

# Bernard Oguna Omolo

## Work Address

Division of Mathematics & Computer Science  
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## EDUCATION

- Texas Tech University** Lubbock, TX 08/99–08/04  
Ph.D in Mathematical Statistics, Dept. of Mathematics & Statistics  
Advisor: Dr. Frits Ruymgaart
- Egerton University** Njoro, KE 02/92–06/94  
M.S. in Statistics, Dept. of Mathematics.
- Egerton University** Njoro, KE 08/87–10/90  
B.S.(with Honors) in Mathematics, Dept. of Mathematics.

## POSITIONS HELD

- Statistical and Mathematical Sciences Institute (SAMSI)** RTP, NC 09/11–12/11  
Visiting Research Fellow (on sabbatical leave)
- University of South Carolina–Upstate** Spartanburg, SC 08/10–  
Associate Professor of Mathematics, Div. of Math & Computer Science
- University of North Carolina - Chapel Hill** Chapel Hill, NC 07/09–08/10  
Postdoctoral Research Associate in Cancer Genomics and Biostatistics (on leave)  
PI: Dr. Joseph G. Ibrahim
- University of South Carolina–Upstate** Spartanburg, SC 08/04–07/10  
Assistant Professor of Mathematics, Div. of Math & Computer Science
- Texas Tech University** Lubbock, TX 08/99–08/04  
Graduate Part-time Instructor, Dept. of Mathematics & Statistics (on leave)
- Egerton University** Njoro, KE 02/99–08/04  
Lecturer (U.S analogue: Asst Prof) of Statistics, Dept. of Mathematics
- Egerton University** Njoro, KE 07/94–01/99  
Assistant Lecturer (U.S analogue: Instructor) of Statistics, Dept. of Mathematics
- Egerton University** Njoro, KE 10/90–06/94  
Teaching Assistant(U.S analogue: TA), Dept. of Mathematics

## SCHOLASTIC AWARDS

- NSF Research Fellowship** SAMSI 09/11–12/11
- NCI Training Fellowship** Univ of North Carolina–Chapel Hill 07/09–08/10
- NIH Travel Award, Diversity in Biostatistics Workshop** 2010, 2012
- NHLBI SIPID Mentee Award** Washington University–St. Louis Summer 2008/2009

<b>Summer Institute Training Grant</b>	South Carolina Department of Education	Summer 2008
<b>Teaching &amp; Productive Scholarship Award</b>	Univ of South Carolina–Upstate	2007, 2009–2011
<b>NSF Travel Award, Quality Education for Minorities CAREER Workshop</b>		05/08
<b>NIH/NCI Travel Award, Workshop for Junior Researchers in Biostatistics</b>		03/04
<b>NSF Travel Award, 7th Purdue International Symposium on Statistics</b>		07/03
<b>Gordon Fuller Memorial Graduate Scholarship</b>	Texas Tech University	1999–2000, 2003–2004
<b>German Academic Exchange (DAAD) Graduate Scholarship</b>	Egerton University	1993–1994

## RESEARCH INTERESTS

**Cancer; DNA Microarray Data Analysis; Extreme Events; Genetic Epidemiology**

## PEER-REVIEWED ARTICLES

**Carson, C., Omolo, B., Ibrahim, J. G., Kaufmann, W. K. et al. (2012)**

A prognostic signature of defective p53-dependent G1 checkpoint function in melanoma cell-lines (available online at DOI: 10.1111/j.1755-148X.2012.01010.x)

**Cooley, D.; Cisewski, J.; Erhardt, R. J.; Jeon, S.; Mannshardt, E.; Omolo, B. O. & Sun, Y. (2012)**

A survey of spatial extremes: Measuring spatial dependence and modeling spatial effects. *Revstat*, **10**, 135–165

**Morgan, D., Omolo, B. O. (2010)**

Challenges in Genomic Data Processing I - Multiple Small Files. *SAS Global Forum 2010 Proceedings, Seattle, WA, Paper 062-2010*.

