

**CURRICULUM VITAE
OF
CHANGWON YOO, DEPARTMENT OF BIostatISTICS**

EDUCATION

Degree	Institution	Field	Dates
Ph.D.	University of Pittsburgh	Biomedical Informatics	May, 2003
S.M.	Harvard University	Computer Science	May, 1997

FULL-TIME ACADEMIC EXPERIENCE

Institution	Rank	Field	Dates (Month/Year)
Florida International University	Associate Professor	Biostatistics	08/2015 – Present
Florida International University	Assistant Professor	Biostatistics	08/2009 – 08/2015
University of Montana	Assistant Professor	Computer Science	08/2003 – 05/2009
Virginia Bioinformatics Institute, Virginia Tech	Senior Research Associate	Bioinformatics	08/2002 – 07/2003
University of Pittsburgh	Research Associate	Biomedical Informatics	08/1998 – 07/2002
Massachusetts Institute of Technology/Harvard Univ.	Research Associate	Biomedical Informatics	08/1996 – 07/1998

PART-TIME ACADEMIC EXPERIENCE

Institution	Rank	Field	Dates (Month/Year)
SsangYong Info. & Communication Education Center, Seoul, Korea	Lecturer	Probability and Statistics	02/1993 – 08/1996

NON-ACADEMIC EXPERIENCE

Place of Employment	Title	Dates (Month/Year)
SsangYong Info. & Communication Co. Seoul, Korea	Software Engineer	02/1992 – 08/1996

PUBLICATIONS IN DISCIPLINE

Peer Reviewed Articles

1. JM Youngblut, D. Brooten, J Glaze, T Promise, **C. Yoo**, Parent Grief 1–13 Months after Death in Neonatal/Pediatric Intensive Care Units, *Journal of Loss and Trauma*, In Press, 2016
2. D. Roy, M. Morgan, **C. Yoo**, A. Deoraj, S. Roy, VK Yadav, M. Garoub, H. Assaggaf, M. Doke, Integrated bioinformatics, environmental epidemiologic and genomic approaches to identify environmental and molecular links between endometriosis and breast cancer, *International journal of molecular sciences* 16(10) p25285-25322, 2015
3. HK Kim, JY Kwon, **C. Yoo**, S. Abdi, The Analgesic Effect of Rolipram, a Phosphodiesterase 4 Inhibitor, on Chemotherapy-Induced Neuropathic Pain in Rats, *Anesthesia & Analgesia*, 121(3) p822–828, 2015
4. JM Youngblut, D. Brooten, K. Blais, C. Kilgore, **C. Yoo**, Health and Functioning in Grandparents After a Young Grandchild’s Death, *Journal of Community Health*, DOI: 10.1007/s10900-015-0018-0, 2015
5. T. Samikkannu, KVK. Rao, AAA Salam, VSR Atluri, EM Kaftanovskaya, M. Agudelo, S. Perez, **C. Yoo**, A. D. Raymond, H. Ding, M.P.N. Nair. HIV Subtypes B and C gp120 and Methamphetamine Interaction: Dopaminergic System Implicates Differential Neuronal Toxicity, *Scientific Reports*, doi:10.1038/srep11130, 2015
6. V. Okoh, N. Garba, R. Penney, J. Das, A. Deoraj, K. Singh, S. Sarkar, Q. Felty, **C. Yoo**, R. Jackson, D. Roy, Redox Signaling to Nuclear Regulatory Proteins by Reactive Oxygen Species Contributes to Estrogen-Induced Growth of Breast Cancer Cells, *British Journal of Cancer*, 112 (10), 1687-1702, 2015
7. M. Kim, L Ramirez, **C. Yoo**, MS Choo, JS Paick, SJ Oh, Factors Influencing Nonabsolute Indications for Surgery in Patients With Lower Urinary Tract Symptoms Suggestive of Benign Prostatic Hyperplasia: Analysis Using Causal Bayesian Networks, *International Neurourology Journal*, 18(4):198-205. DOI: 10.5213/inj.2014.18.4.198, 12/2014
8. **C. Yoo**, J. Pfau, Bayesian probabilistic statistical model for asbestos-associated autoimmunity risk assessment, *Advances and Applications in Statistics*, In Press, double spaced 16 pages
9. B. Luna, S. Bhatia, **C. Yoo**, Q. Felty, D.I. Sandberg, M. Duchowny, Z. Khatib, I. Miller, J. Ragheb, J. Prasanna, D. Roy, Proteomic and mitochondrial genomic analyses of pediatric brain tumors, *Molecular Neurobiology*, DOI:10.1007/s12035-014-8930-3, 2014
10. M. Kang, M. Kim, MS Choo, J. Bae, JH Ku, **C. Yoo**, SJ Oh, Association of high bladder neck elevation with urodynamic bladder outlet obstruction in patients with lower urinary tract symptoms/benign prostatic hyperplasia. *Urology*, DOI:10.1016/j.urology.2014.08.037, 12/2014
11. M. Kim, A. Cheeti, **C. Yoo**, M. Choo, SJ Oh. Non-invasive parameters for the prediction of urodynamic bladder outlet obstruction: analysis using causal Bayesian networks, *PLOS One*, DOI: 10.1371/journal.pone.0113131, 2014
12. J. Jung, S. Cho, **C. Yoo**, S. Oh, Establishment of the Novel Cystoscopic Classification for bladder Trabeculation of Neurogenic Bladder, *Urology*; 84(3):515–519. DOI: 10.1016/j.urology.2014.05.015, 09/2014
13. T. Samikkannu, KVK. Rao, H. Ding, M. Agudelo, A. D. Raymond, **C. Yoo**, M.P.N. Nair. Immunopathogenesis of HIV Infection in Cocaine Users: Role of Archidonic Acid, *PLOS One*, DOI: 10.1371/journal.pone.0106348, August, 2014
14. M. Agudelo, P. Khatavkar, A. Yndart, **C. Yoo**, R. Rosenberg, J.G. Dévieux, R.M. Malow, M. Nair, Alcohol Abuse and HIV infection: Role of DRD2, *Current HIV research*, PMID:25053368, July 2014

