### AKRON COUNCIL OF ENGINEERING AND SCIENTIFIC SOCIETIES 64th ANNUAL

### HONORS AND AWARDS BANQUET



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**Akron Physics Club** 



Thursday, November 3, 2011 Guy's Party Center

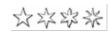
### 64<sup>th</sup> ANNUAL **ACESS HONORS & AWARDS BANQUET PROGRAM**

## Guy's Party Center November 3<sup>rd</sup>, 2011

Welcome, Opening Remarks	-Dr Missi Zender-Sakach President, ACESS
America the Beautiful	-Marissa Durbin, Twinsburg High School
Dinner	
Banquet Introductions     -ACESS Advisory Council	-Dr Missi Zender-Sakach
Speaker Introduction	-Dr Missi Zender-Sakach
• Speaker	- Christine Milcetich
Making a Point for Phy	sics Everyday
Outstanding High School Student	-Certificates presented by
Science / Math Awards	Dr Anoop Krishen / Brent Sisler
-Presentation of Certificates of Recognition to Outstanding Students from High Schools in Summit County	-Winners announced by Dr Missi Zender-Sakach / Ms Katrina Halasa
Honors & Awards	-Dr Lloyd Goettler President-Elect, ACESS
-Best of Show Akron Science & Technology Expo -Middle School	-Cambria Barkley National Inventors Hall of Fame School, Akron
-Best of Show Akron Science & Technology Expo -High School	-Ashley Nichols, Jaquea Latimer East Community Learning Center, Akron
-Best of Show Western Reserve District 5 Science Day	-Leat Perez Beaumont High School, Cleveland Heights
-ACESS / OMNOVA Teacher Grant Awards	-Deborah Geffken, Barber Community Learning Center -Betty Indriolo, St Sebastian School
-ACESS / ExxonMobil Teacher Grant Awards	-Margaret Busker-Postlethwait, Buchtel High School -Maginel Natof, Kenmore High School -Monique Binkley, Garfield High School -Josh Oldham, East Community Learning Center
-ACESS Teacher Grant Awards	-Elizabeth Terrill, Buchtel High School -David Hardwick, Hyre Middle School
-Summit County Teacher of the Year Award	-Shari Gardner, Nolley Elementary, Manchester Local Schools
-ExxonMobil / ACESS Scholarship Award	-Nicholas Tietz, Kent State University
-Bridgestone Americas / ACESS Scholarship Award	-Sunandini Chopra, The University of Akron



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Honors & Awards (continued)	-Dr Lloyd Goettler President-Elect, ACESS
-ACESS Outreach Partnership Presented by Ms Katrina Halasa, Akron Public Schools	-Akron Public Schools and UA-UARF
-OMNOVA / ACESS Scholarship Awards	-Andrew Buck, The University of Akron
Presented by Dr Ray Weinert, OMNOVA Solutions Inc	-Matthew Mechler, The University of Akron
	-Austin Raper, Mt Union College
	-Jeffrey Brown, Kent State University
-ACS Chemistry Scholarships	-Adam Miller, Hiram College
Presented by Dr Bryan Katzenmeyer, ACS	-Eun (Grace) Kim, The University of Akron
	-Allison Balloon, Malone University
	-Rachelle Miller, Walsh University
-Gene Easter Award for Exemplary High School	
Chemistry Teaching	-Heidi Lynn Gaunter, Hudson High School
Introduced by Dr Bryan Katzenmeyer, ACS	]
	-Sophie Grodsinsky, Carnegie Mellon University
-SPE Special Merit Scholarships	-Matthew Konderson, The Ohio State University
Presented by Dr Kevin Cavicchi, SPE	-Andrew Schaffer, The University of Akron
	-Meredith Lynne Scott, The Ohio State University
-SPE Ken Sharp Memorial Scholarship	-Brian Phillips, The Ohio State University
Presented by Dr Kevin Cavicchi, SPE	
-SPE Jim Steiner Memorial Scholarship	-Samantha Moskowitz, The Ohio State University
Presented by Dr Kevin Cavicchi, SPE -SPE Rubbermaid Scholarship	
Presented by Dr Kevin Cavicchi, SPE	-Andrew McBain, Purdue University
-SPE Goodyear Scholarship	IZ-dila Ai =
Presented by Dr Kevin Cavicchi, SPE	-Kathleen Angel, The University of Akron
	-Middle School
-SPE Wonders of Plastics Essay Contest	Todd Lensman, North Canton Middle School
Presented by Dr Kevin Cavicchi, SPE	-High School
	Cody Hufstetler, Hoover High School
-SPE Plastics Hall of Honor Inductee	-Edward Shen
Presented by Dr Kevin Cavicchi, SPE	201011
-SPE William C Zekan Memorial Award	-Professor Sadhan Jana, The University of Akron
Presented by Dr Kevin Cavicchi, SPE -SPE Pinnacle Gold Award	
Presented by Dr Kevin Cavicchi, SPE	-SPE Akron Section
Trocomod by Erricomir ourloan, or E	-Dr Michael B Dowell
	Student Chemistry Teacher, John Hay High School
-ACESS Award	Cleveland, Ohio
	Woodrow Wilson Foundation Fellow
	John Carroll University -Mr Robert W Handlos
-Distinguished Award of Council	Vice President of Research
2.53.1gaionea / mara e. Godinon	Bridgestone Americas
Closing Remarks	-Dr Missi Zender-Sakach





