Robochamps

The Roeper Middle School robotics teams members Ian Meintjes (from left), Spenser Solys, Fiona Maylath-Bryant, Chase Solys, Will Smidlein and Luke Brennan competed in the first round of competition on April 18 to qualify for the World Robofest Tournament, which was May 9, at Lawrence Technological University. Team Suber Keliner Schmetterling, made up of Luke, Ian, and Spenser, won the Judges Award and placed first in an Unknown Mission to advance to the World Robofest Tournament. Team Der Kuh Braun, made up of Fiona, placed first in the RoboFashion and Dance Show to advance. Team Robo Penguins made up of Will and Chase won two rounds and tied one round of three, but did not qualify to go on to the World Robofest Tournament. "All [of the teams] worked incredibly hard for the last four months to prepare for these complex robotic competitions," said coach Linda Pence. "Every team met with great success and a real sense of accomplishment."

The Oakland Press
May 21, 2009

Kids learn, excel in Robofest

By ALEXANDRA CALDWELL

DUNEDIN – Four boys dance around a table with a decorated pillowcase on a stick as they shout "KAMELZ! We are the KAMELZ." A robot on the table dances with them to "In the Jungle." It's the team's final meeting in Dunedin before they entered their robot in the first regional Robofest Competition in Safety Harbor.

Robofest is a robotics competition for middle school and high school students to help the kids become excited about science, engineering, technology and math. Teams design, build and program robots to compete in various competitions, including Exhibition, Game Competition and the RoboFashion and Dance Show. There were 15 teams at the regional competition March 21 at the Safety Harbor Community Center.

"I think it's fun that you can design stuff that no one has ever designed before, and you use computer software to program it, and I like doing that kind of stuff," said Michael Weigley, 12, of Safety Harbor.

Weigley makes up the "M" of the KAMELZ, which was derived from the team members' names: Kameron Madley, 13, of Oldsmar – he is the "KA"; Weigley; Niles Loughlin, 14, of Dunedin provides an "EL"; and Zach Jacquillard, 13, of Dunedin adds the "Z." The group met for a few weeks at Patent Attorney Michael J. Colitz Jr.'s office in Dunedin, who served as the team's coach. The boys designed and built their robot and programmed computer software to tell the robot how they wanted it to move.

The KAMELZ team's robot took first in the RoboFashion and Dance Show against three other teams, propelling them to the national competition, Colitz said. The students used their creativity and imaginations to come up with their own choreography and synchronize a skit with the robot, said Emma Alaba, director and organizer for the event. The kids acted out a skit while the robot dances, she said. The national competition will be May 9 at Lawrence Technical University in Michigan, Alaba said, and the students are currently looking for sponsors to help them raise funds to attend the competition.

"They were absolutely terrific," Alaba said. ". . . Now we're trying to send them to the World (competition.) And I think they can win."

There were eight teams entered in the Junior Game, which is a technical competition. Alaba said. First the teams drew a shape, but they did not know the size or shape the judges chose until during the competition. Teams were disqualified if they did not draw anything in 20 minutes. If the robot leaves the paper, it is a 50 percent deduction. Those who passed that test went to the second game, where robots teamed up against each other to fight to occupy a certain area for three seconds or push the other robot off the table, Alaba said. The St. Petersburg team New Xtreme won this event. The kids on this team were Michael Garrity and Drew Davis.

There were three teams registered in Junior Exhibition, in which students made up their own project, Alaba said. They used the Lego robot kit to demonstrate a goal, such as a task like feeding the cat, she said. All teams also had to answer judges' technical questions about the math, science and programming of their robots, she said. John David Kappeler of team Brick Buddies of Land O'Lakes won first place in this event.

Students in the 15 teams were from all over the region, including Dunedin, Clearwater, Safety Harbor, Indian Rocks Beach, North Redington Beach, Belleair, Largo, St. Petersburg, Brandon and Ocala.

At the KAMELZ's final team meeting, Colitz brought in a secret weapon: 23-year-old Stephen Kowski, originally from Clearwater who now is studying to earn his master's degree in electrical engineering from the University of South Carolina. Kowski has worked with robots for 10 years and wanted to show the boys that robotics and engineering can be fun and is also an important profession.

"(Robofest) is a learning experience to get people exposed because we are drastically undermanned for the future," Kowski said. "As far as a world global economy, we are not putting out nearly enough engineers to compete with any of these countries, and it's going to hit in the next five to 10 years. People are going to wake up and realize, oh man, we're not producing anything or inventing anything anymore. All these boomers who were inspired by NASA and the project of going to the moon are now retiring."

Robotics is a good way to expose kids to engineering, Kowski said, because it hits on all kinds of aspects of engineering: Computer science, mechanical engineering, electrical engineering and creativity. Kowski said the field

Photo courtesy of EMMA ALABA

Kameron Madley shows off Team KAMELZ's first-place trophy and award-winning robot. The team won the RoboFashion and Dance Show division at the Robofest Competition on March 21.

needs kids like the KAMELZ team to become interested in engineering because the United States now has to fly in people from overseas to fill all the job positions that baby boomers are vacating.

"There's just a lack of people in the engineering field," Kowski said. "It's hard, it's intensive, it's math-heavy, and not a lot of people like to do it, so we have to get people to understand that this is a fun thing you can enjoy doing, not just tedious math and grinding out numbers."

owner of the Computer Learning Center in Clearwater and said her goal is to target fourth- and fifth-graders to show them math, science and computers can be fun. So far, the boys in KAMELZ are still interested. Weigley said he would like to be a mechanical engineer, Loughlin said he wants to go into engineering or science, and Jacquillard and Madley like computers. Jacquillard wants to program video games, and Madley likes computer software. Or he wants to be a

"The two hardest things about (Robofest) are programming and working together with people, trying to get the right ideas," Madley said. "Sometimes if you want an idea and another person doesn't, you have to create a new idea."

People who are interested in participating in next year's Robofest may call Alaba and get on a list to receive notices and updates about the event or about summer computer camps. Possible sponsors for the winning teams may also

CLEARWATER CITIZEN

Volume IX, No. 6 www.TBNweekly.com March 20, 2009

Kids learn to compete in Robofest competition

By ALEXANDRA CALDWELL

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See ROBOTS, page 4

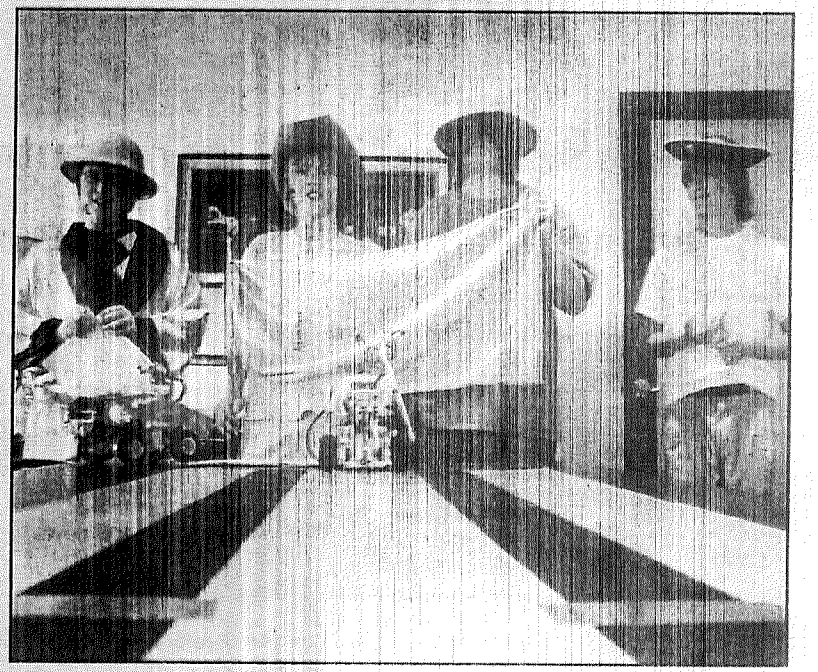

Photo by ALEXANDRA CALDWELL

From left, Kameron Madley, Michael Weigley, Niles Loughlin, and Zach Jacquillard run through a dress rehearsal of their skit for the Robofest Competition to take place March 21.