15. **C. Yoo**, L. Ramirez, J. Liuzzi, Big data analysis using modern statistical and machine learning methods in medicine, *International Neuropsychology Journal* 18 (2), 50-57, 2014
16. B. Luna, S. Bhatia, **C. Yoo**, Q. Felty, D.I. Sandberg, M. Duchowny, Z. Khatib, I. Miller, J. Ragheb, J. Prasanna, D. Roy, Bayesian Network and Mechanistic Hierarchical Structure Modeling of Increased likelihood of Developing Intractable Childhood Epilepsy from the Combined Effect of mtDNA Variants, Oxidative Damage, and Copy Number, *Journal of Molecular Neuroscience*, p1-15, 2014
17. J.P. Liuzzi, L. Guo, **C. Yoo**, T.S. Stewart, Zinc and autophagy, *BioMetals*, 1-10, 2014
18. S.H. Kim, **C. Yoo**, M. Choo, J.S. Paick, S.J. Oh, Factors affecting de novo urinary retention after holmium laser enucleation of the prostate. *PLOS One*, 9(1): e84938. doi:10.1371/journal.pone.0084938, 2014
19. T. Samikkannu, K.V.K. Rao, A.Y. Arias, A. Kalaichezian, V. Sagar, **C. Yoo**, M.P.N. Nair, HIV infection and drugs of abuse: role of acute phase proteins, *Journal of Neuroinflammation*, **10**:113 doi:10.1186/1742-2094-10-113, 2013
20. **C. Yoo**, E. Brilz, Efficient and Scalable Bayesian Statistical Method for Identifying Causal Relationships from Intervention Studies, *Advances and Applications in Statistics*, 37(2), p95-122, 2013
21. J. Liuzzi, **C. Yoo**, Role of zinc in the regulation of autophagy during ethanol exposure in human hepatoma cells, *Biological trace element research*, doi:10.1007/s12011-013-9816-3, 2013
22. B. Kunkle, **C. Yoo**, D. Roy. Reverse Engineering of Modified Genes by Bayesian Network Analysis Defines Molecular Determinants, *PLOS One*, 8(5): e64140. doi:10.1371/journal.pone.0064140, 2013
23. S.Y. Cho, J.B. Bae, **C. Yoo**, S.J. Oh. Establishment of a Grading System for Bladder Trabeculation, *Urology*; 81(3), p503-507, 2013
24. **C. Yoo**, Statistical Methods in Experimentation Recommendation Models for Discovering Gene Regulation Pathways, *Wiley WIREs Computational Statistics*, 5(2) p121-134, 2013
25. B. Kunkle, **C. Yoo**, D. Roy. Discovering gene-environment interactions in Glioblastoma through a comprehensive data integration bioinformatics method. *NeuroToxicology*, 35, p1-14 2013
26. M. Agudelo, **C. Yoo**, M.P. Nair, Alcohol-induced serotonergic modulation: The role of histone deacetylases, *Alcohol*, 46(12), p635-642, 2012
27. **C. Yoo**, Bayesian Method for Causal Discovery of Latent-Variable Models from a Mixture of Experimental and Observational Data, *Computational Statistics and Data Analysis*, 56, p2183-2205, 2012
28. **C. Yoo**, E. Blitz, M. Wilcox, M. Pershouse, E. Putnam. Gene Pathways Discovery in Asbestos-Related Diseases using Local Causal Discovery Algorithm, *Communications in Statistics - Simulation and Computation*. 41(10), p1840-1859, 2012
29. Q. Felty, **C. Yoo**, A. Kennedy, Gene expression profile of endothelial cells exposed to estrogenic environmental compounds: Implications to pulmonary vascular lesions, *Life Sciences*, 86(25-26), p919-927 2010
30. **C. Yoo**, E. Blitz. Local Causal Discovery Algorithm using Causal Bayesian networks. *Annals of the NY Academy of Science*, 1158, p93-101, 2009
31. **C. Yoo**, G. Cooper, M. Schmidt. A Control Study to Evaluate a Computer-Based Microarray Experiment Design Recommendation System for Gene-Regulation Pathways Discovery Corresponding. *Journal of Biomedical Informatics*, 39, 126-146, 2006
32. **C. Yoo**, G. Cooper. An Evaluation of a System that Recommends Microarray Experiments to Perform to Discover Gene-Regulation Pathways. *Journal of Artificial Intelligence in Medicine*. 31,169-182, 2004

