JOELLE MBATCHOU

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EDUCATION

University of Chicago, Department of Statistics, Chicago IL   Expected June 2018
Ph.D. Statistics
Department of Education GAANN Fellowship Recipient
Relevant Coursework: Applied Linear Statistical Methods, Generalized Linear Models, Applied Longitudinal Data Analysis, Data Mining, Applied Survival Analysis, Mathematical Statistics, Design/Analysis of Experiments, Statistical Genetics, Distribution Theory, Stochastic Processes, Sample Surveys

DePaul University, Chicago IL   Jun 2011
Bachelor of Science in Biology (conc. Cell & Molecular Biology) & Mathematical Sciences (conc. Statistics)
Summa Cum Laude

RESEARCH EXPERIENCE

University of Chicago, Department of Statistics, Chicago, IL   Oct 2013 - Present
Graduate Student with Dr. Mary Sara McPeek
- Genome-wide association mapping of binary traits in the presence of related individuals using a retrospective approach with a MCMC-based fitting algorithm
- Generalized permutation testing method for binary trait association in structured samples
- Re-sampling method based on a retrospective genetic model to correct for multiple testing

DePaul University, Chicago, IL   Jan 2010 - Jun 2011
Research Assistant with Dr. Windsor Aguirre's Lab
- Develop AFLP markers to study genetic differentiation of Ecuadorian fishes

Harvard Medical School, Boston, MA   Jun 2010 - Aug 2010
Summer Research Assistant with Dr. Ulrike Eggert's Lab
- Use FRET technique and small molecules to analyze the Rho pathway during cytokinesis

Field Museum, DNA Lab, Chicago, IL   Jun 2009 - Aug 2009
Research Intern
- Obtained DNA sequences from lichenized fungal species
- Analyzed the data in a phylogenetic tree and developed future goals
- Presented my research to 30 scientists at the REU Symposium

TEACHING & LEADERSHIP EXPERIENCE

University of Chicago, Department of Statistics, Chicago, IL
Statistical Consultant, Team Leader   Sep 2013 - Present
- Project #1: Rhesus Monkeys Display Behavior – *Generalized Linear Models*
- Project #2: Investigating Wealth of Russian Oligarchs – *Linear mixed models*
- Project #3: Influence of Ottoman Empire on Corruption in Romania – *Kriging, regression trees*

Teaching Assistant   Jun 2011 - Present
- Assisted in undergraduate courses: Statistical Methods and Applications, Statistical Models/Methods, Applied Regression Analysis and Analysis of Categorical Data
- Created introductory material for R and STATA through weekly computer sessions
- Organized weekly office hours where students expanded their understanding of course materials

University of Chicago, Department of Statistics, Chicago, IL

Statistics Collaborative Learning Team Leader   Oct 2016 – Mar 2017
- Facilitated the design of a new program based on collaborative learning
- Created workshop exercises and managed weekly workshops where I assisted students on working in groups

Course Instructor   Mar 2014 – Jun 2014
- Taught an introductory course on statistical methods (STAT 234: Statistical Models/Methods)
- Designed course materials and delivered bi-weekly lectures to a class of 36 students
- Assisted students in office hours with learning statistical concepts as well as R programming skills

SKILLS

Computing: Proficient in R, C, LaTeX | Intermediate in STATA, Python, Microsoft Office & Tableau
Languages: Fluent in French (native) and English, Spanish (Intermediate) and beginner in Japanese and Korean

PUBLICATIONS

Jiang, D., **J. Mbatchou**, and M. S. McPeek. "Retrospective Association Analysis of Binary Traits: Overcoming Some Limitations of the Additive Polygenic Model." *Human heredity* 80, no. 4 (2016): 187-195.

Nelsen, M. P., R. Lücking, **J. S. Mbatchou**, C. J. Andrew, A. A. Spielmann, and H. T. Lumbsch. "New insights into relationships of lichen-forming Dothideomycetes." *Fungal Diversity* 51, no. 1 (2011): 155-162.

Kharas, G. B., E. Hanawa, B. L. Hill, K. T. Flynn, H. Husain, **J. Mbatchou**, W. Paik et al. "Novel Copolymers of 4-Fluorostyrene. 8. Some Ring-Trisubstituted 2-Phenyl-1, 1-dicyanoethylenes." *Journal of Macromolecular Science, Part A* 48, no. 5 (2011): 327-331.

Nelsen, M. P., R. Lücking, E. Rivas Plata, and **J. S. Mbatchou**. "Heiomasia, a new genus in the lichen-forming family Graphidaceae (Ascomycota: Lecanoromycetes: Ostropales) with disjunct distribution in Southeastern North America and Southeast Asia." *The Bryologist* 113, no. 4 (2010): 742-751.

Nelsen, M. P., R. Lücking, M. Grube, **J. S. Mbatchou**, L. Muggia, E. Rivas Plata, and H. T. Lumbsch. "Unravelling the phylogenetic relationships of lichenised fungi in Dothideomyceta." *Studies in Mycology* 64 (2009): 135-144

Schoch, C. L., P. W. Crous, Johannes Z. Groenewald, E. W. A. Boehm, T. I. Burgess, J. De Gruyter, G. S. De Hoog et al. "A class-wide phylogenetic assessment of Dothideomycetes." *Studies in mycology* 64 (2009): 1-15.