

# The Art of Robotics

By Camp Peavy

Some artists paint with pigment and texture, others sculpt with clay and stone, some perform with voice and instrument; we just happen to use microcontrollers and digital multi-meters. Robotics is the major new art-form for the 21st century. Eventually robots will become commonplace but for now they are rare and provoke strong emotional responses. It is fertile ground for artists; lots of social experiments, room for technical improvement and opportunities to demonstrate creativity. You can't really learn this stuff in class either. It is street-theatre; the main pre-requisite passion; the outcome as diverse as any ecosystem.



Al Honig is an artist who makes static robotic sculptures.

Not only are robots “art” but an art form with the potential to recognize itself at which point it will have achieved a form of humanity; to recognize its self and ponder its own obsolescence. Robots will follow in the footsteps of their creators and eventually become molecules studying molecules in their own right; searching for meaning. Since the days of “Leonardo Da Vinci” robotics has quietly remained at the nexus of art and science; at the center but always in the background... like the

proverbial 8000-pound elephant in the room... no one wants to comment about the lack of progress. Well, my friends, that brings me back to you... why do we build ArtBots? We build ArtBots because they aren't going to build themselves. If you want a robot, for now at least, it looks like you're going to have to build it yourself. The good news is that once you have accomplished this task it will be rewarding in a variety of ways. One day humanoid androids will become as indispensable as the World Wide Web,



2006 Musical ArtBot Gold Medalist “Arca Musarithmica 1” by Christopher Palmer.



Static: Mark Sherman's mom made this illuminated ArtBot.



Static: An unidentified robotic gardener

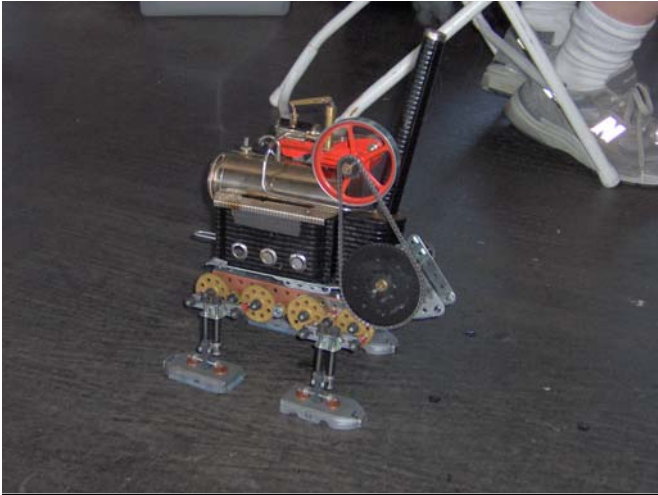
When I think of an Artbot I think of a robot made from "found things". Robots are all around us. Toys, tools, carts, grabbers... all waiting to be motorized, electrified; to be given logic... and pathos (yes pathos, robots have feelings). The robot-artist is the one wondering through the store aisles looking for God-only-knows-what. Do not ask if he can be helped... he is beyond help. He's studying the mechanics of everything... closely... a little too closely. He asks about modifying everything; and nothing is safe if a screwdriver is within reach... and of course one always is. He waxes poetic about adhesives; tools and drools over anything autonomous. Yes my friend if you recognize these symptoms then you might be a robot-artist.

this is inevitable. If you are not involved in this new art form you are missing the opportunity of a lifetime.

The RoboGames [www.robogames.net](http://www.robogames.net) "ArtBot" competition is really the most fun because you can build whatever you want. Whatever your skill level you can probably come up with something you like and robot building is an iterative process; that is you build off of what you have built. Enter a contest; the pressure will force you to create and even if your first attempt is not successful you'll have it under your belt and able to improve. As anyone who has worked with robots for any length of time will tell you anything that can go wrong does... but another truism is if it works in your backyard it will work on stage. Standing back and watching your robot perform can only be surpassed by the performance of one's own children; which in a very real way they are.



