

# Kareem M. Shehata, P.Eng.

---

kareem@shehata.ca

## Profile

- ▶ Highly motivated, proactive, and skilled control systems engineer with a broad range of technical abilities
- ▶ Proven leadership and international coordination in high-pressure, high-risk projects.
- ▶ Creative, adaptable, and very quick learning, with a proven ability to both lead and work within diverse teams to produce winning solutions to complex problems.

## Key Areas of Expertise

- ▶ **Multi-layer Control Systems** Design separation into three layers; modularization, reliability, and complexity management.
- ▶ **Programming:** C#, VB.NET, VB6, MS Access, C/C++, and Java with a focus on algorithms and data structures.
- ▶ **Automation Technology:** PLC (Software PLCs, AB PLC/5 and SLC500), Opto 22, and PC/104.
- ▶ **Circuit Design:** analog, digital, and power domains, from schematic capture to final product verification including board design, prototype assembly, and debug.
- ▶ **Team Leadership and Project Management:** team co-ordination, scope, scheduling, budgeting, tracking, closing, and delivery.

## Employment

### Independent Consultant

Automation Systems Specialist

November 2006 to Present  
International (Multiple Locations)

### ATS Advanced Systems Inc.

Control Systems Software Designer

August 2004 to October 2006  
Cambridge, Ontario

### Archonix Corp.

Hardware Designer

April 2003 to June 2004  
Toronto, Ontario

## Education

### University of Waterloo

B.A.Sc. Electrical Engineering, Honours Co-op with Distinction, 2003

Computer Engineering Option, 86% Average (3.8 GPA)

Engineering Faculty Deans Honour List 1998 and 2001

# Kareem M. Shehata, P.Eng.

---

kareem@shehata.ca

## Selected Recent Projects

### SimCell System

BioProcessors / ATS Advanced Systems

Lead Programmer

July 2005 to June 2007

Led internal team and coordinated with customer and vendor teams to develop and deploy multi-module system for automated high-throughput cell culture experimentation. Developed process definition with the customer, then turned project around to deliver required system operation, performance, and reliability. Coordinated with customer and vendors in five sites across three countries to deliver subsequent productions of the system within budget and on-time. Designed and implemented several major improvements to both existing systems and new designs with minimal impact to existing functionality.

***Skills Developed: Multi-layer control systems, soft PLC, QNX, revision and change management, project management, Stäubli robotics, Animatics and Kollmorgen servo systems, Visual Basic, and MS Access.***

### Array Checker 7200

Photon Dynamics / ATS Advanced Systems

Technical Lead and Customer Representative

August 2004 - March 2006

Led technical team and represented ATS at primary-customer and end-customer sites to solve problems and implement new features after machine delivery. Learned proprietary ATS technology for control systems, motion and vision, and turned around solutions in under one week. Crossed cultural and language barriers, and coordinated home, on-site, and third-party resources across three countries on a high-risk project for optimal results.

***Skills Developed: Multi-layer control systems, soft PLC, QNX, project management, vision systems, Delta Tau PMAC and UMAC, international customer relations, and management***

### Low-Power Motor Simulator

Honeywell Aerospace Inc. / Archonix Corp.

Project and Electrical Lead

April 2003 - June 2004

Led diverse team to produce turn-key motor simulator from start to finish under very tight schedule and cost constraints. Negotiated expedited delivery schedule with client and supplier, and delivered to client's satisfaction.

***Skills Developed: Project management and leadership, circuit and board design, prototyping, debugging and validation, VHDL and digital design.***

## Awards

- |      |   |
|------|---|
| 2003 | ECE Fourth Year Design Contest, Runner-Up     |
| 2001 | NSERC Undergraduate Student Research Award    |
| 1998 | Best of School, Descartes Mathematics Contest |