

RESC Retired Engineers & Scientists of Cincinnati

Luncheon Meeting -Tuesday, November 17, 2009 @ 11:30 am
Evergreen Retirement Community
230 West Galbraith Road, Cincinnati, Ohio 45215
visit us at www.resc.org

HUMAN ASSISTING ROBOTS – THE NEXT GENERATION

By: Dr. Yasuhiro Ota

Project Manager for the Partner Robot Group
Toyota Motor Engineering & Manufacturing North America
Ohio P.E. CPD Credit



Peeking into the capability of tomorrow's robots reveals some amazing possibilities for a human-assisting partner robot in a ubiquitous society. The next generation of robot technology by Toyota will embody "kindness" and "intelligence" that will be able to assist with human activities in applications such as assistance, elderly care, manufacturing, and mobility. In part, this is expected to help Japan and other countries cope with its rapidly aging population.

The Toyota Group has been developing industrial robots since the 1970's and actively participates in development of the Intelligent Transport Systems "ITS". In 2005, Toyota introduced a partner robot with up to 31 degrees of freedom, an amazing step forward toward the Integrated Mobility Society "IMS".



Don't miss this fascinating presentation by Dr. Ota when he will cover the general R&D strategy, a brief technical insights review, along with implementation issues and the vision.

Dr. Yasuhiro Ota takes a leading role as Project Manager for the Partner Robot Group at Toyota Motor Engineering & Manufacturing North America (TEMA). He is responsible for managing advanced R&D activities and robot events and is also active as one of a few Japanese delegates for the ISO robot standardization committee.

An IEEE Senior Member, Dr. Ota received his B.S., M.S., and Ph.D. in electrical engineering from the University of Wyoming in 1991, 1993, and 1996, respectively. His main research interest lays in the area of humanoid robotics and analog CMOS VLSI implementations of artificial neural networks and fuzzy logic controllers.



ATTENTION ALL MEMBERS.

WE NEED VOLUNTEERS TO ASSIST IN THE OPERATION OF RESC

RESC is operated under the direction of a Control Board consisting of the officers and the various Committee Chairs. The Control Board meets at 9:30 am, the second Tuesday of the month, at Evergreen. These meetings are open to all RESC members. We especially encourage new members to attend and see if you wish to volunteer. The officers are elected by the members while the Control Board appoints the Committee chairs. For Ohio P.E.'s, the participation on the Control Board is worth 2 CPD credits per year. Please call Bob Haas if you can help. Ph: 859-331-2579

FUTURE PROGRAMS

December 15, 2009

CHRISTMAS PROGRAM

The Village Voices Choir

An adult volunteer choirs of 25 members harmonizing since 1958 brings a blend of traditional carols and today's holiday songs

January 19, 2010

NEW GUINEA

By: Edward Daley

New Guinea including the western half of the island, which is controlled by Indonesia

February 16, 2010

All-Electric Saturn Sky Conversion

Ohio P.E. CPD Credit

by Tim Wieck, Chief Engineer

AMP™ Advanced Mechanical Products, Inc.

The AMP delivers 150 miles per charge, and a complete "fill up" cost about the same as a gallon of gas. And best of all, it's great looking and fun to drive. The AMP, the true 100% electric car is here.

March 16, 2010

QUEEN CITY SQUARE PROJECT

Building the Future, Cincinnati's Tallest Building

Ohio P.E. CPD Credit

By: Bob Grace, Turner Construction

Mr. Grace is the project executive responsible for all operations on a given project including contract negotiations, client services, project quality, schedule and profitability. He currently holds this role on the \$250 million Great American Tower at Queen City Square, which will be Cincinnati's largest, tallest and "greenest" office building upon its 2011 completion.

April 20, 2010

Green Issues and Solutions

Ohio P.E. CPD Credit

By: Jack Clock CMfgE, Green Energy Ohio
GEO encourages environmentally and economically sustainable energy policies and practices in Ohio. GEO promotes renewable energy (solar, wind, biomass & low-impact hydro) statewide by acting as a clearinghouse to inform Ohioans on sustainable energy.

May 18, 2010

Global Warming

Ohio P.E. CPD Credit

by Dr. Marwan Nusair,

The data-driven view of global warming, where evidence of each source of climate change is considered and the various causes then compared, including human activity.

RESC 2009-2010 DUES ARE NOW PAST DUE

Please mail your \$15 dues check to our Treasurer, Zan Smith, either with this month's luncheon reservation or separately. Check's should be payable to "RESC". Remember, you may use your bank "Bill Pay" feature to pay electronically and save the postage cost.

"Note: SEP 2010 appears after your name in the address of the postal mailed Newsletter if our records indicate your dues have been paid as of Oct 27, 2009."



