



CASE SCHOOL  
OF ENGINEERING SDLE  
CASE WESTERN RESERVE  
UNIVERSITY

### **Postdoctoral Scholar Position In Materials Degradation and Data Science**

A Postdoctoral Scholar position for a materials scientist/engineer 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 understanding and predicting materials degradation, optimizing performance, and accelerating adoption of new technology](#).

The [Postdoctoral Scholar](#) will engage in research to gain understanding and prediction of degradation mechanisms in materials, components, and systems from laboratory-based experimentation and historical retrieved samples to monitor performance and identify real-world degradation mechanisms. Data is acquired over time and a data science methodology is employed to model the behavior in a quantitative manner. This includes image, spectral analysis, machine learning, and deep learning.

The applicant should hold a Ph.D. degree in Materials Science, Chemistry, Physics, Statistics, Computer and Data Sciences, or a related field. The Postdoctoral Scholar will be responsible for original and collaborative research, related data analysis 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 x-ray diffraction, scattering, small angle x-ray scattering (SAXS), and beamline (APS, BNL, CHESS) x-ray experiments with a demonstrated ability to lead a project, analyze data, and write manuscripts. The applicant should hold a Ph.D. degree in materials science, electrical engineering, physics, or a related field. Analytic and computing skills are required including the ability to code in either R or Python. Experience with Linux is a plus. Strong oral and written communication skills and ability to work independently and collaboratively are essential.

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:

Jonathan Steirer  
Operations Manager, SDLE Research Center  
Case Western Reserve University, Cleveland Ohio, 44106-7204, USA  
email: [jonathan.steirer@case.edu](mailto:jonathan.steirer@case.edu)  
website: <http://sdle.case.edu>, <http://engineering.case.edu/profiles/rxf131>

In employment, as in education, Case Western Reserve University is committed to Equal Opportunity and World Class Diversity.