### 2011-2012 ACESS OFFICERS

President:	Missi Zender-Sakach, PhD ACS	Summit County Educational Service Center
President-Elect	Lloyd Goettler, PhD SPE	Retired
Treasurer:	Gregg Loesch, PE ASCE	City of Akron
Secretary:	Robert Erdman APC	Retired
<b>Executive Director:</b>	Anoop Krishen, PhD ACS	Retired

### **ACESS COMMITTEE CHAIRS**

<u>AUDIT</u>	<b>EDUCATION</b>
Walt Ruthenburg, AIChE	Ken Batcher, PhD, ACM
<b>BANQUET</b>	HONORS & AWARDS
Mike Buza, ASME	Marian Rousek, ACS
Bill Kessler, SME	
COMMUNICATIONS	STUDENT OUTREACH
Ken Batcher, PhD, ACM	Katrina Halasa, ACS
COMMUNITY RELATIONS	STRATEGIC PLANNING
Brent Sisler, PE, ADSPE, ASME	Anoop Krishen, PhD, ACS

## **ACESS DELEGATES**

ACM:	Ken Batcher, PhD, Delegate	<u>ASHR</u>	AE: Ryan Kopko, Chair Greg Drensky, Delegate Steve Piescuik, Delegate
ACS:	Bryan Katzenmeyer, PhD, Chair	ASME:	Andrew Brugger, Chair
	David Perry, PhD, Delegate		Mike Buza, Delegate
	Marian Rousek, Delegate		James Parish, PE, Delegate
ADSPE:	Mark VanAuken, PE, President	ASSE:	Erick Halverson, President
	Mark Elicker, PE, Delegate	<u> </u>	Howland Davis, Delegate
	Dwayne Groll, PE, Delegate		
<u> AIChE:</u>	Tom Flynn, Chair	<u>IEEE:</u>	Gary Lanier, PE, Chair
	Joe Feil, Delegate		Malissa Clingman, Delegate
	Walt Ruthenburg, Delegate		Robert Osterhout, Delegate
APC:	Ernst von Meerwall, President	SME:	Bill Kessler, Chair
	Dan Galehouse, Delegate	SIVIL.	Bill Marzich, PE, Delegate
	Robert Erdman, Delegate		biii Marzich, PE, Delegale
ASCE:	Brian Hanna DE Brosidant	SPE:	Lloyd Goettler, PhD, President
ASCE:	· · ·		David Schultz, Delegate
	Gregg Loesch, PE, Delegate		Joe Mattingly, Delegate



# AKRON COUNCIL OF ENGINEERING AND SCIENTIFIC SOCIETIES (ACESS)

The purpose of the Akron Council of Engineering and Scientific Societies (ACESS) is to enhance the technical environment in the Greater Akron area through coordination and cooperation with technical societies, industry and academia by:

- Providing a forum for action on matters of concern and interest to the technical and scientific communities.
- Serving as a focal point for contact between the technical community and the business community, academia and society at large.
- Promoting inter-society communication, professional interchange of ideas and coordination of society activities.
- Promoting interest in and encouraging careers in technical professions.