**S.-H. Lee, E. Lee, B. O. Omolo (2008)**

Using Integrated Weighted Survival Difference for the Two Sample Censored Data Problem. *Computational Statistics & Data Analysis*, **52**, 4410–4416

**Hart J, Omolo B, Boone R, Brown C, Ashton A (2007)**

Reliability of Three Methods of Computer-Aided Thermal Pattern Analysis. *J Can Chiropr Assoc*, **51(3)**, 175–185

**Hart J, Omolo B, Boone R (2007)**

Thermal Patterns and Health Perceptions. *J Can Chiropr Assoc*, **51(2)**, 106–111

**Einmahl, J. H. J.; Omolo, B. O.; Puri, M. L.; Ruymgaart, F. H. (2005)**

Aligned Rank Statistics for Repeated Measurement Models with Orthonormal Design Employing a Chernoff-Savage Approach. *Journal of Statistical Planning and Inference*, **130**, 167–182

## MANUSCRIPTS

**Cautions of using allele-based tests under heterosis** (*submitted*)

**A Bayesian hierarchical model for correlated microarray datasets** (*in progress*)

**A signature of defective G2 checkpoint function in melanoma cell-lines** (*in progress*)

## RESEARCH SUPPORT

Faculty Research Grant (Univ of South Carolina–Upstate)	\$2,500	08/12 – 12/12
2012 ASPIRE-I Research Grant (Univ of South Carolina)	\$11,228	05/12 – 08/13
Faculty Research Grant (Univ of South Carolina–Upstate)	\$2,500	01/09 – 06/09
Student Research Assistant Grant (Univ of South Carolina–Upstate)	\$1,260	05/08 – 08/08

## PENDING SUPPORT

Collaboration Grant (Simons Foundation)	\$35,000	
NSA - MSP Young Investigator Grant (National Security Agency)	\$19,949	

## CONFERENCE/SEMINAR PRESENTATIONS

### *Invited*

International Mathematics Research Meeting	Strathmore University	07/12
The First Strathmore University Mathematics Conference	Strathmore University	08/11
Department of Mathematical Sciences Seminar	Georgia Southern University	03/11
LCCC Biostatistics Core Seminar	Univ of North Carolina–Chapel Hill	01/11
Morehouse School of Medicine	Atlanta, GA	11/09
International Research and Philosophy Symposium	Sherman College	11/05

### *Other*

Joint Statistical Meetings (JSM) 2012	San Diego, CA	08/12
Joint Statistical Meetings (JSM) 2011	Miami, FL	08/11
ENAR 2010 Conference	New Orleans, LA	03/10
2010 SRCOS Summer Research Conference	Norfolk, VA	06/10
WNAR / IMS 2009 Conference	Portland State University	06/09
2007 Nonparametric Statistics Conference	Univ of South Carolina–Columbia	2007
Risk Analysis, Extreme Events and Decision Theory Workshop	SAMSI	2007
2nd Lehmann Symposium on Optimality	Rice University	2004
Justus Seely Conference on Linear Models	Oregon State University	2003

