.: Robustness of Estimators for Directional Data. *Annals of Statistics*, **16**: 609-618, 1988
38. **Ko, D.** and Zeh, J.: Detection of Migration Using Sound Locations. *Biometrics*, **44**: 751-763, 1988
39. Zeh, J., **Ko, D.**, Krogman, B. and Sonntag, R.: A Multinomial Model for Estimating the Size of a Whale Population from Incomplete Census Data. *Biometrics*, **42**: 1-14, 1986
40. Zeh, J., **Ko, D.**, Krogman, B. and Sonntag, R. : Statistical Considerations in Estimating the Number of Bowhead Whales, *Balaena mysticetus*, from Ice-Based Visual Census Data. *Rep. int. Whal. Commn*, **36**: 317-323, 1986
41. **Ko, D.**, Zeh, J., Clark, C., Ellison, W., Krogman, B. and Sonntag, R.: Utilization of Acoustic Localization Data in Determining minimum number of Spring Migrating Bowhead Whales Unaccounted by the Ice-based Visual Census. *Rep. int. Whal. Commn.*, **36**: 325-338, 1986
42. Krogman, B., **Ko, D.**, Zeh, J., Grotefendt, R. and Sonntag, R.: Experimental design considerations for the use of acoustic data to correct for whales missed by the ice-based census. *Rep. int. Whal. Commn*, **34**: 445-456, 1984
43. **Ko, D.**: Limits and Colimits of the Monadic Functors, Korean Air Force Academy Faculty Journal, 1: 127-132, 1977

### **Under Preparation**

1. Local parametric density-based outlier detection.
2. Robust Gaussian Methods in Spike Train Analysis.
3. Detection of hostile insiders.

## **Book Reviews**

1. **Daijin Ko:** Data mining by Aggarwal, Charu. (Springer) *Mathematical Review* MR3523923, 2017
2. **Daijin Ko:** Growth curve models and statistical diagnostics by J. Pan and K. Fang. (Springer Series in Statistics) *Mathematical Review* 1937691 (2004m:62008), 2004
3. **Daijin Ko:** Introductory biostatistics for the health sciences by M. Chernick and R. Friis. (Wiley-Interscience) *Mathematical Review* 1962325 (2004b:62001), 2003
4. **Daijin Ko:** Linear mixed models for longitudinal data by Verbeke, Geert; Molenberghs, Geert( Springer Series in Statistics). *Mathematical Review* 1880596, 2002
5. **Ko, Daijin:** Applied survival analysis: regression modeling of time to event data by Hosmer and Lemeshow (Wiley): *Journal of Statistical Planning and Inference* **91**(1): 173-176, 2001
6. **Daijin Ko:** Recursive partitioning in the health sciences by Zhang, Heping; Singer, Burton.(Springer-Verlag) *Mathematical Review* 1683316, 2000
7. **Ko, Daijin:** A Handbook of Statistical Analyses Using S-Plus by Brian S. Everitt (Chapman-Hall), *Technometrics*, Vol. 37, No. 2 (May, 1995), pp. 232-233
8. **Ko, Daijin:** An Introduction to S and S-Plus by Phil Spector (Duxberry Press), *Technometrics*, Vol. 37, No. 2 (May, 1995), pp. 232

## **INVITED SHORT COURSES**

Robust and Nonparametric Statistics: One week short course, Department of Waste Management, Commonwealth of Virginia, Aug, 1989

Counting Process and Survival Analysis: A short course presented at the Division of Statistics, University of Virginia, Spring 1996

Regression Diagnostics for Survival Data: A short course presented at the 8<sup>th</sup> Annual Biopharmaceutical Applied Statistics Symposium, Savannah, Georgia, Dec, 2001

Microarray Data Analysis: Beyond Clustering, Virginia Institute of Psychiatric and Behavioral Genetics, 2002

Data Mining for Complex Traits: Combining Information, Virginia Institute of Psychiatric and Behavioral Genetics, 2002

Genomics and Proteomics workshop series for the San Antonio area biomedical researchers, 2005-2006

Microarray Analysis Review: Microarray Workshop at Children's Cancer Research Institute, 2005

1<sup>st</sup> Neurostatistics Workshop, The Common Statistical Platform – R language and Experimental Design, The Neuroscience Institute, San Antonio, 2009