ACESS is a non-profit 501(c)(3) organization, incorporated under the laws of the State of Ohio, operating exclusively for scientific and educational purposes.

Societies eligible for council membership are professional technical organizations with acceptable ethical standards, which have, as their objectives, the advancement of the theory and practice of the science concerned. Societies include:

- Akron-Canton Section of the American Society of Civil Engineers (ASCE)
- Akron District Society of Professional Engineers (ADSPE)
- Akron Physics Club (APC)
- Akron Section of the American Chemical Society (ACS)
- Akron Section of the American Institute of Chemical Engineers (AIChE)
- Akron Section of the American Society of Mechanical Engineers (ASME)
- Akron Section of the Institute of Electrical and Electronic Engineers (IEEE)
- American Society of Heating, Refrigerating, & Air Conditioning Engineers (ASHRAE)
- American Society of Safety Engineers (ASSE)
- Association for Computing Machinery (ACM)
- Society of Manufacturing Engineers (SME)
- Society of Plastics Engineers (SPE)



### 2011-2012 ACESS ADVISORY COUNCIL

Dr Michael Askew	Director, Walter A Hoyt Jr Musculoskeletal Research
• Di Wichael Askew	Laboratory, Dept of Orthopaedic Surgery, Summa
• Dr Pai Chawdhury	Professor
<ul> <li>Dr Raj Chowdhury</li> </ul>	College of Technology, Kent State University
Mr Michael Ferncez, PE	Director, Transmission & Substation Services
- Wil Wilchael Ferricez, FE	FirstEnergy Service Company
Mr Robert Handelman	Chief Executive Officer
- Wil Robert Handelman	Chemstress Consultant Company
Dr William Landis	G Stafford Whitby Chair in Polymer Science
Ol William Landis	Dept of Polymer Science, The University of Akron
Dr George Newkome	Vice President for Research
- Di George Newkome	The University of Akron
Mr Clark Reed	Chief Technologist
- Wil Clark Reed	Lockheed Martin Corporation (retired)
Ms Mary Ann Roach	Community Affairs
- IVIS IVIATY ATTIT ROACIT	Bridgestone Americas Tire Operations
Dr Nick Triantafillopoulos	Manager & Fellow, Akron Technology Center
- Di Nick Hamamiopoulos	OMNOVA Solutions Inc

The ACESS Advisory Council consists of six or more business and/or technical leaders of the Greater Akron Area who are selected annually by the ACESS President. The purpose of the Advisory Council is to act in an advisory capacity to the ACESS Board of Directors.

Members of the Advisory Council are also available, as needed, to assist the ACESS Board of Directors in the accomplishment of ACESS objectives. The Board of Directors of ACESS expresses thanks to the Advisory Council members for their time and assistance.



# 2011 ACESS HONORS & AWARDS BANQUET COMMITTEE



Ken Batcher, PhD, ACM	Retired
Mike Buza, ASME	Committee Co-Chair, Retired
George Deisz, ACS	Retired
<ul> <li>Michael Dowell, PhD, ACS</li> </ul>	John Hay High School
Joseph Feil, AIChE	Retired
<ul> <li>Lloyd Goettler, PhD, SPE</li> </ul>	Retired
<ul> <li>Katrina Halasa, ACS</li> </ul>	Akron Public Schools
Bill Kessler, SME	Committee Co-Chair, Retired
<ul> <li>Anoop Krishen, PhD, ACS</li> </ul>	Retired
Gregg Loesch, PE, ASCE	City of Akron
Robert Osterhout, IEEE	Lanier Consulting, LLC
Mary Ann Roach	Bridgestone Americas Tire Operations
<ul> <li>Marian Rousek, ACS</li> </ul>	Retired
Brent Sisler, PE, ADSPE, ASME	The Babcock & Wilcox Company
<ul> <li>Missi Zender-Sakach, PhD, ACS</li> </ul>	Summit County Educational Service Center



# OUTSTANDING STUDENTS from High Schools in Summit County



Recognition is extended to the following math and science students from high schools in Summit County.

