

HONOR SEMINARS

of
Metropolitan
Dayton

*2007 - 2008
Forty Sixth
Annual Report*

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of
Metropolitan Dayton, Inc.***

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Honor Seminars of Metropolitan Dayton, Inc.
140 East Monument Avenue

Dayton, OH 45402

FOREWORD

The Honor Seminars of Metropolitan Dayton was organized in 1962 as a non-profit corporation having as its goal the function of providing for outstanding area high school students the opportunity to learn from and interact with highly qualified professional people from the greater Dayton area. To accomplish this goal, two separate seminar programs are established each year for selected juniors and seniors as an extracurricular activity. Effective use of the community resources is thereby utilized to develop the student who has demonstrated the desire and ability for high achievement. These seminars have been directed toward the understanding and appreciation of advances in modern sciences, technologies, and the humanities. They are meant to provide enrichment to the students' background, to aid in the development of independent thinking and the stimulation of individual creativity, and to lend assistance in defining personal career objectives. This annual report represents completion of 46 years of service to the community.

In 1973, the Honor Seminars of Metropolitan Dayton, Inc. joined the Affiliate Societies Council of the Engineering and Science Foundation of Dayton to provide Honor Seminars with a permanent headquarters address.

Seminar programs in recent years have been directed toward increased participation of the students and have emphasized discussions of the topics with seminar leaders. This mode of operation has helped to make the contents of the seminars meaningful to the students and to satisfy their intellectual curiosities. Many of the seminars are conducted within the working environments of the individual seminar leaders, permitting them to use a variety of demonstration materials pertinent to their profession and permitting the students to acquire deeper insights into the functions performed by these professionals in today's society. Honor Seminars is an educational program established in the spirit of voluntary participation. All operations of the program are conducted without compensation or honoraria for the service of the individuals. The continued success of the Honor Seminars program is the direct result of the strength of the seminar leaders who constitute the faculty and the foresight of the officers and members of the Board of Directors. These professional individuals give gladly of their time and efforts to bring their knowledge and experience in a wide variety of fields. Their individual contributions are pointed out in this

annual report of the activities for 2007-2008. Students of exceptional ability and promise are selected on an impartial basis from the public and private schools of the greater Dayton metropolitan area. The Principals and Counselors of these schools prior to the student's junior year provide nominations of candidates. An experienced Admissions Committee determines the selection of students from those nominated by the participating schools. Those students who displayed and maintained through their weekly attendance the very highest level of interest, initiative, talent, and scholarly activity are listed in this report of activities.

This year, as in the past, the program for the junior students was directed toward the basic sciences and mathematics in preparation for the senior program. Building on the junior year base, the senior program involves more applications technology and provides the senior students with opportunities to gain insight into work being performed at the leading edge of scientific endeavor.

The Honor Seminars of Metropolitan Dayton, Inc., serves a unique and fundamental need for the Montgomery-Greene County community. The cooperation and backing of the companies and institutions with which the seminar leaders and board members are affiliated have been substantial. The generous financial support provided by the many participating organizations in this community is appreciated and indicative of their desire to maintain this exceptional opportunity for our outstanding high school students. The Dayton Area Chamber of Commerce recognizes The Honor Seminars of Metropolitan Dayton, Inc., as an ongoing benefit to the community which merits contributory support from sponsoring organizations.