Peer Reviewed Proceedings

1. **C. Yoo**, A. Saxena, K. Krupp, K. Winter, J.D. Klausner, V. Kulkarni, J. Devieux, P. Madhivanan, Using Integrated Logistic Regression and Bayesian Statistical Modeling to analyze Acceptance of Male Circumcision in Pune, MODSIM 2013, Proceeding of 20th International Congress on Modeling and Simulation, Adelaide, Australia, p2023-2028, 2013
2. **C. Yoo**, A. Cheeti, D. Brooten, J. Youngblut, Modified Second Degree Markov Model in Missing Data Analysis in Child and Family Functioning after Pediatric Head Trauma, MODSIM 2013, 20th International Congress on Modelling and Simulation, Modelling and Simulation Society of Australia, p2018-2022, 2013
3. **C. Yoo**, S.J. Oh, Combining Structure Equation Model with Bayesian Networks for predicting with high accuracy of recommending surgery for better survival in Benign prostatic hyperplasia patients, MODSIM 2013, Proceeding of 20th International Congress on Modeling and Simulation, Adelaide, Australia, p2029-2033, 2013
4. **C. Yoo**, M. Wilcox, Evaluation of causal Bayesian network search algorithms using simulated mesotheliomas gene expression data, MODSIM 2011, Proceeding of 19th International Congress on Modeling and Simulation, Perth, Australia, p1042-1048, 2011
5. **C. Yoo**, Q. Felty, Identifying gene-protein interactions in response to environmental estrogenic chemicals using Bayesian networks: its implication in the etiology of pulmonary vascular lesions, MODSIM 2011, Proceeding of 19th International Congress on Modeling and Simulation, Perth, Australia, p1056-1062, 2011
6. S. Yoo, **C. Yoo**, A Statistical model that calculates the life time risk of Alzheimer's disease using Bayesian Networks, MODSIM 2011, Proceeding of 19th International Congress on Modeling and Simulation, Perth, Australia, p1049-1055, 2011
7. J. Gutierrez, **C. Yoo**, Stroke prediction in a sample of HIV/AIDS patients, MODSIM 2011, International Congress on Modelling and Simulation, Modelling and Simulation Society of Australia, 1030-1036, 2011
8. B. Kunkle, **C. Yoo**, Q. Felty, D. Roy, Identifying Gene Alterations Required for the Development of Astrocytoma, MODSIM 2011, International Congress on Modelling and Simulation, Modelling and Simulation Society of Australia, 1037-1043, 2011
9. **C. Yoo**, G. Cooper. A Computer-Based Experiment Design Recommendation System for Gene-Regulation Pathways Discovery. Proceedings of AMIA Symposium, p733-737, 2003
10. **C. Yoo**, G. Cooper. Discovery of Yeast Gene-Regulation Pathways using Local Causal Search. Proceedings of AMIA Symposium. p914-918, 2002
11. **C. Yoo**, V. Thorsson, G.F. Cooper. Discovery of causal relationships in a gene-regulation pathway from a mixture of experimental and observational DNA microarray data. Pacific Symposium On Biocomputing. p498-509, 2002
12. R. Scheines, G.F. Cooper, **C. Yoo**, T. Chu. Piecewise Linear Instrumental Variable Estimation of Causal Influence. Proceedings of Artificial Intelligence and Statistics. 286-291, 2001
13. G. Cooper, **C. Yoo**. Causal Discovery from a Mixture of Experimental and Observational Data. Proceedings of Uncertainty in Artificial Intelligence. p116-125, 1999