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SCHOOL	STUDENTS
<ul> <li>Akron Early College, Akron</li> </ul>	-Josephine Watson
	-Tyler Brown
<ul> <li>Buchtel High School, Akron</li> </ul>	-Jade Shropshire
	-Nevan Strobelt-McCann
<ul> <li>East High School, Akron</li> </ul>	-Tayler LeGrair
	-Matthew Schertz
<ul> <li>Ellet High School, Akron</li> </ul>	-Amanda Rowe
	-Tyler Sherrard
<ul> <li>Firestone High School, Akron</li> </ul>	-Sarah Meek
	-Evan Yetter
Garfield High School, Akron	-Kashmire Crislip
	-Dezmond Love
Kenmore High School, Akron	-Angelique Rackley
	-Jonathan Waszkiewicz
North High School, Akron	-Nirmala Ghimirey
	-Ryan Cantrell
Barberton High School	-Duska Maljkovic
-	-David Macko
Copley High School	-Olga Eliseeva
	-Michael Dugan
Coventry High School	-Allison Pulley
	-Wolfgang Davidson
Cuyahoga Falls High School	-Keenan Brooks
	-Logen Breehl
Green High School	-Amanda Pinheiro
	-Wesley Peng
Hudson High School	-Stephanie Lee
	-Greg Bulger
<ul> <li>Manchester High School</li> </ul>	-Heather Shaffer
	-Kyle Daily
Mogadore High School	-Lauren Brodie
	-Jack McDowall
Nordonia Hills High School	-Sara Andrasik
<u> </u>	-Nehal Patel
Norton High School	-Katlyn Walker
	-Collin Foltz
Revere High School	-Annie Sun
	-Edwin Zhang
Springfield High School	-Gabby Lessak
	-Dylan Harris



# OUTSTANDING STUDENTS from High Schools in Summit County



(continued)

Recognition is extended to the following math and science students from high schools in Summit County.

SCHOOL	STUDENTS
Stow-Munroe Falls High School	-Maia Marchetti
	-Robert Moorehead
Tallmadge High School	-Michael Strand
	-Peyton Patrick
<ul> <li>Twinsburg High School</li> </ul>	-Divya Naik
	-Evan Smith
Woodridge High School	-Kayla Saldat
	-Nate Tompkins
<ul> <li>Archbishop Hoban High School</li> </ul>	-Caren Dieglio
	-Paul Wischt
<ul> <li>Our Lady of the Elms High School</li> </ul>	-Catherine Culp
	-Alicia DuBois
<ul> <li>Walsh Jesuit High School</li> </ul>	-Elizabeth Reeves
	-Derek Allman
St Vincent St Mary High School	-Hannah Roberts
	-John Friess
Cuyahoga Valley Christian Academy	-Heather Alberson
	-William Van Bjuskirk



#### **SCIENCE FAIR WINNERS**

### **Best of Show Akron Science & Technology Expo**

<u>Middle School</u> - Cambria Barkley won the ACESS Award for the outstanding project at the Akron Science & Technology Expo held at the North High School on January 29, 2011. The title of her project was "Stealthy Shapes (To Make an Aircraft Invisible)". Cambria is currently in the 8<sup>th</sup> grade at the National Inventors Hall of Fame School in Akron, Ohio. Her science advisor was Ms Christine Justiss.

<u>High School</u> – Ashley Nichols and Jaquea Latimer won the ACESS Award for the outstanding project at the Akron Science & Technology Expo held at the North High School on January 29, 2011. The title of their project was "When Mold Attacks". Ashley and Jaquea are currently in the 11<sup>th</sup> grade at East Community Learning Center in Akron, Ohio. Their science advisor was Mr Josh Oldham.

### Best of Show 63<sup>rd</sup> Western Reserve District 5 Science Day

Leat Perez won the ACESS Award for the outstanding project at the 63<sup>rd</sup> Western Reserve District 5 Science Day held at The University of Akron on March 19, 2011. The title of her project was "Killer Immunoglobulin-like Receptors (KIR) Gene Polymorphism and BKV Infection in Post-transplant Kidney and Kidney/Pancreas Recipients". Leat is currently in the 12<sup>th</sup> grade at Beaumont High School, Cleveland Heights. Her science advisor was Mrs Gretchen Santo.



#### **ACESS GRANT AWARD WINNERS**

ACESS recognizes the need for students to carry out experiments and projects to further math or science education at their school. One-time grants of \$500 are being awarded to six winners based on their grant applications.