1/2

ROBOTS, from page 1

cal competition, Alaba said. First the teams must draw a shape, but they will not know the size or shape the judges choose until during the competition. Teams are disqualified if they do not draw anything in 20 minutes. If the robot leaves the paper, it is a 50 percent deduction. Those who pass that test go on to the second game, where robots are teamed against each other and have to fight to occupy a certain area for three seconds or push the other robot off the table, Alaba said.

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Robotics is a good way to expose kids to engineering, Kowski said, because it hits on all kinds of aspects of engineering: Computer science, mechanical engineering, electrical engineering and creativity. Kowski said the field needs kids like the KAMELZ team to become interested in engineering because the United States now has to fly in people from overseas to fill all the job positions that baby boomers are vacating.

"There's just a lack of people in the engineering field," Kowski said. "It's hard, it's intensive, it's math-heavy, and not a lot of people like to do it, so we have to get people to understand that this is a fun thing you can enjoy doing, not just tedious math and grinding out numbers."

Left: Michael Weigley, left, and Kameron Madley finish decorating their team's flag for the Robofest Competition to take place March 21.

Right: The team KAMELZ robot dances down the runway during a dress rehearsal for their entry in the Robofest Competition.

Photos by ALEXANDRA CALDWELL

Alaba agreed. She is the owner of the Computer Learning Center in Clearwater and said her goal is to target fourth- and fifth-graders to show them math, science and computers can be fun. So far, the boys in KAMELZ are still interested. Weigley said he would like to be a mechanical engineer, Loughlin said he wants to go into engineering or science, and Jacquillard and Madley like computers. Jacquillard wants to program video games, and Madley likes computer software. Or he wants to be a congressman.

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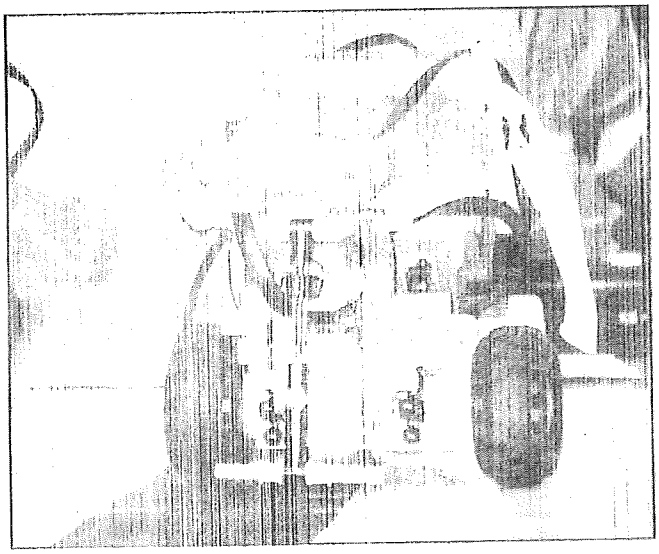
People who are interested in participating in next year's Robofest may call Alaba and get on a list to receive notices and updates about the event or about summer computer camps. Call 447-3067.



MidWeek

Students Engage In Sumo & Eco-tasks At Robot Tourne

April 01, 2009
By Midweek Staff

Momilani Elementary School students prepare their robots for battle (above) as members of Radford High School's robotics team check that all circuits are in working order March 14 during the second annual Hawaii Robofest at Pearlridge Uptown Center. Photos from Dwayne Abuel.

In the sumo ring sit two robots ready for combat. Three seconds pass, and their programs are initiated.

The robots circle the ring for a good 25 seconds, not touching each other. With a 30-second time limit for each match (when robots don't interact with each other), the audience and teams assume a reset.

Suddenly, one robot strays out of the circular pattern and advances forward, right into its competitor. That robot is then lifted slightly into the air and, with that change in direction, drives itself out of the ring.

This was the excitement experienced at Pearlridge Uptown center stage March 14 at the 2009 Hawaii Robofest Tournament, when the CyborPueoz team from Gus Webling Elementary School was declared the junior division winner of RoboSumo, a competition that tests the limitations of robots through a simulation of the human sport.

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"From concept to the event, I really only had a dream of how it was going to be. When the event day came, I got out of bed truly excited, and I really couldn't wait until I saw every single robot," said program coordinator and Highlands Intermediate teacher Dwayne Abuel. "To my amazement, every team surpassed my vision - every single team surpassed my dream of how it was going to be."

Established by Lawrence Technological University professor CJ Chung in 2000, Robofest has mushroomed into a worldwide annual robotics festival where participants celebrate inventions, innovations, game play and unification of all kinds of people.

If this sounds fun, it is. This is what robotics should be.

And season two of Robofest in Hawaii did not disappoint: Twenty-four teams from 12 different schools competed - almost three times more than last year - with many coming from Pearl City complex schools.

Lynn Fujioka, president and founder of isisHawaii, was responsible for getting the funds to run RoboFest for the past two years.

Chung also recognized her as the official site coordinator.

In addition to RoboSumo, this year's program included a Rube Goldberg and Robotics exhibition, where the teams prepared machines to do simple everyday tasks such as watering plants. It was made a little more challenging when robots had to be made by incorporating the theme "It Ain't Easy Being Green," demonstrating things such as energy conservation and recycling. Even the RoboSumo bots, known as "battery killers" because of their power usage, were programmed to save energy through various strategies and gears.

Kristy Suefuji. The editor-in-chief of her school's newspaper, Suefuji will attend the University of Hawaii-Manoa in the fall and hopes to later transfer to a pharmacy school, possibly at UH Hilo. Her ultimate goal is to earn a PhD in pharmacy, with a possible minor in journalism.

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In celebration of an early Earth Day, all of the participants - which include teams from Kanoelani, Lehua, Waiau, Momilani, Manana, Palisades, August Ahrens, Webling and Pearl City Highlands elementary schools; Waipahu and Highlands intermediate schools and Radford High School - were invited to showcase their Rube Goldberg machines and demonstrate RoboSumo matches to the public from 10 a.m. to noon April 19 at the Children's Discovery Center.

This article was submitted by Pearl City High School senior

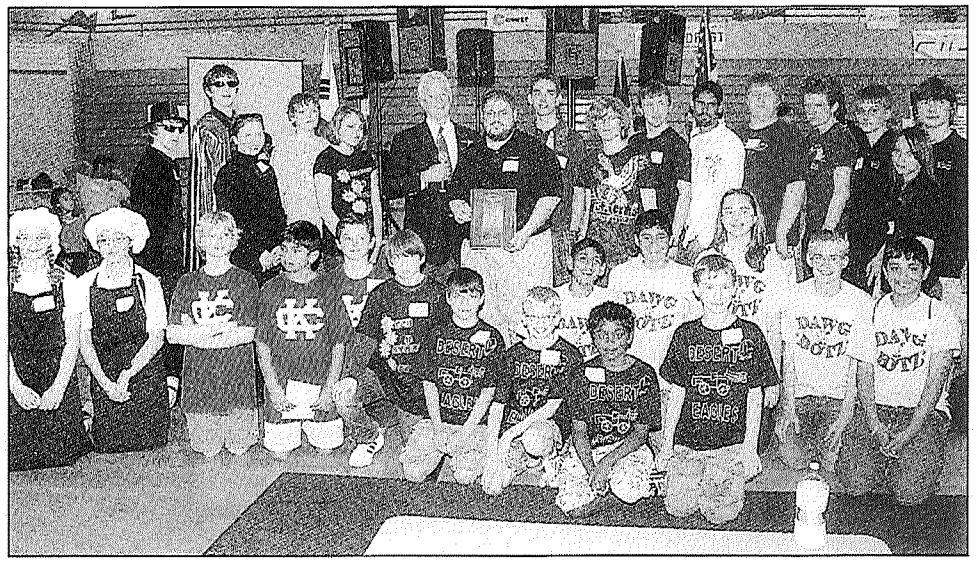
TARDEC grants highlight 10th Robofest competition

The Joint Center for Robotics at the Tank Automotive Research, Development and Engineering Center (TARDEC) in Warren introduced a new set of awards at Lawrence Tech's 10th annual World Robofest Championship in May. Seven grants ranging from $500 to $1,000 were awarded to teams demonstrating creative and innovative robotics projects with entrepreneurship components.

