

# **RICHARD M. ROTERDAM**

1122 4th Street North  
Fargo, ND 58102  
(701) 280-2758 (Home)  
(701) 306-3162 (Cell)  
Email: mroterdam@qwest.net

## **PROFESSIONAL SUMMARY**

Over 15 years of extensive and diversified experience in the metrology software industry: CMM (Coordinate Measuring Machine) software, GD&T (Geometric Dimensioning and Tolerancing), CAD/CAM (Computer Aided Design/Manufacturing), SPC (Statistical Process Control). Experienced in all phases of software development: design/specification, coding, testing, documentation, training and technical support. A team player with a strong work ethic.

Principle strengths include:

- Organizational expertise as part of overall workflow.
- Excellent computer skills and extensive knowledge of processes.
- Excellent communication (written and verbal) skills.
- Ability to teach and train at high and low levels.
- Desire to learn new systems and software as this professional field changes and evolves.

## **EXPERIENCE**

### **MITUTOYO AMERICA CORPORATION - CTRLab, Industry, California 1987 - Present**

The world's largest metrology company was founded in 1934 with one product - the micrometer. Since then, Mitutoyo's product line has encompassed not only small hand tools, but the entire line of quality control instrumentation up to CMMs. The Computer Technology Laboratory (CTLab) was formed to develop software specifically for Mitutoyo CMMs.

#### ***Software Service Engineer - CTRLab, Fargo, North Dakota (1997 - Present)***

- Project coordinator for a product called CADMeasure. CADMeasure is a general measurement, analysis and CAD-based system for Mitutoyo CMMs. Working with Windows 2000 and CAD kernels such as AutoCAD/Mechanical Desktop and Open Cascade, CADMeasure makes the user interface through complex CMM functions (GD&T, on-line/off-line part programming, reverse engineering and nominal versus actual comparison) easy and intuitive.
- Provide CADMeasure technical training to Mitutoyo sales and application engineers. The sales and application engineers, in turn, use the training to effectively demonstrate the product and educate their customers.
- Organize customer beta test sites. This provides valuable feedback from customers prior to the actual release of the product.

#### ***Project Coordinator - CTRLab, Industry, California (1994 - 1997)***

- Served as the project coordinator and in-house trainer for a product called GEOMeasure, which is a precursor to CADMeasure. It was one of the first Windows NT CMM products on the market
- Responsible for company liaison activities between Mitutoyo's software group and sales force, which resulted in better communication between customers and programmers.

**Systems Engineer - Systems Engineering Dept, Elk Grove Village, Illinois (1990 - 1994)**

- Responsible for the customized software development of the main product Geopak 2000/2100. Working closely with the customer, the SED group extended the basic functionality of Geopak to implement the customer's specific application. This proved to be a valuable service to the customer in addition to generating revenue for the company.
- Facilitated the Autodesk Developer Network (ADN) program. Coordinated AutoCAD training for the sales and application engineers and updated the programmers with the latest software.
- Promoted to project coordinator.

**Software Programmer - CTRLab, Industry, California (1987 - 1990)**

- Developed advanced mathematical geometric and tolerancing algorithms to accompany the CMM software. Methods included Least Squares, Chebychev, Max-inner and Min-outer.
- Designed and programmed bi-directional interfaces between CAD (Computer Aided Design) systems and CMMs while implementing IGES (Initial Graphics Exchange Specification) and DMIS (Dimensional Measuring Interface Specification).
- Served on the Geopak-5000 (PC Unix-based) product development committee.
- Represented Mitutoyo on national and international standards activities such as NIST and PTB algorithm certification, B89, DMIS, and PDES/STEP.
- Promoted to systems engineer.

**UC RIVERSIDE MATHEMATICS DEPARTMENT, Riverside, California****1983 - 1985****Teacher's Assistant**

Received the "Outstanding Teaching Assistant" Award granted by the Mathematics Department for 1986-87. Classes taught, 4 hours weekly, were Calculus (single and multi-variable), Numerical Analysis, and Differential Equations. Other duties included preparing and grading exams, assisting students with homework assignments, and counseling undergraduates.

**USDA SALINITY LABORATORY, Riverside, California****1983 - 1986****Coder**

Major responsibilities were extensive computer programming and software development for the specialized needs of soil scientists. Assisted in loading research data into the computer, analyzing and plotting of data.

**EDUCATION****Master of Science Mathematics, 1987, GPA 3.72 of 4.00**

University of California, Riverside, California

**Bachelor of Science Mathematics, 1985, GPA 3.59 of 4.00**

University of California, Riverside, California

**Associates of Science Mathematics, 1983, GPA 3.96 of 4.00**

College of the Desert, Palm Desert, California