Chapters in Books

1. A Deoraj, **C. Yoo**, D Roy, Integrated Bioinformatics, Biostatistics, and Molecular Epidemiologic Approaches to Study How the Environment and Genes Work Together to Affect the Development of Complex Chronic Diseases, Book Chapter in Gene-Environment Interaction Analysis: Methods in Bioinformatics and Computational Biology, Chapter 5, p151-181, CRC Press, 2016

2. **C. Yoo**, Discovering Gene-Gene and Gene-Environment Causal Interactions from Different Types of Genomic Data using Statistical Methods in Bioinformatics, Chapter 3, p62-81, Nova Science Publishers, 2012 (ISBN: 978-1-61942-363-3)
3. **C. Yoo**, Application of bioinformatics in learning gene-gene and gene-environment interactions, Book Chapter in The Environment and Cancer: Gene-Environment Interactions and Individual Susceptibility, Chapter 5, p115-138, Springer Science and Business Media, 2010 (ISBN: 978-1-44196-751-0)

PRESENTED PAPERS, AND LECTURES

Abstract/Presentations (presenter in underlined bold)

1. **L. San Diego**, S. Yoo, J. Liuzzi, **C.Yoo**, Analysis of Alzheimer Gene Interactions Using Bayesian Networks, FIU Undergraduate Research, FL, March, 2016 (poster presentation)
2. **H Assaggaf**, T Aljifri, **C.Yoo**, Q Felty, Molecular Determinants of Pulmonary Lesions, Society of Toxicology Annual Meeting, San Diego, CA, March, 2015 (poster presentation)
3. **J Liuzzi**, L Menzel, **C. Yoo**, Induction of autophagy by zinc during acute ethanol exposure, American Societies of Experimental Biology, San Diego, CA, April, 2014 (podium presentation)
4. **M Kim**, **C. Yoo**, JS Paick, SJ Oh, Factors That Influence The Decision For Surgery In Patients With Benign Prostatic Hyperplasia: Artificial Neural Network Analysis. Society of Urodynamics, Female Pelvic Medicine and Urogenital Reconstruction, Miami, FL, February, 2014 (podium presentation)
5. **C. Yoo**, **D Roy**, Dynamic Stochastic and Mechanistic Model Incorporating Interplay of Multi-hits of Multiple Genetic and Epigenetic Factors and Environmental and Stochastic Factors Influencing Biological Pathways and Networks Contributing to the Susceptibility and Development of Cancer, Statistics 2013 International Conference, December, 2013 (podium presentation)
6. **C. Yoo**, A Saxena, K Krupp, K Winter, JD Klausner, V Kulkarni, J Devieux, P Madhivanan, Using Integrated Logistic Regression and Bayesian Statistical Modeling to analyze Acceptance of Male Circumcision in Pune, India, 20th International Congress on Modeling and Simulation (MODSIM2013), December, 2013 (podium presentation)
7. **C. Yoo**, A Cheeti, D Brooten, J Youngblut, Modified Second Degree Markov Model in Missing Data Analysis in Child and Family Functioning after Pediatric Head Trauma, 20th International Congress on Modeling and Simulation (MODSIM2013), December, 2013 (podium presentation)
8. **C. Yoo**, SJ Oh, Combining Structure Equation Model with Bayesian Networks for predicting with high accuracy of recommending surgery for better survival in Benign prostatic hyperplasia patients, 20th International Congress on Modeling and Simulation (MODSIM2013), December, 2013 (podium presentation)
9. **M Kim**, **C. Yoo**, JH Ku, JS Paick, SJ Oh. Prediction of urodynamic obstruction using artificial neural networks model. The 65th Annual Meeting of the Korean Urological Association, Seoul, South Korea, November 2013 (podium presentation)