2<sup>nd</sup> Neurostatistics Workshop, Experimental Design and Analysis of Variance Model for Biologists, The Neuroscience Institute, San Antonio, 2010

3<sup>rd</sup> Neurostatistics Workshop, Statistical Models for Counting Data & An introduction to the Bootstrap method Experimental Design in Neuroscience, The Neuroscience Institute, San Antonio, 2011

4<sup>th</sup> Neurostatistics Workshop, Statistics in Neuroscience and Data Mining, The Neuroscience Institute, San Antonio, 2012

5<sup>th</sup> Neurostatistics Workshop, Stochastic Process Modeling in Spike Train Analysis, The Neuroscience Institute, San Antonio, 2013

The International Workshop: Advances in Directional Statistics, invited speaker, Brussels, Belgium, 2014.

Conference of Texas Statisticians 2016, invited speaker, Detection of Hostile Insiders, 2016

### **CONTRIBUTED TALKS**

I have presented over 50 contributed talks at the Joint Annual Meetings of the ASA, Regional Meetings of the Biometric Society and the IMS, Neuroscience, Epilepsy Society meeting, Neurology, Management Information Society meetings.

### **GRANTS AND CONTRACTS**

#### **Ongoing Research Support**

NIH 1 P20 CA 165589-01 (PI Kay Robinson) 09/01/2012-08/31/2016  
The Cancer Bioinformatics Initiative: A UTSA/UTHSCSA Partnership (\$ 575K)  
Role: Co-Investigator

DHS grant DHSST-LRBAA14-02- CSD.12-0011-I (PI Nicole Beebe) 4/1/16-3/31/18



Lightweight Media Forensics for Insider Threat Detection Follow-On (\$649 K)  
Role: Co-PI

NIH/NINDS 1 U54 NS060658-01A1 (Charlie WILSON) 09/01/2008-  
08/31/2014  
Quantitative Neurobiology at the University of Texas at San Antonio/ Quantitative  
Neurostatistics Core (\$ 546K)  
Role: P.I. (Neurostatistics Core)

DoD Information Systems Agency (Beebe) 9/29/2014-  
6/29/2016  
Vector: Insider Threat Identification DOD (sub-award from Def-Logix, Inc.) (\$211K)  
Role: Co-PI

DHS / NPS BAA BAA 12-004 (NPS, Garfinkel/ UTSA, Beebe) 1/01/2013-  
8/31/2014  
Detecting Threatening Insiders with Lightweight Media Forensics (\$ 796K)  
Role: Co-PI for UTSA

NIH 1 P20 CA 165589-01 (Kay Robinson) 09/01/2012-08/31/2016  
The Cancer Bioinformatics Initiative: A UTSA/UTHSCSA Partnership (\$ 575K)  
Role: Co-Investigator

### **Completed Research Support**

NIH/NINDS Grant 5P50NS025630-129001 1/1/01-12/31/05  
Data Management and Biostatistics at Greater Richmond Epilepsy Research  
Center (budget circa \$500K)  
Role: P. I. (40% effort, reduced to 5% during 2003-2005)

NIH/NINDS Grant P01 NS25630-06A1, Principal Investigator, 1994-1999  
Data Management and Biostatistics at MCV Epilepsy Research Center (circa  
\$500K)  
Role: P. I. (45% effort)

National Science Foundation Research Grant #DMS-9101725, 1991-1993:  
Statistics of Estimated Rotations  
Role: P. I. (17% effort)

NIH/NINDS Grant P01 NS25630-02 1989-1993:  
Data Management and Biostatistics at MCV Epilepsy Research Center (circa  
\$500K))  
Role: P. I. (50% effort)

NIH Pre-doctoral Fellowship Awards #1 F31 GM 17303, 1994-1998  
National Research Service Award  
Role: P. I. (Sponsor)

Fellowship from Burroughs Welcome CO. 1988-1998  
Burroughs Welcome Fellowship  
Role: P. I. (Sponsor)

DHHS Grant f 5P30CA 16059-14 1988-1993  
Massey Cancer Center Core Support Grant  
Role: Co-Investigator

NIH #5R01M32431-002 1986-1988  
Data Coordinating Center for Pediatric Renal Disease Study  
Role: Co-PI

