Exponent
Failure Analysis Associates®

Exponent
5401 McConnell Avenue
Los Angeles, CA 90066

telephone 310-754-2700
facsimile 310-754-2799
www.exponent.com

K. Medji Sama, Ph.D., P.E.
Senior Engineer

Professional Profile

Dr. Medji Sama is a Senior Engineer in Exponent's Civil Engineering practice. He specializes in geotechnical engineering, foundation analysis and design, and geotechnical earthquake engineering. His project experience includes landslide investigations, failure analysis and performance evaluation of foundations and retaining walls, and post-earthquake reconnaissance and assessment. His prior research has dealt with the numerical modeling of soil and rock behavior, and the characterization of localized failure patterns, such as faulting in rocks and slip surface formation behind slopes and earth-retaining structures. In addition, he has performed laboratory experiments seeking to understand the effects of specimen preparation, fines content, and stratification on the liquefaction behavior of sandy soils.

Prior to joining Exponent, Dr. Sama was a research assistant in the Department of Civil and Environmental Engineering at Stanford University. He has served as instructor for soil mechanics laboratory courses and has assisted in the teaching of the fundamentals of geotechnical engineering, foundation engineering, and computational geomechanics.

Academic Credentials and Professional Honors

Ph.D., Geomechanics, Stanford University, 2004
M.S., Geomechanics, Stanford University, 2000
B.S., Civil Engineering, University of the District of Columbia, 1998

National Science Foundation Graduate Research Fellow, 1999–2002

Licenses and Certifications

Registered Civil Engineer, California, #71098

Publications and Presentations

Sama KM. Some stability characteristics of three-invariant plasticity models. GeoCongress 2006, Atlanta, GA, 2006 (Poster presentation with P.F. Sanz).

Borja RI, Sama KM, Sanz PF. On the numerical integration of three-invariant elastoplastic constitutive models. Computer Methods in Applied Mechanics and Engineering 2003; 192(9–10):1227–1258.

Borja RI, Lin CH, Sama KM, Masada GM. Modeling non-linear ground response of non-liquefiable soils. Earthquake Engineering and Structural Dynamics 2000; 29:63–83.

Borja RI, Lai T, Regueiro R, Sama KM. Modeling strain localization in soil-nailed excavations. XI Pan-American Conference on Soil Mechanics and Geotechnical Engineering, Sao Paulo, Brazil, 1999.

Amini F, Sama KM. Behavior of stratified sand-silt-gravel composites under seismic liquefaction conditions. Soil Dynamics and Earthquake Engineering 1999; 18:445–455.

Amini F, Sama KM. Effect of sample preparation on the liquefaction behavior of layered sand-gravel mixtures. 11th European Conference on Earthquake Engineering, Rotterdam, The Netherlands, 1998.

Seminars Attended

"Design and Installation of Buried Pipes," American Society of Civil Engineers, St. Louis, MO, March 2–3, 2006.

Professional Affiliations

- American Society of Civil Engineers (member)
- Geo-Institute (member)