As presenting sponsor for Robofest 2009, TARDEC supported Lawrence Tech's outreach efforts to get students in grades 5–12 interested in technology-based careers.

Robofest is an international competition of autonomous robots that are computer-programmed to act independently. This year approximately 1,700 students from 10 states and five countries participated.

"Events like Robofest are important to TARDEC because they help us lay the groundwork for the future of Michigan's engineering and technical workforce," said Bernard Theisen, project manager for outreach at the Joint Center for Robotics. "Robotics is a multidisciplinary field, so students are exposed to the computer science, electrical engineering, mechanical engineering, physics, and math disciplines."



Lawrence Tech President Lewis N. Walker and TARDEC representative Bernard Theisen (top row center) congratulate World Robofest Championship teams that won project grants from the U.S. Army's Joint Center for Robotics in May.

TARDEC funding also supports workshops, education assessments of Robofest participants, and student teams. Workshops at 10 Detroit and Highland Park schools built awareness of robotics and gave educators the basics for developing student projects and teams.

Robofest founder CJ Chung, Lawrence Tech associate professor of mathematics and computer science, said support from sponsors like TARDEC has helped Robofest grow from 150 participants in 2000.

"Together our goals are to provide hands-on learning and teamwork experiences that will motivate young students to pursue higher education in technology-driven fields," said Chung. "We also are nurturing creative and innovative ideas that will lead to entrepreneurship." ▲*EP*

roboticshawaii.org

4-5-2009

2009 Hawaii State Senate Recognizes Robofest

Source: RoboticsHawaii

The Senate of the Twenty-fifth Legislature of the State of Hawaii, Regular Session of 2009, formally recognized the Hawaii Robofest program and its students who participated in the 2nd Annual Robofest Tournament on Saturday, March 14th, 2009, at the Pearlridge Center.

A surprise presentation of the recognition certificate was made by the **Honorable David Ige** (left) and the **Honorable Carol Fukunaga** (right) to isisHawaii President, **Lynn Fujioka** (center), at the Science & Tech Day at the Capitol on Thursday, April 2nd, 2009.

The certificate reads:

> The Senate Congratulations Lynn Fujioka and Student Teams Participating in the Second Annual Hawaii Robofest Tournament
>
> It is a pleasure of the Senate of the State of Hawaii to recognize Lynn Fujioka and the students who participated in the Second Annual Hawaii Robofest Tournament.
>
> Launched in 2000 by Dr. CJ Chung of Lawrence Tech University in Southfield, Michigan, Robofest is an international scholastic robotics program that engages students in the areas of science, technology, engineering and mathematics (STEM) through robotics activities that stimulate innovation, problem solving and teamwork.
>
> The 2nd Annual Hawaii Robofest Tournament was held on March 14, 2009, at Pearlridge Center. This event would not have been possible without the tireless efforts and dedication of Lynn Fujioka, president and founder of isisHawaii. Ms. Fujioka's non-profit organization is a lead supporter for robotics programs in Hawaii, providing mentorships, resources and opportunities for students exploring higher education and careers in STEM-related fields.
>
> This year's Hawaii Robofest Tournament was sponsored by the University of Hawaii College of Engineering with Act 111 funds, and Highlands Intermediate School. Dwayne Abuel, lead Robofest program coordinator, and volunteer Gayle Loui, coordinated the kickoff and tournament, providing training for coaches as well as team support.
>
> The Senate of the Twenty-fifth Legislature of the State of Hawaii, Regular Session of 2009, recognizes and congratulates Lynn Fujioka and the students who participated in the 2nd Annual Robofest Tournament, and wishes them continued success on their STEM competitions.
>
> (signed by)
>
> David Y. Ige, Sponsoring Senator
> Carol Fukunaga, Sponsoring Senator
> Clarence K. Nishihara, Sponsoring Senator
> Colleen Hanabusa, President of the Senate
> Carol Taniguchi, Clerk of the Senate
>
> (Senate signatures)

Southfield SUN
NOV 19, 2009

Lawrence Tech promotes robotics knowledge with annual event

BY STEVE KOWALSKI
ECCENTRIC STAFF WRITER

SOUTHFIELD — When people think of parades, floats and marching bands may come to mind first.

Lawrence Technological University hosts an indoor parade with a different kind of program — the kind that's found in a robot.

School-aged children from across metro Detroit participated in the fourth annual Robot Thanksgiving Parade, Nov. 19, inside the Buell Management Building Cafeteria on campus.

Dozens of school science teams programmed their computerized robots to navigate a circular parade route that simulates America's Thanksgiving Parade along Woodward Avenue, complete with a scaled-down, cardboard likeness of the Renaissance Center and Christmas carols over

Please see **ROBOTICS, A3**

JOHN STORMZAND | STAFF PHOTOGRAPHER

Southfield residents, and brothers, 9-year-old Derek Church (left) and 11-year-old Austin, prepare for the Robot Thanksgiving Parade, Nov. 19, at Lawrence Tech University.

ROBOTIC

FROM PAGE A1

the public address system.

Dr. C.J. Chung, associate professor in the College of Arts and Sciences at Lawrence Tech, is the parade founder, according to Keith Bozin, a fellow science professor at the Southfield campus.

The parade complements a spring time event, Robofest, which Chung also started as an annual autonomous robotics competition, focusing on learning STEM (Science, Engineering, Technology and Math) for students in grades five through 12 and college students. Chung was unable to attend this year's parade, but would be proud of the participation level and advanced technology, according to Bozin.

"(Chung) wanted to get kids at an early age interested in math, robotics and science," Bozin said. "Some of the (robots) are absolutely amazing."

Royal Oak resident and University of Detroit-Jesuit science teacher Tim Murphy entered a team of students in the parade. Students operate their robot using commands from a laptop computer, Murphy said.

"(The students) buy the kits and (instructors) teach them how to program it," Murphy said. "It's a good way for kids to start."

America's Thanksgiving Parade has Santa Claus as its highlight. The Robot Thanksgiving Parade has Lawrence Tech's AIBO — a robotic pet — as its signature entry and model robot.

Nate Johnson and Emily Trudell, a Royal Oak married couple who have two

JOHN STORMZAND | STAFF PHOTOGRAPHER

Gabe Wilson, 11, programs his robot on a lap top computer during the Robot Thanksgiving Parade, Nov. 19 at Lawrence Tech University in Southfield.

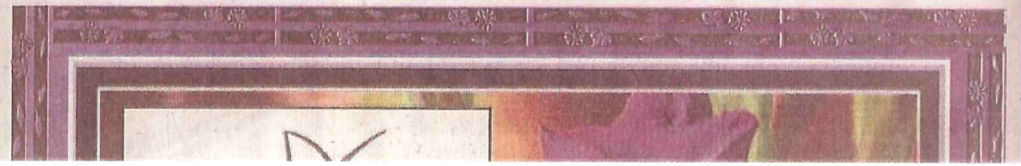
Their AIBO has a camera in its nose and an infrared, wireless, onboard computer, which allows it to perform "whatever you program it to do."

A parade route may seem like a simple command for the AIBO, which has been known to master more complicated programs, according to Trudell, who has a master's degree in computer science from Lawrence Tech.

"When it plays soccer, it grabs the ball between its two 'front paws,' and places its head down to kick it toward the goal," Trudell said.

Her husband, who has a master's degree from Lawrence Tech in electrical engineering, called the parade "an excellent opportunity for

Participants line up their robots for the start of the Robot Thanksgiving Parade, Nov. 19 at Lawrence Tech University in Southfield.



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MidWeek, Hawaii

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April 01, 2009
By Midweek Staff

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This article was submitted by Pearl City High School senior

The Observer & Eccentric
5-24-09

Academy teams tops at annual Robofest

MAY 24, 2009

Three teams sponsored by Canton Charter Academy won U.S. Army development grants during the 10th annual World Robofest Championship recently held at Lawrence Technological University in Southfield.