#### Family Polymer Science Night Project

Sponsored by ACESS / OMNOVA

Deborah Geffken Barber Community Learning Center, Akron

#### Hang on Sloopy II: A Natural Balance in the Buckeye State II

Sponsored by ACESS

Elizabeth Terrill Buchtel High School, Akron

#### Where Does our Water Go?

Sponsored by ACESS / ExxonMobil

Margaret Busker-Postlethwait Buchtel High School, Akron

#### Field Trip to Math & Physics Day at Cedar Point

Sponsored by ACESS / ExxonMobil

Maginel Natof Kenmore High School, Akron

#### **Continuing Forensic Explorations!**

Sponsored by ACESS / ExxonMobil

Monique Binkley Garfield High School, Akron

#### 2011 National Chemistry Week - Chemistry & Health

Sponsored by ACESS / OMNOVA

Betty Indriolo St Sebastian School, Akron

#### **Forensic**

Sponsored by ACESS / ExxonMobil

Josh Oldham East Community Learning Center, Akron

#### Hyre Nature Study Area

Sponsored by ACESS

David Hardwick Hyre Middle School, Akron



#### SUMMIT COUNTY TEACHER OF THE YEAR AWARD

The Summit County Educational Service Center holds an annual event to honor teachers that have made long-term contributions to education. \$500 is awarded by ACESS to the Summit County Teacher of the Year to spend on classroom materials and enrichment experiments.

# Shari Gardner Nolley Elementary School, Manchester Local Schools 3<sup>rd</sup> Grade Teacher



#### ExxonMobil / ACESS SCHOLARSHIP AWARD

One \$1,000 scholarship is awarded each year to a deserving student at either The University of Akron or Kent State University. To be eligible, the student must be a junior and working toward a four-year degree in a technical area that is related to at least one of the areas represented by ACESS member societies.

Nicholas Tietz, Computer Science, Kent State University

#### **BRIDGESTONE AMERICAS / ACESS SCHOLARSHIP AWARD**

One \$1,000 scholarship is awarded this year to a student at The University of Akron.

Sunandini Chopra, Mechanical-Polymer Engineering, The University of Akron

# ACESS OUTREACH PARTNERSHIP APS and UA-UARF

The University of Akron Research Foundation (UARF) and The University of Akron (UA) were the recipients of a grant to participate in the creation of the High Institute for Elastomer Industries (HIEI) in Yanbu, Saudi Arabia. Akron Public Schools (APS) and UA-UARF are delighted to have entered in a partnership called "Train the Trainer" Program.

#### **PARTICIPANTS**

Arab Sadeq S Abuaarab with Joe DeAngelis at Ellet High School
Saad Baghdad A Almotari with Karen Rummell at Garfield High School
Mansour Abdulhamid A Alyas with Angela Demchak at Garfield High School
Moataz Abulaiz K Alhaddad with Bill Alkire at North High School
Ahmed Abdulrahman H Aleid with Steve Remenaric at Ellet High School
Talal Mohammed F Namankani with Steve Remenaric at Ellet High School
Ayoub Ibrahim A Awaji with Penny Porter at Buchtel High School

#### **INSTRUCTORS**

Dr Harold Wilcox Dr Peter Richter Dr Mohamed Hassan Dr Victor Monroy

#### OMNOVA / ACESS SCHOLARSHIP AWARD WINNERS

Two \$1,500 scholarships are awarded this year to students at The University of Akron by Dr Ray Weinert, Technology Manager & Fellow, OMNOVA Solutions Inc.



Andrew Bruck, Mechanical-Polymer Engineering
Matthew Mechler, Chemistry



### **ACS CHEMISTRY SCHOLARSHIPS**



Each year the Akron Section of the American Chemical Society (ACS) provides six \$500 scholarships to outstanding junior Chemistry majors in nearby colleges and universities. This year's winners are:

Mt Union College	Kent State University
Austin Raper	Jeffrey Brown
Dr Jeff Draves, Advisor	Dr Nicole Brasch, Advisor
Hiram College	The University of Akron
Adam Miller	Eun (Grace) Kim
Dr Carol Shreiner, Advisor	Dr David Modarelli, Advisor
Malone University	Walsh University
Allison Balloon	Rachelle Miller
Dr Jeffrey Goff, Advisor	Dr Neil Walsh, Advisor







# ACS 2011 GENE EASTER AWARD for EXEMPLARY HIGH SCHOOL CHEMISTRY TEACHING

#### Heidi Lynn Gauntner, Hudson High School

The Gene Easter Award was established in 1995 by the Akron Section of the American Chemical Society to recognize an outstanding chemistry teacher at the high school level who combines innovative and relevant methods of presenting chemistry subjects in order to illustrate the importance of chemistry in our everyday lives. The award is named after Gene Easter who taught chemistry at Streetsboro High School.



