

TITLE: Analyst/Programmer for Mass Spectral Reference Data (U.S. Citizens preferred)

Overview

The Material Measurement Laboratory of the National Institute of Standards and Technology is seeking qualified candidates (U.S. Citizens preferred) to maintain and develop widely used software and analysis methods for reference databases of mass spectra and related data. This involves highly complex Microsoft Windows user interface software for both internal and external use in accessing this data as well as for identifying compounds in complex chemical mixtures. It also involves developing software specifically designed for mass spectral data quality analysis. Spectra include electron ionization with retention indices, tandem electrospray of small molecules and peptides. This work also involves the implementation of chemical structure-based analysis as well as the building of varied library analysis tools to assist NIST research programs.

Duties

- Maintain and extend a highly complex Microsoft Windows user interface program for enabling the use of NIST Mass Spectral Reference Libraries for compound identification
- Maintain and extend user interfaces and data analysis algorithms for interpreting mass spectra in term of chemical structure
- Create consensus mass spectral libraries for specialized NIST applications
- Create interfaces between programs written by other NIST staff and external distributors of NIST data to the NIST library program.

Required Skills, Expertise and Qualifications

- Demonstrated expertise in developing highly interactive, complex Microsoft Visual C++ chemical structure based scientific database software
- Demonstrated expertise in chemical structure analysis by computer
- Demonstrated facility in applying mass spectral fragmentation rules for electron ionization, electrospray tandem and related ionization methods
- Experience in working closely with research scientists and scientific programmers

Employment Terms: This opportunity is to be an associate researcher in the NIST Mass Spectrometry Data Center Group for a term of 1 year, with options to renew. Associate researchers are NOT Federal Employees, but they work aside NIST researchers and with NIST's often world class instrumentation. Relocation expenses will not be provided. U.S. citizens hired into associate positions may have the opportunity to seek longer term Federal employment.

Salary: \$85,000 to \$135,000 per year

How to express interest: Persons (U.S. Citizens Preferred) who meet all of the required qualifications and who would be interested in taking this position are invited to express their interest by sending an email that briefly describes their qualifications along with a CV to 645assoc@nist.gov. US Citizens should note "US Citizen" and the opportunity title in the email subject line. All others should note "Non-US Citizen" and the opportunity title in the email subject line.