### **MASTER'S THESIS SUPERVISED**

Shigeaki Ohtsuki (M.S.): Survival Analysis on Gastric Cancer Data, May, 1989

Ronald Seaman (M.S.): Using Equivalence Testing to Identify Differentially Expressed Genes in Two-Color Microarrays, July 2010

### **Ph. D. THESIS SUPERVISION**

#### **At MCV/VCU**

Erick Edwards, Jr. (Ph.D.): A Monte Carlo Approach to Hypothesis Testing in Nonparametric Regression, January, 1990

Randy Anderson (Ph.D.): Robustification of the Buckley-James Estimator for Linear Regression Parameters with Right Censored Responses, August, 1990 (ENAR Paper Travel Awards)

Ken Sullivan (Ph.D.) Determining Therapeutic Synergism in a Nonparametric Regression Setting, April, 1992 (ENAR Paper Travel Awards)

Sharon McDermott (Ph.D.): Kendall's Tau as a Multiple Correlation Coefficient for Right Censored Data, April, 1992

Jiandong Lu (Ph.D.): The Standardized Influence Matrix and Its Applications to Generalized Linear Models, August, 1994 (ENAR Paper Travel Awards)

Fisseha Tesfaye (Ph.D.): Modeling Onset Times in Twins Based on Multivariate Frailty Model, January, 1998

Tristan Massie (Ph.D.): Variance Estimation and Influence Functions for Threshold Models, August, 2002

**At UTSA**

Jose Bird (Ph.D.): Combining Classifiers using class-specific Precision Index Function, May, 2012

CHUNXIANG WANG (Ph.D.) VARIABLE SELECTION THROUGH ADAPTIVE ELASTIC NET FOR PROPORTIONAL ODDS MODEL, August, 2016

Kris Williams (Ph.D.) LOCAL PARAMETRIC DENSITY-BASED OUTLIER DETECTION AND ENSEMBLE LEARNING WITH APPLICATIONS TO MALWARE DETECTION, November, 2016

**Participated Ph.D. Dissertation Committee**

**At VCU**

Human Genetics: J. Meyer, van den Bree, S. Roberts, J. Landis, T. York  
Biostatistics: M. Pacheco, L. Cao, K. Nui, M. Fay, W. London, D. Farina, R. Gibb, M. Zang, T. Parliament-Massie

**At UTSA**

Nicole Beebe (Department of MIS, 2007)  
Amitave Karmaker (Department of Computer Science, 2007)  
Dan Polhamus (2011), Joleen Beltrami (2011)

**Participated M.S. Thesis Committee**

**At VCU**

Biomedical Engineering: L. Beightol  
Biostatistics: T. Peters, G. Ritter

**At UTSA**

M.S.: James Courage (Department of Biology, 2008)

**PROFESSIONAL MEMBERSHIP**

American Statistical Association

**SERVICE**

**PROFESSIONAL SERVICE AND RECOGNITION**

**2001 BASS (Biopharmaceutical Applied Statistics Symposium) Scholar**

**Editorial Service**

**Staff Reviewer** for Mathematical Reviews: 39 published reviews in MR since 1996

## **Referee to Scholarly Journals**

### **Referee for**

Annals of Statistics

Biometrics

Journal of American Statistical Association

Journal of Multivariate Analysis

Journal of Biopharmaceutical Statistics

Journal of Statistical Planning and Inference

Report of the International Whaling Commission

Communications in Statistics

Technometrics

Statistics and Probability Letters

Journal of Heart and Lung Transplantation

Information Sciences

Decision Support Systems

The Knowledge Engineering Review

International Journal of Information Technology & Decision Making

(BMIC) International Symposium on Bio- and Medical Informatics and Cybernetics

## **Grant Reviews**

NIH-NCI Cancer Control Special Review Committee (1987)

NIH Grant Reviews Committee (2001)

NIH Grant Reviews Committee (2011): Sudden Unexpected Death in Epilepsy (SUDEP) (P20)

## **Service to the Professional Society**

### **Regional Service**

Institute of Mathematical Statistics Meeting Local Arrangements Committee Chair, March, 1996

Councilor of chapter representative of Richmond to ASA (1987-1990)

Councilor of chapter representative of San Antonio to ASA (2014-2017)

I have participated Career Day in Statistics, organized by Dr. Tripathy, during Spring 2010. This was a day-long event organized for over 100 local high school students. I have given a lecture on Biostatistics to promote biostatistics as a career-building discipline.