Three teams from Canton Charter Academy won TARDEC development grants during the World Robofest Championship held at Lawrence Technological University in Southfield.

The Joint Center for Robotics at the Tank Automotive Research, Development and Engineering Center (TARDEC) in Warren awarded grants to teams demonstrating creative and innovative robotics projects with entrepreneurship components.

"Events like Robofest are important to TARDEC because they help us lay the groundwork for the future of Michigan's engineering and technical workforce," said Bernard Theisen, project manager for outreach at the Joint Center for Robotics. "Robotics is a multidisciplinary field, so students are exposed to the computer science, electrical engineering, mechanical engineering, physics, and math disciplines."

Robofest, founded by Lawrence Tech professor CJ Chung, is an international competition of autonomous robots - computer-programmed to act independently and not radio-controlled. The competition encourages students to have fun while learning principles of computer science, physics, math, engineering and technology. This year some 1,700 students from 10 states and five countries participated.

The three Canton teams competed in the junior division (grades 5-9). One three-student team named TILT (Technology in Layman's Terms) built a pinball-type game that moves in concert with a player who is seated on a large exercise ball. The Desert Eagles created an ecofriendly RoboRecycler that sorts recyclables into categories.

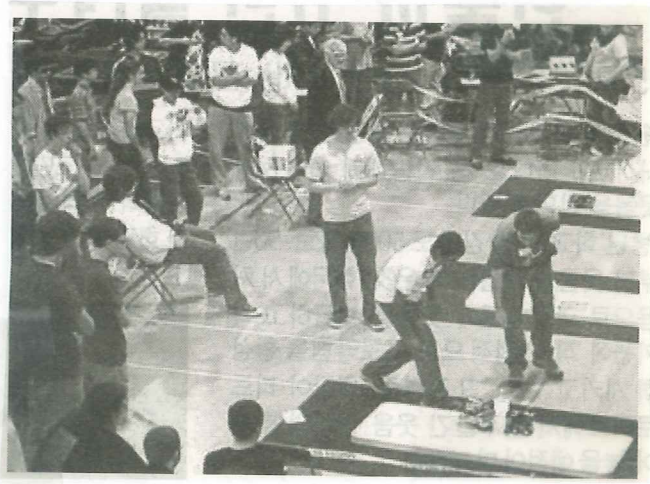
CCA's Dawg Botz won a People's Choice Award with CART (Carrying Autonomous Robotic Technology). This multipurpose robot uses infrared light to follow a person by employing ultrasonic and infrared sensors to avoid hitting obstacles.

The Michigan Seoul Times 5-17-09

· **Robofest 2009 World Championship** (Lawrence Tech University)

Lewis Walker 총장 과 한창수회장 , 대회 디렉터 정찬진 교수

LAWRENCE TECHNOLOGICAL UNIVERSITY
ROBOFEST
2009



TARDEC Returns as Lead Sponsor For Robofest® 2010 Championship

Student teams use fully autonomous robots to accomplish missions at the World Robofest® Championship.

The 11th annual World Robofest® Championship, an international competition that challenges junior high, high school, and college students to design, build, and program robots, was held May 8 at Lawrence Tech.

Once again, TARDEC, the advanced military automotive technology laboratory at the U.S. Army's Detroit Arsenal in Warren, Mich., stepped up as presenting sponsor for Lawrence Tech's outreach efforts to get students in grades five through 12 interested in technology-based careers.

C.J. Chung, Robofest founder and Lawrence Tech associate professor in the math and computer science department, said sponsor support has helped Robofest grow from 150 participants in 2000 to more than 1,500 today.

Other Robofest 2010 sponsors included the Herbert and Elsa Ponting Foundation, Denso Corporation, IEEE Region 4, Michigan Council of Women in Technology, RIIS LLC, LEGO Education, Realtime Technologies, Michigan Association for Computer Users in Learning, Detroit Chinese Engineer Association, Aramark Education, Mindsensors, Stoutware Engineering, ROBOTC, David E. Bindschadler, C.J. Chung, Howard Davis, Dennis Howie, Starlett Sinclair, Joel Stein, and Emily Trudell.

This year, teams from 30 qualifiers and three regional competitions in 10 states and four countries competed in a variety of events. Christopher Cartwright, associate professor of mathematics and this year's Robofest program manager, said, "Junior and senior high school students competed in three events—a robotic fashion show/dance segment, an exhibition challenge of the students' own design; and a planned task that required robots to clear an eight-foot playing surface of partially filled plastic water bottles and search out a 'human' water bottle to rescue and return to a designated area." College students had only one event—a vision-centric challenge that required the entrants' robots to navigate a dynamic obstacle course.

"Robotics is a multidisciplinary field, so students are exposed to computer science, electrical engineering, mechanical engineering, physics, and math disciplines," added Chung. "Together our goals are to provide hands-on learning and teamwork experiences that will motivate young students to pursue higher education in the STEM fields—science, technology, engineering, and math. We also are nurturing creative and innovative ideas that will lead to entrepreneurship."

LTU Tech Report Summer 2010

WWJ·950
NEWSRADIO

11-20-2010

Nov. 20 Thanksgiving RoboParade Showcases Student Built Robots: Lawrence Technological University's fifth annual Thanksgiving RoboParade will be held Saturday, Nov. 20, from 12:30 to 3:30 p.m. at Macomb Community College's Lorenzo Cultural Center, 44575 Garfield Road in Clinton Township. The event is open to the public, and admission is free. This year's parade will feature robot floats constructed and programmed by elementary, middle and high school students from throughout southeast Michigan. After team presentations, around 1:55 p.m., the fully autonomous robot floats will follow the mock Woodward Avenue parade route, from Orchestra Hall to the Renaissance Center. The robot floats are fully programmed to detect other robots and to stop and start without human help along the parade route. Participants in this indoor autonomous robot demonstration will come from Cranbrook Kingswood, the Roeper School in Birmingham, Shrine Academy in Royal Oak, Northville's Our Lady of Victory School, Michigan Technical Academy in Redford, Winans Academy of the Performing Arts in Detroit, University of Detroit Jesuit High, Ojibwa Elementary of Chippewa Valley Schools, Immaculate Conception School in Ira, Dearborn Homeschoolers, Mark Twain Elementary in Fraser, and from various other communities including Rochester Hills and Canton Township. The event grew out of Lawrence Tech's computer summer camps where students in grades 5-12 construct and program robots to follow lines and process input from various sensors. Capitalizing on the Thanksgiving parade tradition in the Detroit area, RoboParade is intended to help inspire students to pursue science, technology and computer programming in a creative environment. A live streaming broadcast of this year's RoboParade can be accessed at **www.robofest.net** , along with videos from the previous four parades. This year's RoboParde will be a part of "American Ingenuity: Embracing the Freedom to Dream" program organized by Macomb Community College.

Filed Under: **Michigan State University, Lawrence Technological University, Michigan Economic Development Corp., Macomb Community College, Thanksgiving, Lorenzo Cultural Center, Kellogg Center, Michigan Department of Energy Labor and Economic Growth, Michigan Biomass Waste to Energy Summit, Department of Biosystems and Agricultural Engineering, RoboParade, Robofest**

2010

CONTRA COSTA TIMES
ContraCostaTimes.com

San Ramon, CA

Robots to perform at East Bay competition

By Rebecca F. Johnson
Correspondent

Posted: 03/25/2010 12:44:39 PM PDT

Updated: 03/25/2010 12:58:11 PM PDT

By Rebecca F. Johnson

SAN RAMON — Imagine the daunting task of navigating through the rubble of a plane crash, attempting to locate the pilot and extricate him to safety while encountering debris, rough terrain and obstacles — all in less than two minutes.

The task is part of a regional qualifying round for Robofest, a state robotics competition that will be open to the public Saturday at Windemere Ranch Middle School. Admisison is free.

Teams from San Ramon, Livermore and Fremont will all compete.

"Trying to help students learn math and science skills — that's pretty much what we're about," said Tiffany Platt, an assistant coordinator for Robofest, which is facilitated by Lawrence Technological University in Michigan.

Each year the mission — which is performed on a 36-by-72-foot table using bottles and other objects, such as pencils taped to the table to simulate rough terrain — is varied to keep it fresh.

