

## Experience

SICPA Securink Corp Springfield VA  
Senior Process Engineer Jul 2021—Present

- Installed new process historian in existing ink and 10,000-liter varnish plants.
- Supported the commissioning and commercialization of new 20,000-liter varnish plant.
- Maintained, researched, documented, and upgraded 40-year-old processes and utilities.
- Addressed operator concerns about ergonomics and safety through engineering interventions.
- Programmed PLCs, HMIs, batch recipes, standalone controllers, and other devices as needed.

Washington Metropolitan Area Transit Authority (WMATA) Washington DC  
Mechanical Controls Engineer Jun 2019—Jun 2021

- Updated design criteria, specifications, sequences of operation, and CAD drawings for the control of industrial and office HVAC, sewage, drainage, and other rail systems.
- Reviewed contract submittals for projects with budgets from \$50 million to \$2.8 billion.
- Inspected new and rehabilitated rail assets to ensure standards compliance and functionality.
- Supported maintenance personnel with troubleshooting of equipment in the field.
- Modified PLC ladder logic and HMI programs to operate more reliably and add capability.

Praxair, Inc. Tonawanda NY  
Advanced Process Controls Engineer Jul 2013—May 2018

- Deployed model predictive control (MPC) to improve process efficiency and reliability at nine cryogenic air separation plants globally, saving an average \$300k/year each.
- Simplified software upgrades for about 200 MPC installations with PowerShell and Hyper-V.
- Configured and demonstrated SCADA and MPC simulations for biennial internal training.
- Supported networking and systems issues globally.
- Monitored and maintained MPC performance in the Scandinavian region.

University of Massachusetts Lowell Lowell MA  
Research Assistant Jan 2012—Jul 2013

- Interpreted and manipulated large rheological data sets.
- Learned and documented specialized rheology software.
- Wrote Perl scripts to convert rheological data formats. <https://github.com/iemcd/rheology>
- Published: McDougall, I., N. Orbey, and J. M. Dealy, “Inferring meaningful relaxation spectra from experimental data,” J. Rheol. **58**, 779 (2014) <http://dx.doi.org/10.1122/1.4870967>

## Education

University of Massachusetts Lowell Lowell MA  
BSE Chemical Engineering, Mathematics Minor May 2013