

# MARIAM GONZÁLEZ DEBS

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## EXPERIENCE

### Facility Manager – Nanofabrication and Nanocharacterization



#### International Iberian Nanotechnology Laboratory (INL)

Sept 2011 – Ongoing Braga, Portugal

- Developed processes for lithography and chemical mechanical polishing
- INL cleanroom budget control manager
- Technical liaison between nanofabrication and nano-characterization coordinating teams
- Developed certification program and instructed courses for equipment use and cleanroom safety/utilization protocols
- Quality systems internal auditor
- Organizing collaboration network for Iberian nanofabrication facilities

### Cleanroom Start-up Lead – Staff Technician

#### International Iberian Nanotechnology Laboratory (INL)

July 2009 – Sept 2011 Braga, Portugal

- Developed cleanroom scientific equipment specifications
- Managed public tender processes worth 12M€: definition, evaluation, purchase justification
- Fully engaged in multiple cleanroom start-up activities: protocol elaboration, quality assurance, tool pre-acceptance tests, floor layouts, facilities readiness, system installations and validation

### Laserscribe Senior Process Engineer



#### Intel

Jan 2007 – Aug 2008 San Jose, Costa Rica and Oregon (USA)

- Led Laserscribe module qualification for process transfer from international sites, exceeding aggressive fab start-up schedule and tool availability requirements
- Implemented new manufacturing methods to enable safer and more effective module maintenance during factory start-up activities
- Developed training material and instructed courses to certify technicians resulting in 24x7 sustainable manufacturing capability, including "Introduction to Lean Manufacturing using Lean Tools"
- Managed self-sustaining technicians from all time shifts

### C4 Lithography Senior Process Engineer

#### Intel

Jan 2006 – Jan 2007 Portland, Oregon (USA)

- Developed and implemented process changes leading to \$650K cost savings per year
- Identified root cause of critical feature dimension variation; leading to resolution for an improved process control
- Developed and standardized lithography recipes for next-generation technology testing

## STRENGTHS

Committed

Results-oriented

Hard-working

Mentoring

Team Spirited

Customer-focused

## TECHNICAL SKILLS

- X-Ray Diffraction (XRD) and Reflectivity, Deep Level Transient Spectroscopy (DLTS), Photoluminescence, Photolithography, Magnetic Annealing, Scanning Electron Microscopy (SEM), Energy-dispersive X-Ray Spectroscopy (EDX), Focused Ion Beam (FIB)
- Microsoft Office Tools
- Computing, designing, and graphing tools (MathCAD, Origin, LabView, AutoCAD, WebCT, Linux basics, DACAPO)

## EDUCATION



### PhD in Chemical Engineering

Nanoscale Diffusion in III-V semiconductor structures

#### University of Wisconsin – Madison

Sept 2000 – Nov 2005



- Summer Internships at Sandia National Labs and Dow Chemical
- Teaching Assistantship for Transport Phenomena courses



- Organized and presented workshops at the annual TIP "Teaching Improvement Program" for 3 years (2002-04)

### B.Sc. in Chemical Engineering – Magna Cum Laude

Certificate of Manufacturing

Minor in Psychology

#### University of Puerto Rico - Mayagüez

Aug 1995 – May 2000



## LANGUAGES

- English (native)
- Spanish (native)
- Portuguese (full professional proficiency)
- Greek (elementary)