# STEM SHOWCASE (Science, Technology, Engineering, Math)



Colleges, Universities and Organizations represented at the ACESS Honors & Awards Banquet

College Advantage – Ohio Tuition Trust Authority
Hiram College
Kent State University
Malone University
The University of Akron – Akron Global Polymer Academy
The University of Akron – STEM Program
Western Michigan University



#### **SPE SCHOLARSHIPS**



Each year the Society of Plastics Engineers (SPE) awards scholarships to deserving students. This year's winners are:

#### **Special Merit Scholarships**

Sophie Grodsinsky, Carnegie Mellon University Matthew Konderson, The Ohio State University Andrew Schaffer, The University of Akron Meredith Lynne Scott, The Ohio State University

# Ken Sharp Memorial Scholarship Brian Phillips, The Ohio State University

# Jim Steiner Memorial Scholarship Samantha Moskowitz, The Ohio State University

# Rubbermaid Scholarship Andrew McBain, Purdue University

# Goodyear Scholarship Kathleen Angel, The University of Akron



# SPE Akron Section WONDERS OF PLASTIC ESSAY CONTEST



#### Middle School

Todd Lensman, 8<sup>th</sup> grade, North Canton Middle School "Plastics: A Brief History" Teacher – Valerie Heban

#### High School

Cody Hufstetler, 11<sup>th</sup> grade, Hoover High School "Printing in Plastic" Teacher – Steven Wood





**Edward Shen** for his contributions to the Thermoplastic Elastomer Industry during his work at Monsanto and Advanced Elastomer Systems and his involvement in the SPE Thermoplastics Elastomers Special Interest Group

#### **SPE WILLIAM C ZEKAN MEMORIAL AWARD**

**Professor Sadham Jana**, Department of Polymer Engineering, The University of Akron for his involvement and leadership with the Akron SPE Board of Directors, Akron SPE Student Chapter, and TOPCON meeting on electronic displays

#### SPE PINNACLE GOLD AWARD

**Akron Section** 

The Pinnacle program was established in 2005 to recognize Sections and Divisions that successfully create and deliver member value. Sections and Divisions report on these activities in the area of organization, technical programming, and communication.

#### THE ACESS AWARD

The ACESS Award is presented annually to an individual who has made an outstanding contribution to the Akron Council of Engineering & Scientific Societies (ACESS). The 2011 recipient of this award is Dr Michael B Dowell.

Michael B Dowell has managed marketing and development of new products for companies in the chemical, electronics and advanced energy industries for many years. He has been involved in plant expansions, joint ventures, acquisitions and distribution alliances in 15 countries, and has worked with many governmental and intergovernmental agencies. Dr Dowell has started up six US companies, three of which have foreign partners. He has diligently worked with ACESS for the past five years.



Dr Dowell holds a BS degree from Fordham University and a PhD from Penn State, both in chemistry, and a Marketing Manager's

Certificate from Columbia University Graduate School of Business. Currently he is a Woodrow Wilson Foundation Fellow at John Carroll University and is doing his student teaching in Chemistry at Early College at John Hay High School in Cleveland. When he completes his student teaching and has his Master's from John Carroll, he hopes to be a high school chemistry teacher.

#### THE DISTINGUISHED AWARD OF COUNCIL

The Distinguished Award of Council is presented annually to an outstanding citizen for his/her technical and managerial achievements and involvement in civic activities. The 2011 recipient of this award is Robert (Bob) W Handlos, Vice President - Research for Bridgestone Americas Tire Operations.



Bob has 30 years of experience in the tire and rubber industry, including 25 years with the Bridgestone Americas family of companies. His work experience includes such varied areas as materials development, product development, strategic planning and race tire manufacturing. He has a Bachelor of Science degree in chemical engineering from the University of Pittsburgh and a Master of Business Administration degree from Kent State University. Bob led the team that made the recommendation to build a new technical center for Bridgestone Americas in Akron, which will be completed in the spring of 2012.