Eleven Windemere Ranch Middle School teams, five from Livermore High School and one from American High School in Fremont will take part in the competition, which will be held from 1 to 4 p.m. Saturday at Windemere Ranch, 11611 E. Branch Parkway, San Ramon.

The teams are comprised of students who are members of their respective schools' robotics clubs. The three schools are the only program participants from California, and the winners in each division will advance

to the World Robofest Championship in May. The event, which is traditionally sponsored by technology corporations and other industry members, also includes a robot fashion and dance show and exhibitions.

Rich Osborne, a former computer project manager who teaches advanced technology at Windemere Ranch, has run the club the past two years. He said students learn mathematical, analytical and technical skills, but learning to work with each other on a project may be the most important skill they glean from involvement.

The chance to compete against others is the driving force that keeps the students motivated to participate in the voluntary after-school club, he said.

"The focus of competition, I think, just crystallizes everything," he said.

Livermore High's students have been active in Robofest the past four years, even winning first place in the 2008 world championship senior division and earning a trophy, a new robot the team donated to the school, and scholarships to Lawrence Tech.

Solving every mission requires students to learn computer programming language that is used widely in the industry, making it useful for future careers, said Mike Waltz, Livermore High's industrial technology teacher.

"The robots are actually just Legos, just toys, but some of the engineering used to make them work is pretty sophisticated," said Waltz, who instructs a robotics course in addition to serving as the teams' coach.

For 11-year-old Windemere student Avinash Jois — whose father Jagdish Jois, a software consultant, is a volunteer coach — delving into the relatively new concept of artificial intelligence is intriguing.

"It's fun to program the robots to do stuff," he said.

While Jois' family is slated to be in the cheering section, the teachers are seeking to inspire others in the education field to partake in the low-cost competition where materials can be reused each year.

"We're really hoping other middle schools and high schools will get interested in this program," Waltz said.

BATTLE CREEK SHOPPER NEWS

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Page: 40
Keyword: Lawrence Technological University

CACC students place in 'Great Lakes Area Robofest'

Calhoun Area Career Center (CACC) Robotics Club, comprised of students from the computer networking and machining technology programs, participated in the Great Lakes Area Robofest Competition held at Lawrence Technological University in Southfield, MI, April 24.

Timothy Fee, Albion High School, and Jonathan Timmer, Lakeview High School, took fourth place.

They competed at the World Robofest Championship on May 8 at Lawrence Technological University against approximately 30 other high school teams throughout the world.

Robofest is an annual autonomous robotics competition focusing on learning STEM (Science, Engineering, Technology and Math) for students in fifth through 12th grades.

Robofest challenges teams to design, build, and program robots. This year's task was to build a robot that would find a "human" bottle among "debris" bottles and rescue it.

To see this in action, visit www.Robofest 2010 video link and go to download Robo Power Videos or watch it on You Tube video: Robo Power.

Jonathon Timmer is setting up a practice run at the Calhoun Area Career Center.

Account: 23947A (1241)
MI-498

Detroit News

5-24-2010

Eighth-grade team takes second in robot contest

Two Plymouth-Canton Community Schools eighth-graders, Alex Yu of Discovery Middle School and Kevin Ni of East Middle School, recently finished second at the 2010 World Robotic Competition (Robofest). Yu and Ni, who had qualified by earning first-place honors at district and state events earlier in the year, competed against 21 other teams from all over the world recently at Lawrence Technological University. Robofest is a competition of autonomous robots, which are programmed to do required tasks without remote control.

www.detnews.com/article/20100524/METRO01/5240319/-1/ARCHIVE/Wayne-Stat... 5/26/2010

Fort Wayne, In

The Journal Gazette

Published: May 11, 2010 3:00 a.m.

With world title in tow, Elmhurst pride to live on

Frank Gray

In another three weeks, Elmhurst High School will close its doors for good, but one team will walk out of the place with the biggest honor, in name, at leastany team at the school has ever won: a world championship.

Scarcely more than two months ago, senior Anthony Howell, a member of Elmhurst's robotics team, proposed designing a robot that would sort recyclables while they were still on the truck. The plan was to enter the robot in a competition at Lawrence Technical University in Southfield, Mich.

Howell came up with the idea for the robot after reading in the paper that the city had to subsidize recycling, paying far more than the recyclables were worth.

In just a couple of weeks the team, made up of Howell, senior Ian Springer and sophomores Josh Ehinger and Spencer Gordon, had put together a working model – out of recycled materials, no less – and finished first in a qualifying competition and then finished second in a regional competition in Michigan.

Last week, in preparation for the world championships, the group was still working to get the bugs out of the robot, which uses light sensors, magnets and ultrasonic sensors to distinguish aluminum from steel from plastic and sort items into individual bins. Saturday, facing teams from all over, including South Korea and Canada, the Elmhurst team took first place.

Along with the title comes a $2,000-a-year scholarship to Lawrence Technical for each team member and $500 in development money, provided by the Tank Automotive Research Development and Engineering Center, a company that does technical research for the Department of Defense.

The students have now been asked to submit a project improvement plan and to demonstrate their idea at an event at the Henry Ford Museum in Michigan this summer. That could lead to more development money for their robot.

"We're pretty excited," said Phil Springer, who informally coaches the team. What gave them an edge, Springer said, was that they did research. They explained that it would make recycling more economical and eliminate the threat of disease and injury to humans who have to sort recyclables now.

Using a phrase created by the team, Springer said, "They developed a robotic solution for a human problem."

Howell's mother, Deanne Galanty, said many of the other robots in the competition were more novelties or toys, while the Elmhurst team's robot had a real, practical use.

Galanty said the team had never advanced so far in a robotics competition before, and everyone is extremely proud of them. It's just unfortunate "that they're closing the school that's turning out the world champs," said Galanty, who acknowledged being one of those who opposed closing the school.

The team will live on, though. The two seniors will attend college, and the two sophomore members will likely attend Wayne High School next year and they hope to continue in robotics competition.

And the team members can remember one thing – they're the ones who came up with idea, made it reality and won the competition.

Plymouth Observer

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Page: A7
Keyword: Lawrence Technological University

Robotic success

Plymouth Christian Academy sent student teams to the Robofest robot competition at Lawrence Technological University, where they competed in the Junior Exhibition division. PCA supported and sponsored 13 fifth-grade students making up four teams - (from left to right: Max Greil, Matthew Cusumano, Wesley Chen, Joshua DeVries, Adam Albert, Taylor Mistele, Alivia Morton, Phillip Collingwood, Robert Chalhoub, Andrew Fernandes, Justin Winn, Noah Gustafson, and Blake Rickert (not shown)). The students delivered their oral presentations and demonstrated their robot creations in front of hundreds of people during the competitions. The 'Mechanics' (Noah Gustafson, Justin Winn, Andrew Fernandes) and the 'Geekabytes' (Matthew Cusumano, Blake Rickert, Max Greil) finished first and second, respectively, in the local Canton Regional Robofest competition. Both teams were invited to the Michigan Regional competition where the 'Geekabytes' finished fourth and then went on to a fifth-place finish in the 2010 World Robofest Championship competition. The 'Geekabytes' also won a 'Creativity and Innovation Development Grant' for the invention of 'Jack, the card dealing robot.'

Account: 23947A (1250)
MI-187

RoboPower is creating enthusiasm for school in students

January 25, 10:02 AM · Detroit High-Tech Kids Examiner · Lynette Tigue

Students Learning RoboPower programming
L. Tigue

It is time for the Robofest Jr. and Sr. Divisions RoboPower to begin and it sounds like fun. "It takes kids from building lego's to programming them," said Parent Gail Daiuto. This year the student's robots mission is to completely remove debris (water bottles) caused by a landslide from a make believe mountain road and rescue a trapped human (another water bottle) and return the human to the safe zone or home base without dropping them using NXT-G programming.

The object of the game is to teach the students about motion, friction, object detection, logic and navigation. The team that is able navigate the robot to move the debris (without pushing it) from the playing fields and return the human to the safe zone without the student's touching the items will be awarded points according to how well they accomplished the mission. The team

with the most points in the end will be the winner.

