



# Ulises Muro

## ASSOCIATE

Mr. Muro supports CTLGroup with a strong understanding of electronics, controls, programming, design, and robotics. He provides a full spectrum of knowledge regarding design, manufacturing, and the installation sensors and control systems to provide solutions to the industry's problems. Mr. Muro's background allows him to focus on instrumentation, data acquisition and load testing services for the railroad and bridge (with a focus on stay cable testing) industries for CTLGroup's Structural & Transportation Laboratory. In addition, Mr. Muro provides design and production of custom sensor systems for concrete and asphalt pavements.

Prior to joining CTLGroup, Mr. Muro worked as a Project Engineer bringing automation solution to manufacturing companies. He has a Bachelor of Engineering in Mechatronics Engineering from the Instituto Politécnico Nacional in Mexico, where he worked on the design and construction of a teleoperated mobile robot with a hybrid locomotion system.

### Industry Experience

3 Years with CTLGroup

2 Years with Other Firms

5 Years Industry Experience

### Credentials

B.S. in Mechatronics Engineering  
Instituto Politécnico Nacional  
Mexico, 2015

### Contact Information

(847)-972-3232

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### Relevant Project Experience

#### **Design and Installation of Instrumentation for Bridge Structures**

- Jiangsu Fasten Steel Cable Company, Ltd.: JFC Stay Cable Test Program. Controls Engineer responsible for the calibration and verification of the load application system, which met the project specifications for testing procedures and quality assurance.
- Tensacciai S.p.A.: SDI Twi Cable South Capital Bridge. Controls Engineer for the quality assurance, calibration, and specification verification of the cable loading system.

#### **Design and Installation of Instrumentation for the Railroad Industry**

- LIRR East Side Access Concrete Tie Qualification Testing. Controls Engineer for specialized test program that required the use of a variety of sensor types and data acquisition systems. Researched sensor options to support test plan and ensure proper data collecting and continuity of the testing.
- AAR Portable Bridge Plate Testing, AAR M-951. Controls Engineer for a bridge plate testing initiative.
- Confidential Clients: Freight Car Suspension Characterization. Controls Engineer for multiple test programs involving rolling stock components and assemblies for confidential clients.
- Confidential Clients: Strain Gaging and Data Acquisition of Rolling Stock Structural Components (Couplers, Knuckles, Yokes, Bolsters, and Side Frames). Controls Engineer for multiple test programs involving rolling stock components and assemblies for confidential clients.

#### **Manual and Automated Data Collection Programs**

- Designed and integrated data acquisition systems for the collection of information of the transient events of interest during testing for multiple clients and products.

#### **Design and Manufacture of Asphalt and Concrete Pavement Sensors**

- Designed and integrated data acquisition systems for the collection of information of the transient events of interest during testing for multiple clients and products.

#### **Automated Production Lines Efficiency Improvements**

- Installation of robotic arms.
- Integration of automation elements in production lines.
- Use of Artificial Vision for quality assurance in finished goods.