Bob is an advocate of education, especially public education. He was a member of the Lake Local Board of Education for six years, including three as President. He is a member of the Bridgestone Americas Trust Fund Committee, Northern Ohio Golf Charities Foundation Board, United Way Board, a graduate of Leadership Akron and is a 2011 Pink Tie Guy for the Susan G. Komen organization.

#### **BANQUET SPEAKER**

#### **CHRISTINE MILCETICH**

#### "Making a Point for Physics Everyday"

Christine Milcetich holds a Bachelor of Science degree from Walsh University, North Canton, Ohio and a Master of Science in Education from The University of Akron. She is a National Board Certified Teacher (NBCT) and has been awarded the Presidential Award of Excellence in Mathematics & Science Teaching (PAEMST). Christine is currently the Physics teacher and Planetarium Director at Firestone High School. She is an active member in the American Association of Physics Teachers, the Association for Supervision & Curriculum Development, Phi Chapter of Delta Kappa Gamma, the National Science Teachers Association, the Science Education Council of Ohio, and Phi Delta Kappa. Christine volunteers as an Akron Public Schools Science Fair judge, is an apheresis donor at Mercy Medical Center in Canton, Ohio and is the Chair for the Football Hall of Fame Kickoff Sunday race.

Where is physics? Physics is everywhere! Most of the things we use in our modern technological society are based on a few, basic concepts of Physics. Everything in our everyday lives can be accounted for by a handful of particles (electrons, protons, and neutrons) interacting via forces (nuclear forces, gravity, and electromagnetism) subject to the basic rules of quantum mechanics and general relativity. That is a remarkably short list of ingredients to account for all the marvelous diversity of things we see in the world! Physics describes natural laws with a set of concepts.



Christine explores several areas where physics is seen in our everyday lives from our childhood playground experience to watching a cement block being broken while the teacher reclines on a bed of nails. We experience things going on around us all the time in our complex world...leaves are



moving in the wind, the sun is shining, the stars are twinkling, light bulbs are glowing, cars are moving, computer printers are printing, people are walking, streams are flowing, etc. When we examine these actions, questions arise. Physics is an inquiry into these questions and how the world works, from the most basic to the most highly complicated. At root, physics is all about getting conscious about our world.

The things going on around us can be described by observations and measurements of each action which then can be translated into mathematical models. Christine examines the concepts of physics in a child on a swing (force/resonance/amplitude), in bridges (compression/tension), in a shuttle launch (time delay between the speed of light and the speed of sound), in cell phones and iPads (electricity/EMS), in massing a car projectile (coefficient of friction, forces, 2D motion), in a balancing bird (center of mass/balancing forces), and in a bed of nails. The



fundamental concepts of motion, force, energy, thermodynamics, electricity and magnetism define all of these actions that we observe. They are the physical laws or principles of Physics.



OMNOVA Solutions Foundation's (OSF) highest priority is education. OSF wants to help motivate our future leaders and workers to gain the desire, knowledge and work-readiness skills required for corporations like theirs. The Foundation offers two \$1500 scholarships and two \$500 teacher grants.



# **Bridgestone Americas**

TRUST FUND

# **Bridgestone**

The Bridgestone Americas Trust Fund is pleased to support ACESS in their efforts to promote careers in science and engineering. The Trust Fund offers one \$1,000 scholarship.



# ExonMobil Chemical

A special thanks to ExxonMobil Chemical Company for their generous gift to support the activities of ACESS! ExxonMobil Chemical sponsors one \$1,000 scholarship and four \$500 teacher grants.

# The Akron Council of Engineering & Scientific Societies gratefully acknowledges the financial support of the following organizations:



Akrochem Corporation
Akron Section American Chemical Society
Akron Section American Society of Mechanical Engineers
Akron Section Society of Plastics Engineers
Babcock & Wilcox Power Generation Group, Inc
Bridgestone Americas Trust Fund
Chemstress Consultant Company
Eagle Elastomer Inc
ExxonMobil Chemical Company
Hottle and Associates
Lockheed Martin Corporation
OMNOVA Solutions Foundation
Society of Manufacturing Engineers
The University of Akron Research Foundation