First year Coach and Teacher Donna von der Hoff from Thorn Apple Kellogg High School coaches two teams one of which is an all girls team. Ms. von der Hoff said, "What I like about it is that they are required to do part of the programming with my help and the other part without my help at the event. " Which she said helps the students learn even better.

Plymouth Education Center of Detroit Principal and Coach James Spruill said, "I like Robofest because it is more challenging than some of the other competitions and there is more flexibility in the components that can be used." Mr. Spruill coaches 3 teams, two 8th grade teams and one 7th grade team. He said he coaches a big team because the students are involved in so many activities that they may lose one or two but he does not want it to affect their performance in Robofest.

Bob and Gail Daiuto of St. Clair Shores who son is in the competition said they love the program. Mr. Daiuto said, "It is pretty educational for the kids. My son is only 11 and he understands things about computers that I don't." He also said, "It is amazing what they are learning at such a young age." Mrs. Daiuto is also impressed with the programs because she said their son has starting to like going to school again and is more interested in math too since joining Robofest.

It was a packed house and students were there excited and eager to learn to program their robot in hopes of winning the competition. There are only a few weeks left until the competition but they look like they are on the right track. For more information regarding Robofest programs visit http://www.robofest.net

If you enjoyed this article please subscribe at the top of the page and you will be sent new articles when they are available.

RoboPower First Training Session

View Slideshow »




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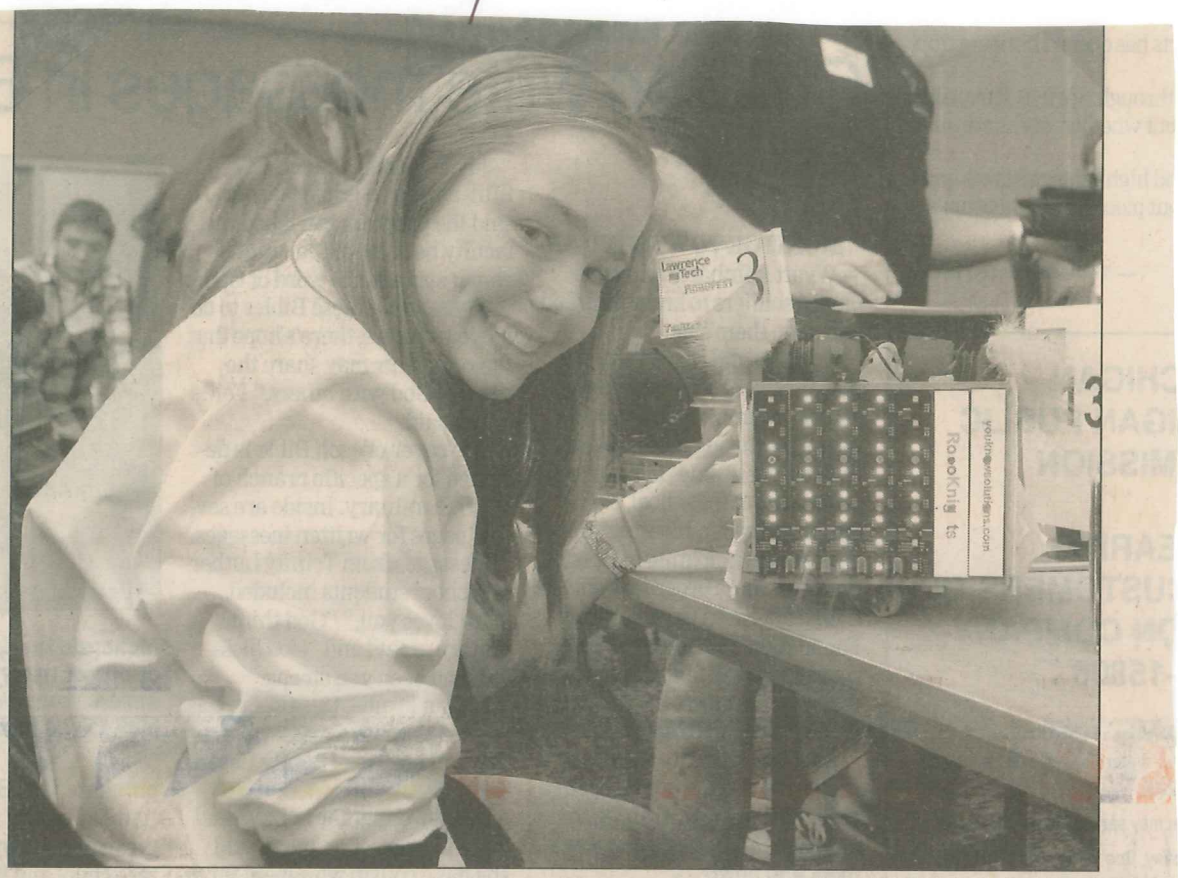
Macomb Daily Nov. 20, 2010

1/2

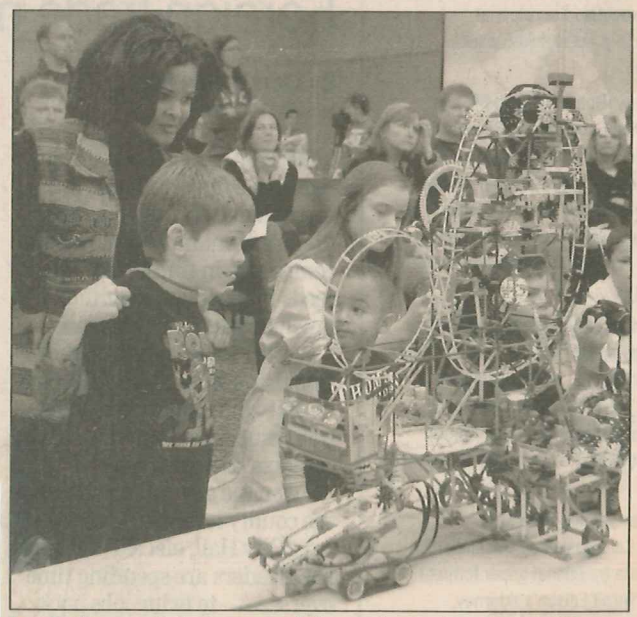


Rachel Harbut of Shrine Academy sets up her robot with a light show.

Macomb Daily photos by David Angell

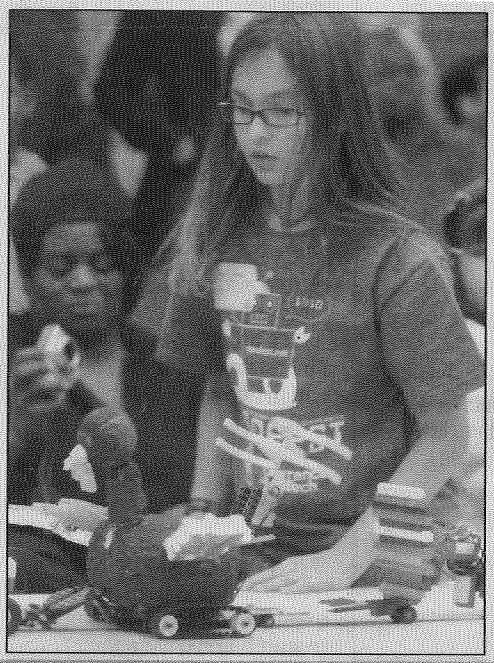
'Bot time

The fifth annual Thanksgiving Robo-Parade held Saturday at Macomb Community College's Lorenzo Cultural Center again demonstrated the creativity and ingenuity of area students. The indoor parade, held in partnership with Lawrence Technological University, featured fully autonomous robot floats programmed by teams of students in grades four through 12. The goal of the event is to spark students' interest in science, engineering, technology and math, organizers said. MCC now offers a robotics programming certificate training program.



Leo Palmer watches some of the action going down at the robotics festival on Saturday.

Aibo the Robot Dog inspects the track during the parade.



Lanny Lesnau from Roeper School checks on the robots' perform-ance.

The Detroit News www.detnews.com

November 20, 2010 http://detnews.com/article/20101120/METRO03/11200377

Science, technology all part of Thanksgiving RoboParade

MICKI STEELE
The Detroit News

A steady flow of robotic floats made their way down a mock avenue Saturday at Macomb Community College for the 5th annual Thanksgiving RoboParade.

