CASE SCHOOL OF ENGINEERING SDLE
CASE WESTERN RESERVE UNIVERSITY

Postdoctoral Scholar Position In
Data Science and Statistical Analytics of Material Degradation

A postdoctoral Scholar position for a statistician/data scientist is available in the SDLE Research Center, Case School of Engineering under the direction of Prof. Roger H. French and Prof. Laura S. Bruckman. The research focuses on using a data analytics approach to understand and predict materials degradation and lifetime performance. Combining time series, spectral and image data on real-world PV modules in a wide variety of climatic zones with more detailed point in time data on smaller sets of real-world retrieved materials, components, or systems is necessary. This real-world data will be cross-correlated with similar datasets on materials under accelerated exposures in order to understand the degradation mechanisms and the roles of specific stressors on degradation and to predict lifetime in various climatic zones.

The Postdoctoral Scholar will be responsible for original and collaborative research, related data analysis, software development and publications, as well as some student supervision and coordination of studies. This position holds excellent career development opportunities. Preference will be given to individuals with experience in real-world data analytics and a demonstrated ability to lead a project, collaborate with domain scientists, analyze data, and write manuscripts.

The applicant should hold a Ph.D. degree in Statistics, Biostatistics, Computer and Data Sciences, Materials Science or a related field. Excellent analytical and computing skills in R and/or Python are required and familiarity with Hadoop/Hbase/Spark would be helpful. Experience with Linux is a plus. Strong oral and written communication skills and ability to work independently and collaboratively are essential. The applicant should be familiar with the linear modeling, fixed effects and mixed/random effects modeling, logistic regression, predictive modeling, and cross-correlation of data sets. The research scholar will lead and mentor students in R/Python code development and data analysis of large and diverse data sets in a Hadoop/Hbase distributed computing environment, including time series and point in time data.

Applicants should send a cover letter including a brief description of research experience and interests, a curriculum vitae, and contact information for at least three references by email to:

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