10. SJ Oh, **M Kim**, HE Lee, SY Cho, JH Ku, JS Paick, **C. Yoo**, Predictive Factors Of Urodynamic Bladder Storage Parameters In Patients With Benign Prostatic Hyperplasia: A Large Scale Cross-sectional Study In A Single Institution, 20th Annual Meeting for Japanese Neurogenic Bladder Society, Shizuoka, Japan, September 2013 (podium presentation)
11. **SJ Oh**, J Bae, **C. Yoo**, SY Cho, JH Ku, SJ Jeong. High Bladder Neck Elevation Is Highly Significant For Urodynamic Bladder Outlet Obstruction In Patients With Benign Prostatic Hyperplasia, Society of Urodynamics, Las Vegas, Nevada, February, 2013 (podium presentation)

12. **C. Yoo**, E Brilz, Discovering Gene-gene Causal Interactions Using Scalable Causal Probabilistic Networks. South Florida Computational Biology Meeting, FIU, FL, 2013 (podium presentation)
13. **C. Yoo**, E Brilz, Evaluation of Local Causal Discovery Algorithm using Mixture of Observational and Experimental Data. American Statistical Association Meeting, Tempa, FL, 2011 (podium presentation)
14. **M Wilcox**, **C. Yoo**, Efficient Causal Discovery using Causal Bayesian Networks in SNP Data Analysis, American Statistical Association Meeting, Tempa, FL, 2011 (podium presentation)
15. **J. Gutierrez**, **C. Yoo**, Identifying factors associated to bad outcomes in a sample of HIV/AIDS patients seen by the neurologists using Bayesian Networks, American Statistical Association Meeting, Tempa, FL, 2011 (podium presentation)
16. **C. Yoo**, M Wilcox, Evaluation of causal Bayesian network search algorithms using simulated mesotheliomas gene expression data, Proceedings of International Congress on Modeling and Simulation, Perth, Australia, 2011 (podium presentation)
17. **C. Yoo**, Q Felty, Identifying gene-protein interactions in response to environmental estrogenic chemicals using Bayesian networks: its implication in the etiology of pulmonary vascular lesions, Proceedings of International Congress on Modeling and Simulation, Perth, Australia, 2011 (podium presentation)
18. **C. Yoo**, E Brilz, Evaluation of Local Causal Discovery Algorithm using Mixture of Observational and Experimental Data. American Statistical Association Meeting, Tempa, FL, 2011 (podium presentation)
19. **B Kunkle**, **C. Yoo**, D Roy, Microarray meta-analysis identifies neurodevelopmental genes potentially important in neoplastic transformation and progression in astrocytic tumors, Society of Toxicology Annual Meeting, Miami, 2010 (*Mr. Kunkle received student travel award*)
20. **M Rubens**, A. Batra, V. McCoy, M. Estrada, **C. Yoo**, Analyzing HIV/AIDS knowledge among African American and Hispanic migrant workers. American Public Health Association Annual Meeting, 2009 (*Mr. Rubens received best student poster award*)
21. **C. Yoo**, E Blitz. Evaluation of Local Causal Discovery Algorithm using Simulated Gene Network of Malignant Mesotheliomas in Mice. Advances in Neural Information Processing Systems, Whistler, Canada, 2006 (poster presentation)
22. **C. Yoo**, G Cooper. Discovery of Yeast Gene-Regulation Pathways using Local Causal Search. Proceedings of AMIA Symposium, 2002 (podium presentation)
23. **C. Yoo**, V Thorsson, G Cooper, podium presentation of Discovery of causal relationships in a gene-regulation pathway from a mixture of experimental and observational DNA microarray data. Pacific Symposium On Biocomputing, 2002 (podium presentation)