My latest ArtBot obsession: Homer the Homebrewed Humanoid



I-wei Huang with Crabfu SteamWorks marches the 2006 Kinetic Gold-medal winning “Steam Walker” around the RoboGames floor.

with a functioning robot. We achieved this goal for six years straight. Springy is a regular at the HomeBrew Robotics Club meetings at “Carnegie Mellon West”, Mountain View, California where she’s usually remote control but does have an autonomous feature where she follows an infrared beacon; as for being practical she carries my toolbox and computer.

A “static” robot seems like a contradiction the category draws beautiful objects... commercially viable. It might double as a stereo or center-table. Sometimes they represent fantasy characters; many times these become centerpieces.

A bartending robot is any robot that can prepare mixed drinks for the user. At a minimum, each robot will be required to be able to prepare a martini. Painting and musical robots obviously produce their respective art forms. Most are interactive; that is the user can have some effect on the outcome.

Complete rules for the various RoboGames ArtBot events can be found at [www.robogames.net/events.php](http://www.robogames.net/events.php)

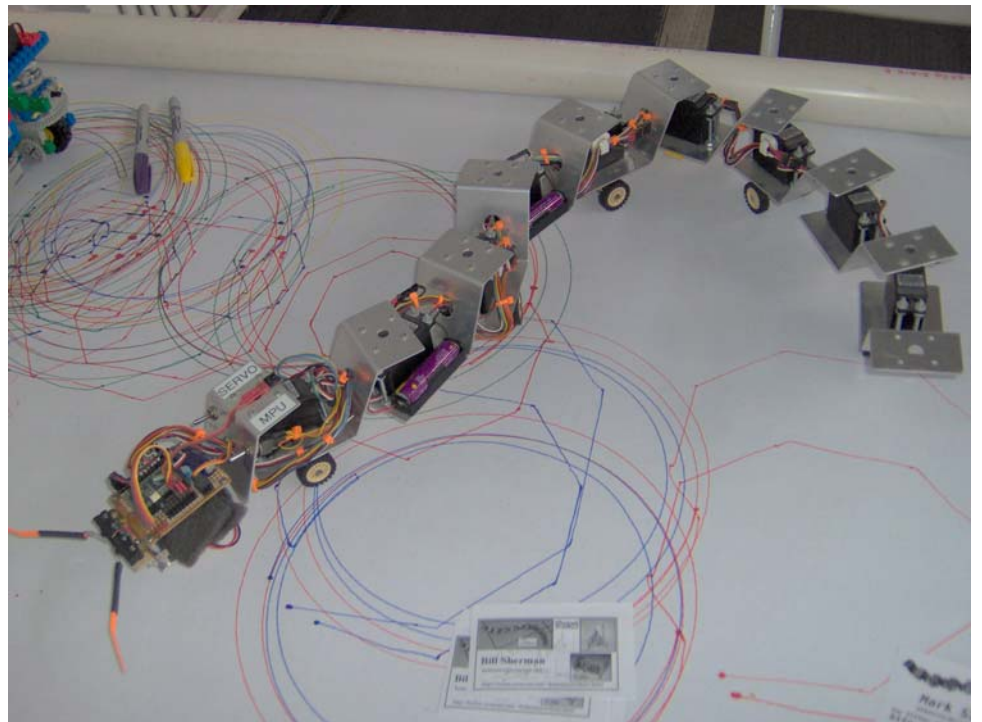
The 2007 Robogames will be held at the Fort Mason Center, San Francisco, California, Fri-Sun, June 15-17.

The RobotGames ArtBot competition is divided into five categories; kinetic, static, bartending, musical and painting.

Probably the purest category is “kinetic”... since it doesn’t actually have to “do” anything... it must be art! I have entered the kinetic category for the past four years (as long as there has been a RoboGames) and took “Silver” in 2004 for my ARTBot “Springy Thingy”. Springy is a robot I built for the Burning Man Art festival after Robot Wars folded. I billed her as a “dancing robot” as opposed to the fighting robots that I had been building. The original goal was to spend a week in the desert; run the robot about an hour a day and leave the event



2005 Kinetic Silver Medalist: Springy Thingy and Robomagellanbot Rusty at Burning Man.



Painting: Slither by Mark Sherman is an example of an ArtBot that can draw. It won Silver in RoboGames 2006 for Kinetic ArtBot.