## **Teaching for San Antonio area scientists**

I organized and taught "Microarray Data Analysis Methods" for students and faculty in the San Antonio Area Universities and Research Institutes (2005-2006).

Since 2009, I have been providing 2 day Neurostatistics Workshop every year to the biology students, faculty, and researchers in great San Antonio area (including UTSA, UTHSC, South West Research Institute) with topics ranging Statistical Programing, Design of Experiments, Statistical Models, Statistics in Neuroscience and Stochastic Processes in Neuroscience (2009-2013).

## **TEACHING AND PROGRAM DEVELOPMENT**

### **Courses Developed at VCU**

Microarray and Proteomics Data Analysis and R programming  
Statistical Computing in S-plus  
Advanced Data Analysis: Graduate Level Computer Intensive Modern Statistical Methods  
Advanced Inference I and II: Ph.D. level Theoretical Statistics  
Survival Analysis

### **CURRICULUM DEVELOPMENT at UTSA**

With the leadership of Drs. Keating, Kannan, and Tripathy, I took on the challenge of developing a new Ph.D. program in the Department of Statistics at UTSA (2004-2005). I drafted the initial curriculum layout (required courses and catalogue) with my Graduate Program Directorship experience at Virginia Commonwealth University. The new applied Statistics PhD program was approved and successfully launched in 2006. Since then I have been involved in students' recruitment, evaluation, course development, and teaching of courses.

I have developed new doctoral courses in Survival Analysis: Counting Process Approach, Bioinformatics: Microarray and Proteomics Data Analysis, Advanced Statistical Learning/Data Mining, Advance Inference I and II (Theoretical Statistics for Ph.D. students) for the new Ph. D. program in Applied Statistics as well as B.S./M.S. level Data Mining course.

I have served as a co-chair of the microarray and proteomics analysis committee at the Computational Biology and Bioinformatics Center at UTSA and organized Genomics and Proteomics workshop series for the San Antonio area biomedical researchers. We are developing the bioinformatics education to the San Antonio Cancer research community using UTSA/UTHSCSA Partnership. The effort has been rewarded by the NIH grant 1 P20 CA 165589-01: The Cancer Bioinformatics Initiative (PI Robinson), 2012-2015 where I will be developing the curriculum, recruiting interns from our undergraduates and graduate students, and mentor interns.

## **UNIVERSITY SERVICE**

### **University/School committees at VCU**

School of Medicine Graduate Program Committee (1991-2000)

Graduate Medical Education Committee: Evaluation of Graduate Programs (1991-2000)

A.D. Williams Research Advisory Committee: Internal Grant Reviews (1991-2000)

### **Departmental Services at VCU**

Graduate Program Director (1991-2000)

Curriculum Committee, Chair (1991-2000)

Bioinformatics Group Director

### **University Committee at UTSA:**

University Review Committee (2007-2008)

### **College Committee at UTSA**

Tenure and Promotion Review Committee

Faculty Leave Review Committee

CFRAC

### **Departmental Services at UTSA**

Ph. D. Committee for Applied Statistics

Search Committee (served as a member and as the Chair several times)

Faculty Review and Advisory Committee

Curriculum Committee

Graduate Admissions Committee

Examination Committee

## **COMMUNITY SERVICE**

### **Outreach Activity**

I participated in organizing Career Days for San Antonio Area High School students to develop awareness regarding Statistics. I also presented talks at these events. I am actively involved in recruiting graduate students for the statistics program from area biologists and scientists with less mathematical background.

### **Other Community Service**

Editor of Richmond Korean American Society Newsletter (1986-1989)

International Food Festival Korean Section Chair (1988)

Columnist, American Korean Central Daily Newspaper (2000-2004)

Columnist, Dureh Journal (2000-2004)

Columnist, Internet Korean Literary Newspaper (2000-2004)

Korean American Literary Society, board of directors (2008-present)

Korean Martyrs Catholic Church Choir, Director (conductor) (2010-2013)