Invited Lectures

1. **Changwon Yoo**, Bayesian statistical methods for gene pathways discovery in brain cancer, Department of Epidemiology and Biostatistics, Georgia Region's University, GA, 2014
2. **Changwon Yoo**, A new scalable Bayesian statistical methods for gene pathways discovery, Division of Biostatistics, University of Miami, FL, 2013
3. **Changwon Yoo**, Data analysis with mixture of data types, Biostatistics and Statistics Joint Seminar, FIU, 2013.
4. **Changwon Yoo**, Biostatistics and bioinformatics research using Bayesian statistics, Medicine, FIU, 2011.
5. **Changwon Yoo**, Bioinformatics research using probabilistic graphical models, Department of Environmental and Occupational Health, FIU, 2010.

6. **Changwon Yoo**, Lecture of causal discovery using probabilistic graphical models, Center for Computational Biology and Bioinformatics, Columbia University, NY, NY, 2009.
7. **Changwon Yoo**, Lecture of recent trend in informatics research, School of Informatics, Arizona State University, Tempe, AZ, 2008.
8. **Changwon Yoo**, Lecture of probabilistic graphical models, Department of Mathematics, University of Montana, Missoula, MT, 2006.

FUNDED RESEARCH

Current

Project Title	Funding Agency	Dates	\$ Amount*	Role+	Percent Effort
Bayesian statistical model of Brain Cancer progression	NIH (SC3)	09/12-08/16	\$435,000	PI	
		Academic Year			13%
		Summer			75-100%
Applications of Bayesian BPH Models	Seoul National University Hospital	06/15-08/16	\$8,000	CoIn	5%

Completed

Project Title	Funding Agency	Dates	\$ Amount*	Role+	Percent Effort
Family functioning in trauma	NIH (R01)	05/14-05/15	\$2 million (PI: J. Youngblut)	CoIn	
		Academic Year			0%
		Summer			10%
Bayesian BPH Models	Seoul National University Hospital	04/13-03/14	\$2,700	CoIn	1%
Substance Use and Aids Research on US Latinos	NIH (P20MD002288)		\$2 million (PI: M. De La Rosa)	CoIn	
		08/10-05/11			12%
		05/11-08/11			2%
Causal Bayesian Networks for Asbestos Related Disease	NIH (P20RR017670)	08/03-07/05	\$107,500	CoPI	
		Academic Year			30%
		Summer			100%

* Estimated, direct and indirect amount

+ CoIn: Co-Investigator

OFFICES HELD IN PROFESSIONAL SOCIETIES

Editorial Board of Journals:

- PLOS One
<http://www.plosone.org/static/edboard> (type *Yoo* in the text box titled *Search For*)
- Advances and Applications in Statistics
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- American Journal of Computational Mathematics
<http://www.scirp.org/Journal/EditorialBoard.aspx?JournalID=535#.VS00E5PGp1A>
- Journal of Bioinformatics and Comparative Genomics
<http://www.jscholaronline.org/journals/journal-of-bioinformatics-and-comparative-genomics/editorial-board.php>
- Journal of Computational Biology and Bioinformatics
<http://austinpublishinggroup.com/computational-biology-bioinformatics/editorialBoard.php>

OTHER PROFESSIONAL ACTIVITIES AND PUBLIC SERVICE

Professional Associations and Scientific Society Membership:

- Member of American Statistical Association
- Member of International Biometric Society/Eastern North American Region
- Member of International Society for Bayesian Analysis
- Member of The Modeling and Simulation Society of Australia and New Zealand

Reviewer for Professional Journals:

- PLoS ONE
- Statistical Applications in Genetics and Molecular Biology
- Advances and Applications in Statistics
- American Journal of Computational Mathematics
- Journal of Bioinformatics and Comparative Genomics