SAVE A STAMP, REGISTER FOR LUNCH ONLINE



For those of you who prefer to write a check and mail in your reservation form, nothing has changed. However, if you already pay your bills online using the "Bill-Pay" from your bank, you can use that same method to pay for your lunch reservations. It's a two step process.

First, go to the RESC web site www.resc.org and complete the "email reservation form" located on the home page. This will send your lunch reservation to the treasurer via email. You will receive an email conformation that your reservation was received.

Secondly, using your online bill-pay feature from your bank, send the lunch reservation money to the treasurer.

Send to: **Zan Smith - RESC; PO Box 30346; Cincinnati, OH 45230. That's it!**

LUNCHEON RESERVATIONS

Mail Label

Zan Smith

PO Box 30346

Cincinnati, OH 45230

**Please make sure ALL lunch reservations
are Received Prior to Friday, November 13th**

RESC Dues & Luncheon Reservation Form				MENU		
Make check payable to "RESC" and Mail to the Treasurer: ALL reservations must be received prior to Friday, Nov. 13th				Chicken Ala King served in puff pastry Fresh salad greens (choice of 2 dressings) Rolls and butter Homemade Fudge Brownies Beverages		
Date of luncheon		November 17, 2009				
LUNCH	Member name		\$13.00			
	Prospective Member		*\$13.00			
	Guest Name		\$13.00			
	Ohio P.E. Name**		\$13.00			
DUES ANNUAL	Membership		\$15.00			
	Golf		\$ 5.00			
*No charge when attending the first meeting and sponsored by a member			TOTAL		TREASURER Zan Smith PO Box 30346 Cincinnati, OH 45230 Ph: 513-520-4338	
Ohio P.E. Registration Number		CPD Certificate (Y/N)				
**Continuing education certificate included with the \$13.00 lunch cost.						
E-mail address						
Phone						

WELCOME NEW MEMBERS PACKAGE

A "Welcome New Members" package has been authored by the combined efforts of several board members. As a new member, if you have not received this package, please ask the treasurer at the check-in table for a copy. Information about us and our history along with extra forms are in the package.

AUDIO SYSTEM IMPROVED AT EVERGREEN

Lee Hite reports he has found a splitter and extra microphones at Evergreen to help provide more flexibility for multiple speakers. Also, he has constructed a stand for a sign that directs new guests to the dining room or auditorium as they enter the main door. Thanks for all your efforts, Lee.

BLUE ASH FIRM HAS CAR IN 100 MPG CONTEST

Our February 2010 RESC program presentation is from the electric car converter company, Advanced Mechanical Products (AMP) Inc. The Blue Ash firm is one of the finalists in the \$10 million Progressive Insurance Automotive X Prize to spur development of super fuel-efficient vehicles.

AMP personnel and one of its all-electric Saturn Sky roadsters were in New York City on Monday, October 19, for the official announcement of the 40-50 finalists in the competition next summer to find a mass-produced vehicle capable of the equivalent of 100 miles a gallon.



A total of 111 teams, ranging from established vehicle makers such as California's Tesla Motors to a group of Cornell University engineers using a variety of different fuels, originally qualified for the competition.

The company's initial strategy of converting Saturn Sky roadsters to its electric motor and battery system was dealt a setback in July when struggling General Motors Corp. stopped producing Skys at its Wilmington, Del., plant even before plans to sell Saturn to auto magnate Roger Penske unraveled.

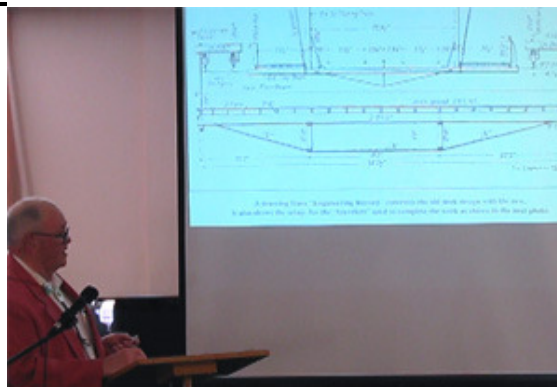
AMP had plans all along to expand its fleet to other vehicles. It has expanded its initial conversions to include the Pontiac Solstice, a sister platform of the Sky which is also out of production but was built in larger numbers. In November, AMP plans to introduce its first electric sports utility vehicle conversion, using an U.S. built SUV. AMP plans to have the first vehicles ready for delivery in November, 2009

October Program Review

REBUILDING THE J. A. ROEBLING SUSPENSION BRIDGE

Few American cities have a historic icon as distinctive as the John A. Roebling, Covington-Cincinnati Suspension Bridge. Mr. Stan Cohen, CE, P.E., presented a valuable viewpoint that explained how the bridge, built in 1863 for horse-drawn traffic, evolved to safely handle motorized street cars in 1895 and modern traffic in 2009.

