

# Brian C. Becker

5551 Centre Ave (321) 262-7715  
Apt. 706 www.BrianCBecker.com  
Pittsburgh, PA, 15232 Brian@BrianCBecker.com

## Objective

A position in computer engineering or robotics, providing software development skills in a challenging environment.

## Skills

### Languages:

- › C/C++
- › Java
- › C#
- › x86 Assembly

### Expertise

- › Robotics
- › Intelligent Systems
- › Machine Vision
- › Compiler Design

### Environments

- › Visual Studio
- › Doxygen
- › Windows API
- › wxWidgets GUI

### Web Publishing

- › HTML
- › CSS
- › PHP
- › MySQL

## Education

2007 – Present	<b>Robotics</b>	Doctor of Philosophy	
	›	› Carnegie Mellon University	
2003 – 2007	<b>Computer Engineering</b>	Bachelors of Science	3.983 GPA
	› Summa Cum Laude	› University of Central Florida	
1999 – 2003	<b>Business Administration</b>	Associate of Arts	4.000 GPA
	› Summa Cum Laude	› Indian River Community College	

## Experience

Jun 04 – Jul 07	<b>Research Assistant</b>	Intelligent Systems Lab	Orlando, FL
		Researched and implemented web-based artificial intelligence systems. Developed PHP-based intelligent wizard guide and added ontology-based search engine to the Java backend of a knowledge based system.	
Sept 03 – Jun 07	<b>Robotics Programmer</b>	Robotics Lab at UCF	Orlando, FL
		Designed and developed machine vision algorithms, GUI interfaces, and path planning approaches in C++ for autonomous ground vehicles. Created interactive GUI with scripting engine for prototyping vision apps.	
Summer 05 & 06	<b>Research Assistant</b>	Pierre & Marie Curie Univ.	Paris, France
		Collaborated internationally in Paris on Contextual Graphs, an AI model. Built ontology editor in C# and MySQL/XML conversion modules in Java.	
Jun 03 – Aug 03	<b>Programmer Intern</b>	SpectorSoft	Vero Beach, FL
		Augmented webmail recording features for “net nanny” software.	

## Honors

2004 – Present	<b>Tau Beta Pi</b>	National Engineering Honors Society
2003 – 2007	<b>Scholarships</b>	ARCS, Astronaut, UCF High Achievement
2005 – 2007	<b>Founder’s Scholar</b>	GPA ranked in the top 1% of college
2004 – 2006	<b>President’s Honor Roll</b>	Five semesters of 4.0 GPA with full load

## Brian C. Becker

5551 Centre Ave (321) 262-7715  
Apt. 706 www.BrianCBecker.com  
Pittsburgh, PA, 15232 Brian@BrianCBecker.com

## Publications

- Becker, B.C., Gonzalez, A.J., Garfield, K. “**A Mission Plan Representation** for Autonomous Reasoning of Consequences.” In the *Proceedings of the 16<sup>th</sup> Behavior Representation in Modeling and Simulation (BRIMS) Conference*. Norfolk, VA, April 2007.
- Becker, B.C., Porter, R.M., Barber, D.J. “**Gamblore**.” In the *Proceedings of The 15<sup>th</sup> Annual Intelligent Ground Vehicle Competition*. AUVSI, <http://www.igvc.org>, June 2007.
- Barber, D.J., Becker, B.C. “**Discover Vision: A Framework for Building, Evaluating, and Testing Performance Based Machine Vision Applications**.” In the *Proceedings of Unmanned Systems North America 2006*. AUVSI, Orlando, FL, August 2006.
- Barber, D.J., Becker, B.C., Ortiz, E.G., Porter, R. “**Calculon**.” In the *Proceedings of The 14<sup>th</sup> Annual Intelligent Ground Vehicle Competition*. AUVSI, <http://www.igvc.org>, June 2006.
- Becker, B.C., Vargas, C.M., Gonzalez, A.J. “**Ontology-Based Search Engine** for a Real-World Decision Support System.” In *Proceedings of the 20<sup>th</sup> National Conference for Undergraduate Research (NCUR) Conference*. Asheville, NC, April 2006.
- Nguyen, J.V., Becker, B.C., Gonzalez, A.J. “**Contextual Graphs** for a Real-World Decision Support System.” In *Proceedings of the 19<sup>th</sup> International FLorida Artificial Intelligence Research Society (FLAIRS) Conference (FLAIRS-06)*. Melbourne, FL, May 2006.
- Barber, D.J., Gonzalez, F.G., Roberts, T., Becker, B.C. “**Software Design** for an Autonomous Ground Vehicle for the 13th Annual Intelligent Ground Vehicle Competition.” In *Proceedings of Intelligent Robots and Computer Vision XXIII: Algorithms, Techniques, and Active Vision*. SPIE, October 2005.
- Barber, D.J., Kiriwas, A., Gonzalez, F.G., Roberts, T., Becker, B.C. “**Calculon**.” In the *Proceedings of The 13th Annual Intelligent Ground Vehicle Competition*. AUVSI, <http://www.igvc.org>, June 2005.
- Barber, D.J., Gonzalez, F.G., Roberts, T., Becker, B.C. Andres, R. “**Black Knight**.” In the *Proceedings of The 12th Annual Intelligent Ground Vehicle Competition*. AUVSI, <http://www.igvc.org>, June 2004.

## Presentations

- |          |   |               |
|----------|---|---------------|
| Apr 2007 | <b>Showcase for Undergraduate Research</b><br>Presented undergraduate thesis entitled “Automatically Determining Consequences of Unexpected Events” in poster format.                                 | Orlando, FL   |
| May 2006 | <b>Showcase for Undergraduate Research</b><br>Won 2 <sup>nd</sup> place in the engineering category with a poster presenting a search engine combined with an ontology for a decision support system. | Orlando, FL   |
| Apr 2006 | <b>National Conference for Undergrad. Research</b><br>Presented the benefits of coupling a domain-dependent ontology with a keyword search engine, including more relevant search results.            | Asheville, NC |
| Apr 2005 | <b>Showcase for Undergraduate Research</b><br>Presented the research and artificial intelligence algorithms that enabled the I/UCRC Wizard to give intelligent answers and guidance.                  | Orlando, FL   |
| Jan 2005 | <b>NSF I/UCRC 2005 Annual Meeting</b><br>Presented the I/UCRC Wizard, an online, intelligent guide for potential universities interested in forming an NSF research center.                           | Arlington, VA |