The free indoor event, sponsored by Lawrence Technological University, featured autonomous robots that followed a predetermined route, while detecting other automatons in front of them as they moved. The floats - all 34 of them -- were designed, constructed and programmed by Metro Detroit students in 4th through 12th grades.

The parade is part of the university's RoboFest program, created by C.J. Chung, which emphasizes science, technology, engineering and math (STEM) education.

"It's a world-first, world-unique event," Chung said.

This year the parade was moved to its new site at the community college to join "American Ingenuity," a two-month initiative that celebrates inventors, innovators and entrepreneurs such as Thomas Edison and Steve Wozniak.

In past parades, robots threw candy at the audience and played drums.

"They're very cute robots," Chung said, "and beautiful and intelligent."

msteele@detnews.com

313-222-2620

Lorenzo Cultural Center salutes American ingenuity

■ Choreographer Twyla Tharp, Apple co-founder Steve Wozniak highlight series.

Where would America be without dreamers, without those who envisioned a new way? The Lorenzo Cultural Center will celebrate great inventors and their innovations in the new program series, "American Ingenuity: Embracing the Freedom to Dream."

The series explores those past and present who have made their mark through invention, innovation and entrepreneurship. National and local creations and developments are featured, such as Vernors ginger ale and Ford's Rouge plant, and include presentations by famed choreographer Twyla Tharp and Apple co-founder Steve Wozniak.

"Integral to the story of our nation is the story of the pervasive drive of Americans to chart new territory and create new possibilities," said Linda Wells, vice president of Student and Community Relations at Macomb Community College. "The Lorenzo Cultural Center's focus on American ingenuity isn't just about the history of our inventors and innovators; it's also about the key role creativity and entrepreneurship has played in defining our nation and its importance in our future."

"American Ingenuity" runs Sept. 25 to Nov. 21 at the Lorenzo Cultural Center, located on Macomb Community College's Center Campus, at Hall and Garfield roads in Clinton Township. The exhibits are free and there is no charge for the majority of the presentations, though advance registration is required.

The exhibits on display will include "Kites to Kitty Hawk," which chronicles the kites and their inventors in the movement toward the goal of man-powered flight, and "Yesterday's Tomorrows," from the Smithsonian Institution Museum on Main Street Program, which showcases how Americans of the late 19th and early 20th centuries envisioned the future.

The series will also include the special luncheon panel discussion "Accelerating Southeast Michigan's Economy: Embracing Innovation and Change." The Nov. 4 luncheon will benefit the Macomb Presidential Scholarship.

A number of presentations will focus on great inventors of the past and present, including the programs "A Day in Thomas Edison's Lab" on Oct. 6; "Inventing Michigan: Inventors Known and Unknown" on Oct. 20; "Buckminster Fuller's Dymaxion House: Invention and Innovation" on Oct. 21; "Thomas Edison and Nikola Tesla: Inventors in Conflict" on Oct. 23; and "Stanford Ovshinsky: Sparking a Revolution" on Nov. 10.

Highlights of some of the other presentations include:

- Sept. 15: WWJ anchor Joe Donovan, who will talk about 90 years of innovation and change at the radio station.
- Sept. 29: Author and frequent guest on CNBC and MSNBC Scott Berkun looks at the myths of innovations.
- Oct. 1: "Enjoying the Ride: The Story of Harley-Davidson."
- Oct. 2: Frederick Allen, leadership editor for Forbes magazine and vice president for selection of the National Inventors Hall of Fame, will speak on "America: Land of Invention."
- Oct. 7: Sanders Confectionary.
- Oct. 14: Twyla Tharp explores the nature of creativity, focusing on themes of process verses product.
- Oct. 21: Macomb County native Butch Hartman, the cartoonist who created "The Fairly Oddparents" and "Danny Phantom" for Nickelodeon TV, will share his perspective on creativity.
- Oct. 24: "Detroit's Drink: The Vernors Story."
- Nov. 5: Deanne Bell, featured on Discovery Channel's "Smash Lab," shares her journey in becoming an engineer and woman in science, and will give the audience opportunities to come up with their own wacky solutions to some of the challenges faced on "Smash Lab."
- Nov. 12: Steve Wozniak shares his experiences as the co-founder of Apple, and discusses the importance of creativity and innovation in education in nurturing entrepreneurship.
- Nov. 20: The Thanksgiving RoboParade, organized by Lawrence Technological University, will feature robots made by area elementary, middle and high school students.

Tickets are required for the Oct. 14 Twyla Tharp and the Nov. 12 Steve Wozniak presentation, both of which begin at 7 p.m. Tickets for each event are $15, or $5 for seniors, students and military personnel. Tickets to the presentation that include a meet-and-greet opportunity from 5:30 to 6:30 p.m. are $30. Tickets for the Nov. 4 luncheon, "Accelerating Southeast Michigan's Economy: Embracing Innovation and Change," are $50. To purchase tickets for these events, call 286-2222 or visit www.MacombCenter.com. All other presentations during the series are free.

The Lorenzo Cultural Center is open from 10 a.m. to 4 p.m. Wednesday through Saturday, and 1 to 4 p.m. Sundays. Additional information about the center and the "American Ingenuity" program series is available at LorenzoCulturalCenter.com

Group visits are welcome during the series and may be arranged by calling 445-7348.

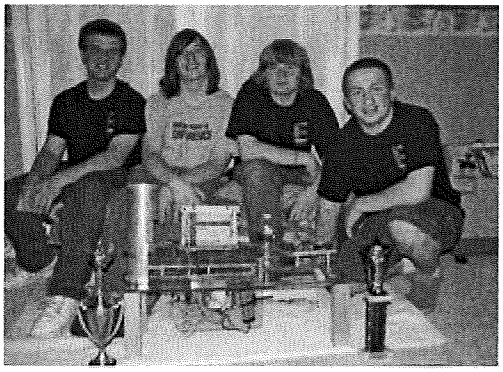
Hide photos

Journal Gazette

Published: May 6, 2010 3:00 a.m.

Elmhurst students built bot to separate recyclables

Frank Gray



Frank Gray | The Journal Gazette

Elmhurst High School sophomore Spencer Gordon, left, senior Ian Springer, sophomore Josh Ehinger and senior Anthony Hall created a recycling robot.

When Anthony Hall read in the paper that it cost more to recycle materials than the materials were worth, it made no sense to him.

It also set off the proverbial light bulb in his head.

Hall, a senior at Elmhurst High School and a member of the school's robotics club, proposed to fellow club members that they build a robot that would sort recyclables on the truck and deliver them to recycling centers neatly sorted.

In a world where people dream of robots that do housework and mix and deliver cocktails at parties, Hall's recycling idea might not have been too sexy, but it made sense, both to him and fellow club members.

That was only a couple of months ago. In the eight or 10 weeks since they tackled the project, the team has come up with a working model, pieced together out of – what else – recycled materials.

The idea has attracted attention, too. The team, which enters various robotics competitions during the school year, hauled their contraption to a qualifying competition of Robofest, sponsored by Lawrence Technical University in Southfield, Mich.

The group finished first in the qualifying competition and finished second in regional competition.

On Saturday, they'll be hauling their gadget to the world championships, also held in Michigan, where they will compete against fellow robot makers from all over the world.

To be honest, the robot isn't ready to be loaded on the back of a big recycling truck just yet. And four days before the contest, it still has bugs to be worked out.

Some parts don't move exactly as they should every time. But that's no reason to panic. Those are just problems, club members said.

When they know what a problem is, all they have to do is find a solution. That's what engineering is, they said. And they do still have two days before the contest to come up with answers. They're accustomed to the pressure.

The crude prototype is actually quite ingenious. Recyclables are fed down a tube where infrared, magnetic and ultrasonic sensors determine whether the item is plastic or metal.

Plastics are scooted down a hole in the platform. A magnetic sensor determines whether cans are aluminum or steel.

If a can is steel, a door pops open and the can is kicked out the side.

Aluminum cans shoot down a conveyor where a curved door pops open and the cans fall into a little gadget that crushes them.