Senior Participants 2007 – 2008

Alter High School

John R. Kroger 62 Bizzell Ave
Dayton 45459

Craig M. Hoying 501 North Claridge Dr.
Kettering 45429

Ramsey Z. Hidmi 4959 Walnut Walk
Kettering 45429

Bellbrook High School

Paul M. Cary 4350 Toll Gate Lane
Bellbrook 45305

Alexander E. Wilson 2668 River Bluff Dr
Spring Valley 45370

Brookville

Kevin S. Rutherford 10220 Amity Rd.
Brookville 45309

Megan E. Norbury 4966 Preble County Line Rd.
Brookville 45309

Brandon S. Myers 9331 Pleasant Plain Rd.
Brookville 45309

Laura M. Bendula 8752 Pleasant Plain Rd.
Brookville 45309

Carroll High School

Jonathon M. McArdle 1788 Grand Portage Trail
Xenia 45385

Travis A. Busbee 3858 Walnut Grove Lane
Beavercreek 45440

John E. Minardi 3752 Silver Leaf Drive
Beavercreek 45430

John L. Luckoski 3845 S. Ashleaf Lane
Beavercreek 45440

Benjamin L. Heider 743 Woodsprings Ct.
Beavercreek 45430

Victor J. Zimmer 2930 Shinicocks Lane Apt. H
Fairborn 45324

Matthew E. Kowal 234 Shelford Way
Beavercreek 45440

Centerville High School

Zoe C. Hesp 1075 Ambridge Rd.
Dayton 45459

SoRi K. Jang 514 Stonington Circle
Dayton 45458

Fairborn High School

Kristain M. Rigney 3624 Winterwood Dr.
Dayton 45424

Kettering-Fairmont High School

Daniel E. Watson 4400 Fernmont St.
Kettering 45440

Miamisburg High School

Jennifer T. Grilliot 415 S. Fourth St.
Miamisburg 45342

Vandalia Butler High School

Michael B. Garison 1110 Wilhelmina Dr.
Vandalia 45377

James E. Elliott 120 Timberwind Lane
Vandalia 45377

Abigail T. Lang 7540 Dog Leg Rd.
Dayton 45414

Stephanie M. Fox 4651 Old Springfield Rd.
Vandalia 45377

Seminars of the Senior Participants

Dr. Jeff Baur AFRL	<i>Smart Structures</i>
Mr. Chris Hemmelgarn Cornerstone Research	<i>Morphing</i>
Dr. John Raquet AFIT	<i>GPS</i>
Ms. Diana Carlin AFRL	<i>Composites in Aerospace Applications</i>
Dr. Peter Raeth Ball Aerospace & Technology	<i>Computer Engineering</i>
Governor Robert Taft State of Ohio	<i>Politics</i>
Ms. Cheri Adams Boonshoft Museum	<i>Astronomy</i>
Dr. Nancy Kelley-Loughnane WPAFB	<i>Biotechnology in Aerospace Applications</i>
Dr. Dan Goldman UD – Geology	<i>Science versus Paranormal</i>
Dr. Sarah Tebbens WSU - Geology	<i>Natural Disasters</i>
Dr. Marc Polanka WPAFB	<i>Jet Engines</i>
Dr. Mark Goltz AFIT	<i>Creative Techniques to Cleanup Ground Water</i>
Dr. Yiling Hong UD Biology	<i>Stem Cells</i>
Dr. Paul Fleitz WPAFB	<i>Lasers</i>
Bro. Ray Fitz UD	<i>Urban Development</i>
Dr. James Apesos Private Practice	<i>Plastic Surgery</i>

Christopher Wennerstom
Kettering Medical Center

Luis Gonzalez, Attorney
Sinclair Community College

Dr. Marianne Stanley
UD - Philosophy

Dr. William Wiesel
AFIT

Dr. Rubin Battino
WSU

Radiation Oncology

Professional Ethics

Philosophy/Theology

Space Travel

***FUN Approach to
Thermodynamics***

Junior Participants 2007 – 2008

Alter High School

Casey Miller 5990 Munger Road
Dayton 45459
Cameron Smith 1135 Ridgeway Road
Dayton 45419

Bellbrook High School

Kevin Scherer 510 Silvercrest Terrace
Dayton 45440
Dominique Smith 1700 Garry Drive
Bellbrook 45305
Julia Woodruff 2029 N Sheffield Drive
Bellbrook 45305

Brookville

Alex Ewers 421 S Wolfcreek Pike
Brookville 45309
Kathleen Thomas 10913 Providence Road
Brookville 45309
Carolyn Wenner 8688 Wengerlawn Road
Brookville 45309

Carroll High School

Matthew Curliss 3825 Rosecliff Drive
Beavercreek 45440

Centerville High School

Sean Behm 6360 Luntshire Court
Centerville 45459

Chaminade-Julienne High School

Sarah Krug 410 Allenhurst Avenue
Vandalia 45377

Greeneview High School

Evan Muller 5082 Spahr
Jamestown 45335

Jen Talbott 41 W Washington Street
Jamestown 45335

Kettering-Fairmont High School

Christopher Kolasa 444 Glenridge Road
Kettering 45429

Miamisburg High School

Michael Fontaine 9714 Pellston Way
Miamisburg 45342
Nathan Hoagland 1807 Lord Fitzwalter Drive
Miamisburg 45342
Caitlin James 4992 Medlar Road
Miamisburg 45342