Mr. Cohen presented an engineering study of the problems facing the Covington and Cincinnati Suspension Bridge investors in a fast-changing region, and explained the re-design that widened and improved access to the bridge, and provided strengthening to meet changing times and maintained traffic during construction.



GUEST APPEARANCE

from Mr. Johann Augustus Roebing*



Mr. J. A. Roebing*, (left) accompanied by the late Charles Swan, (right) manager of the Roebling wire works in Trenton, NJ, thanked the Greater Cincinnati Community for being good custodians of his bridge. His colorful account of details amplified the many aspects of his bridge design and its development over time.

*by Ashley Ford, long time volunteer and first person interpreter for J.A. Roebing from the Cincinnati History Museum at the Cincinnati Museum Center, Union Terminal.

Mr. Ford has authored a detailed timeline from 1806 thru 1992 for JOHN AUGUSTUS ROEBLING AND HIS "OHIO BRIDGE". Well worth the reading. It can be downloaded from the www.RESC.org web site. See the download section.

TOYOTA PARTNER ROBOT PERFORMS AT MAPLE KNOLL VILLAGE

Bob Haas and Lee Hite received a special invitation to the October 8 performance of the trumpet playing Toyota Partner Robot. It played a medley of tunes, waving to the audience as it walked out and then waved as it retreated when finished. We then adjourned to a room where our November speaker, Dr. Ota chaired a “focus group” meeting. Attendees included three MKV residents (engineers) and several MKV top management.



We were treated to a film of several other Toyota robots, the running robot (7 mph); a robot “band”- about eight that played various instruments such as a French horn; violin, trumpets, etc. There was a guide robot that could write its name on a paper and lead you around a building; a wheel chair robot that could navigate uneven terrain. A family of four was pictured sitting at a table being served by robots. Toyota is keenly interested in the opinions of seniors on having a robot assist in our daily lives. (“Partner” means the robot is your partner). Have your questions ready for November 17.



UNMANNED AERIAL RECONNAISSANCE

Five RESC members attended an October, 2009 IEEE presentation by a Lt. Colonel from WPAFB on the unmanned aircraft named “Global Hawk. HALE, A High Altitude Long Endurance Unmanned Aerial Reconnaissance System provides military commanders with high resolution, near real-time imagery of large geographic areas. The system significantly enhances the U.S. military’s ability to prevail in all types of operations from sensitive peacekeeping missions to full scale combat. Advanced technology sensors can look through adverse weather day or night. It will take off, fly its mission and land autonomously. Not small in size, it has a wing span of 131’ feet, a gross take-off weight of 32,500 lb and can fly at an altitude of 65,000 feet.



FAMOUS SCIENTIFIC QUOTES

"It requires a very unusual mind to undertake the analysis of the obvious. (Alfred North Whitehead)"

NOT SO FAMOUS SCIENTIFIC QUOTES Said what . . . ?

"But what ... is it good for? (Engineer at the Advanced Computing Systems Division of IBM, 1968, commenting on the microchip.)"

CORRECTION

We incorrectly stated in the October, 2009 newsletter that J. A. Roebling built two bridges in Ohio. The Covington-Cincinnati Suspension Bridge is the only Ohio Bridge associated with J. A. Roebling.

SMILE, YOU'RE ON RESC CAMERA . . . !

At your next RESC meeting don't be surprised to see someone point a camera at you and say “Smile”. No, we're not posting your picture on “You Tube™”, “facebook™” or “twitter™”. Instead, we are simply creating an “RESC Photo ID Log”.

Often we have asked ourselves, who is he or she? Maybe someone remembers their name but can't recall their face or visa versa. In an effort to know our members better we are creating this “Photo ID Log” for private use only. We will try to have a copy available for viewing at the check-in table.



RESC TOUR OF THE CINCINNATI OBSERVATORY IS TIMELY AS

32 MORE PLANETS ARE FOUND OUTSIDE OUR SOLAR SYSTEM

The new planet discoveries were made by European astronomers using the European Southern Observatory telescope. Six of the newly found planets are several times bigger than Earth, (super Earths). One was up to five times larger than Jupiter. Jupiter's mass is more than 300 times that of Earth. An attachment to the European telescope in Chile can detect wobbles in a star's movement that is an indication of the tug of a planet's gravity on the star. The number of planets discovered outside our solar system is now over 400.

RESC members and guests will tour the Observatory October 29, just too late to file a report for this Newsletter.

John Gilman reports his efforts to set up a November tour of the East Bend power plant failed. After the 9/11 attacks, tours were considered a security risk and were stopped. The Plant Manager did attempt to get special permission, but it was denied by Duke officials.

RESC NEWSLETTER

10266 Kingsport Drive
Cincinnati, OH 45241