The team considered including a glass recycling mechanism but decided, for the contest at least, it wouldn't be a good idea to have a robot producing mounds of broken glass.

The machine, they say, is the perfect solution to defray recycling costs.

Team members contacted a company involved in recycling and said they were told the company employs up to 25 people at $25 an hour to sort materials. No wonder recycling isn't profitable.

A robot like theirs would sort materials on the truck as recyclables are picked up, eliminating the need for expensive labor and protecting people from the hazards of sorting materials themselves – cuts from broken glass, exposure to unhealthy materials and so on.

The only step people would have to do is unload containers of presorted materials after the truck has finished its rounds.

"We're taking a human problem and creating a robotic solution," one team member said.

If the team were to win in the world competition, members would each get a $2,000-a-year scholarship to Lawrence Technical.

What really excites them is that developmental grants will be available if their robot impresses judges enough.

"Even if we don't win, we'd like to see it get into the recycling industry," Hall said.

What's really fascinating is that as the cost of recycling causes some to wonder whether it is even worth the effort, a handful of teenagers fiddling with borrowed and scavenged equipment seems to be among the few looking for an answer.

Frank Gray has held positions as a reporter and editor at The Journal Gazette since 1982 and has been writing a column on local topics since 1998. His column is published Sunday, Tuesday and Thursday. He can be reached by phone at 461-8376, by fax at 461-8893, or by e-mail at fgray@jg.net.

TARDEC Sponsors Competition For Student Robotics at MCC Event

CONTINUED FROM PAGE 1

Defense and especially TARDEC."

Meanwhile, at RET Week, groups of students from around Michigan gathered at the Macomb Community College Sports & Expo Center in Warren to hear from leading experts, see demonstrations of current robots and participate in a robot-building challenge.

The course from the popular 2010 FIRST (For Inspiration and Recognition of Science and Technology) competition was also on display for students to engage.

The FIRST competition was begun by industrial pioneer Dean Kamen years ago.

In the FIRST robotics category, high school student teams had six weeks to build robots from kits containing hundreds of parts. The robots then competed for awards in "Breakaway," a soccer-like game that required them to climb obstacles to score goals against their opponents.

TARDEC is actually the state's largest supporter of the FIRST Robotics initiative.

"Events like RET Week and FIRST are important to TARDEC and our nation because they help lay the groundwork for the future of Michigan's engineering and technical workforce," Overholt added.

TARDEC had two different pavilions set up for participating students to run actual Army field robots and the line to each one was the proverbial "mile long."

The Army has approximately 8,000 robots currently fielded in conflict areas, such as Afghanistan and Iraq, today.

According to the blog Automaton, the robot population on earth now stands at approximately 8.6 million units.

That figure includes 1.3 million industrial robots and 7.3 million service robots, serving manufacturing, government, domestic and military applications.

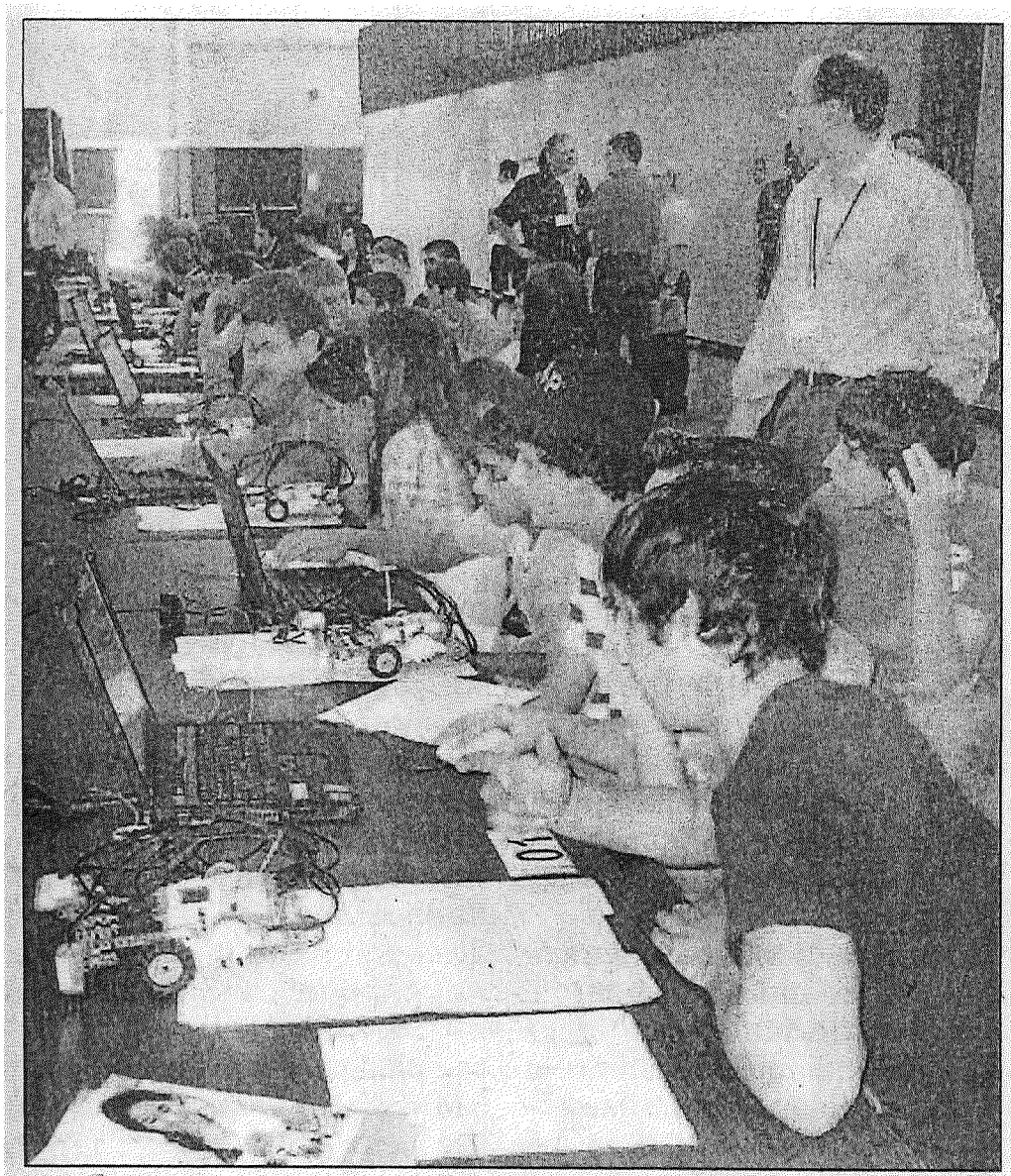


PHOTO: GERALD SCOTT

HIGH SCHOOL ***students program Lego-based robots at the TARDEC-sponsored event at Macomb College in Warren.***

TARDEC Sponsors Competition For Student Robotics at MCC Event

By Gerald Scott
Staff Reporter

If you don't believe that the 21st century is the "robotics century," just check out the recent national headlines.

In New York City, the police department there used a robot to defuse that smoking Nissan SUV that a would-be terrorist parked in Times Square to cause mayhem.

Off the Louisiana coast, U.S. Navy and Coast Guard and oil industry submersibles, remotely piloted, have visited the leaking underwater oil well to assess damage and plan eco-recovery strategies.

And in California, NASA weather drones have been used to oversee wildfire and mudslide recovery activities.

What do these all have in common? At their heart, these all involve a form of industrial and field robotics.

Dr. Jim Overholt, U.S. Army TARDEC Senior Research Scientist in Robotics, was at a Macomb Community College high school robotics competition last week describing a new environment where all of society is embracing robotics – not just the military.

According to Overholt, the middle and senior high school students participating in the TARDEC-sponsored Robotics, Engineering and Technology Week (RET) activity will be surprised by the wide array of robotics careers available – including those with the Army, of course.

"The growth of robotics technology is going to have a significant impact on how people live, play and work worldwide," Overholt said.

"Part of that growth includes careers in robotics – one of the many occupational fields available within the Department of

CONTINUED ON PAGE 5

Detroit Auto Scene 5-10-10