Northmont High School

Stephanie Dohner 702 Heather Street
Englewood 45322
Scott Holdgreve 8480 Crestway Drive
Clayton 45315

Oakwood High School

Claire Roess 140 Patterson Road
Dayton 45419
Lauren Sobol 130 Wisteria Drive
Dayton 45419

Stebbins High School

Lee Christophers 3825 Berrywood Drive
Dayton 45424

Valley View High School

Michael Boyd 12334 Havermale Road
Farmersville 45325

Vandalia Butler High School

Jessica Blaza 7045 Meeker Commons Lane
Dayton 45414
Adam Fischer 3541 Little York Road
Dayton 45414

Matt Lang 7540 Dog Leg Road
Dayton 45414

Robert Marshall 7199 Haer Drive
Dayton 45414

Xenia High School

Kaitlin Duffield 1344 Crescent Court
Xenia 45385

Casey Spinks 1061 Union Road
Xenia 45385

J. Chika Morah 1384 Regency Dr. N.
Xenia 45385

Yellow Springs High School

Ben Miller-Jacobson 1117 Livermore Street
Yellow Springs 45387

Seminars of the Junior Participants

Dr. Peter Raeth Ball Aerospace & Tech. Corp.	<i>Confessions of a Computer Engineer</i>
Dr. Larry Dosser Mound Laser & Photonics	<i>Lasers, What are they ? What do They do?</i>
Dr. Donald Geiger University of Dayton	<i>The Green Revolution- Blessing or Curse?</i>
Prof. Ramana Grandhi Wright State University	<i>Modeling and Simulation Tools for Engineers</i>
Ms. Cheri Adams Boonshoft Museum	<i>The Explorers, A Star Navigation Journey</i>
Dr. Richard Raines AFIT	<i>Cyberspace: Today's Challenges and Tomorrow's Ideas</i>
Dr. Douglas Dudis AFRL/ Materials Directorate	<i>An Outlook on Power and Energy</i>
Dr. John Maguire AFRL/ Materials Directorate	<i>It is a Small World After all, Nanotechnology</i>
Dr. Mitch Wolf Wright State University	<i>Future Aerospace Systems</i>
Prof. Bradley Liebst AFIT	<i>The History of Flight and Aerospace Engineering</i>
Prof. Allen Burton Wright State University	<i>Assessing Aquatic Ecosystems: Issues and Approaches</i>
Commissioner Nan Whaley City of Dayton	<i>Outlook for Careers and Life in the Dayton Region</i>
Lt. Col. Duncan Dversdall AFRL/ Materials Directorate	<i>Opportunities at AFRL</i>
Dr. Maury Docton P& G Pet Care	<i>Pet Nutrition</i>
Dr. Joseph Haus University of Dayton	<i>Optical Meta-materials from Perfect Lenses to Cloaking</i>

Dr. Thomas Hangartner
Wright State University

***Radiation; the Good, the Bad
and the Ugly***

Dr. Edwards Watson
AFRL

Seeing The Light

Dr. Rubin Battino
Wright State University

***A FUN Approach to
Thermodynamics***

Prof. Edward Haas
Wright State University

Huey Long and the Dictators

Mayor McLin
City of Dayton

***The Future of the Dayton
Region – a Vision for
Cooperation***

Leo Finkelstein
Wright State University

Paradigms and People

Dr. Alan Garscadden
AFRL/Propulsion

***Introduction to Propulsion and
Power***

Dr. David Heim
AFRL/Sensors

***The Honor Seminars: a
Reflection After 30 years***

Dean Charles Taylor
Wright State University

***Relations Between Art and
Mathematics***

Dr. Charles Larkowski
Wright State University

***Music/Mathematics
Relationship***

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Mr. Ambrose B. Nutt	<i>Wilberforce U., U. of Dayton (Ret)</i>
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CONTRIBUTORS

Companies and individuals throughout the Greater Dayton Area provide generous support to the Honor Seminars of Metropolitan Dayton, Incorporated. Following is a list of those donors, who have given their permission to be listed in this report, many have donated anonymously.

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The ancient Greek art in our corporate logo is known as the "Lamp of Knowledge" which is symbolic of the major goal of Honor Seminars. It represents the academic achievement and dedication of self-improvement through life long learning. Thus, it is appropriate to encompass this art within our corporate logo.

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