**7th Purdue International Symposium on Statistics** Purdue University 2003

**TEACHING RECORD (Course/Book Author/Level)**

**Mathematical Statistics I and II** Hogg & Craig 500

**Probability & Statistics** Hogg & Tanis 500

**Probability Theory** Weiss 400

**Introduction to Stochastic Processes** Durrett; Ross 400

**Statistical Methods I and II** Ott & Longnecker; Neter & Wasserman 300

**Statistical Inference for Business and Economics** Lind *et al.* 200

**Social Statistics** Babbie, Halley & Zaino 200

**Introduction to Statistical Methods** Johnson & Hsu 200

**Elementary Statistics I** Brase & Brase; Moore 100

**College Algebra** Lial *et al.* 100

**PreCalculus II** Larson/Hostetler 100

**PROFESSIONAL & UNIVERSITY SERVICE**

**Judge, Annual Biomedical Research Conference for Minority Students** Charlotte, NC 2010

**Contributed Session Chair, ENAR 2010** “Pathway and Network-based Genomic Analysis” 2010

**Referee** The American Statistician 2004, 2008

**Statistical Consultant** Clinical Research Dept, Sherman College 2005–

**Advanced Placement Statistics Reader** College Board 2006–2011

**Faculty Mentor, SPRI** SC Governor’s School of Science & Mathematics Summer 2005

**Member, Peer Review Committee** Univ of South Carolina–Upstate 2010–2013

**Member, Faculty Welfare Committee** Univ of South Carolina–Upstate 2005–2011

**Member, Mathematics Search Committee** Univ of South Carolina–Upstate 2010–2011

**Chair, Mathematics Search Committee** Univ of South Carolina –Upstate 2006–2007

External Member, Foreign Languages Search Committee Univ of South Carolina–Upstate 2012

#### PROFESSIONAL AFFILIATIONS

International Biometric Society (ENAR) 2002–  
American Statistical Association (ASA) 2002–  
Institute of Mathematical Statistics (IMS) 2003–  
North Carolina Translational and Clinical Sciences Institute (NC TraCS) 2011–  
International Society for Bayesian Analysis (ISBA) 2011–  
American Association for Cancer Research (AACR) 2012–

#### COMPUTING EXPERIENCE

Bioinformatics Software: BRB-ArrayTools, JMP Genomics, Partek Genomics

Genetic Analysis Software: PLINK

Platforms : UNIX/Linux, Windows

Statistical Software: SAS/IML, R, Stata, SPSS, Minitab

Computational Software : Matlab

#### CONFERENCE/WORKSHOP PARTICIPATION /SHORT COURSES

Uncertainty Quantification: Methodology Workshop SAMSI 09/11  
1st NIGMS Short Course on Statistical Genetics & Genomics Univ of Alabama 07/11  
Responsible Conduct of Research 2011 Summer Course Univ of N. Carolina–Chapel Hill 07/11  
Semiparametric Bayesian Inference Workshop: Applications in PK/PD SAMSI 07/10  
5th Int'l Workshop on Statistical Analysis of Neuronal Data Univ of Pittsburgh 05/10  
Fostering Diversity in Biostatistics Workshop ENAR Spring Meetings 2010/2012  
The 5th Annual Conference on Melanoma Univ of North Carolina–Chapel Hill 02/10  
Summer Institute in Cardiovascular Genetic Epidemiology Wash Univ–St. Louis Summer  
2008/2009  
Risk Analysis, Extreme Events and Decision Theory Workshop SAMSI 2007

<b>SAS Data Mining Training for Educators</b>	SAS Institute	2007
<b>Dynamic Treatment Regimes and Multistage Decision-Making Workshop</b>	SAMSI	2007
<b>Bioinformatics Software Workshop (SC INBRE)</b>	Clemson University	2006
<b>Workshop for Junior Researchers in Biostatistics (ENAR 2004)</b>	Pittsburgh, PA	2004

#### ACADEMIC REFEREES

**Dr. Frits Ruymgaart**, Horn Professor  
 Department of Mathematics & Statistics  
 Texas Tech University  
 P O Box 41042  
 Lubbock, TX 79409  
 ph: (806) 742-1464  
 email: h.ruymgaart@ttu.edu

**Dr. Joseph G. Ibrahim**, Alumni Distinguished Professor  
 Department of Biostatistics  
 University of North Carolina at Chapel Hill  
 McGavran-Greenberg Hall, CB # 7420  
 Chapel Hill, NC 27599  
 ph: (919) 843-2715  
 email: ibrahim@bios.unc.edu

**Dr. William K. Kaufmann**, Professor  
 Dept. of Pathology & Laboratory Medicine  
 University of North Carolina at Chapel Hill  
 31-345 Lineberger Comprehensive Cancer Center, CB # 7295  
 Chapel Hill, NC 27599  
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**Dr. Sebastian van Delden**, Associate Professor & Director of Research  
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