

4TH ANNUAL MEETING & SYMPOSIUM

SEPTEMBER 22, 2011 | MUSEUM OF FLIGHT, SEATTLE, WA

PROGRAM AGENDA

10:30 – 11:30 **Business Meeting** – Members only

11:30 – 12:00 **View International Science and Engineering Fair student displays**

12:00 – 1:15 **Lunch**

Student & Teacher Introductions: Subhash Singhal, Pacific Northwest National Laboratory and WSAS Board Member

1:30 – 6:00 **Symposium** – Rising Above the Gathering Storm: STEM Education in Washington

1:30 – 3:30 **Session I – The Gathering Storm**

Session Chair: Earll M. Murman, Massachusetts Institute of Technology, Emeritus, and WSAS President Elect and 2011 Program Chair

Greeting and Charge to the Symposium

Governor Christine Gregoire (via video)

Five Years of Rising Above the Gathering Storm

C.D. (Dan) Mote Jr., University of Maryland, and Member, National Academy of Sciences “Rising Above the Gathering Storm” Committee

STEM Education in Washington: The Facts of the Matter

Prof Edward D. Lazowska, University of Washington and WSAS Secretary

The Legislative Perspective

Senator Rosemary McAuliffe, Chair of Washington State Senate Committee on Early Learning & K-12 Education

Speaker Panel with Audience Q&A

3:30 – 4:00 **Break**

4:00 – 6:00 **Session II – Improving Mathematics and Science Learning**

Session Chair: Guy H. Palmer, Washington State University, WSAS Board Member and Membership Chair

How the Storm Begins: Cultural Stereotypes, Identity Formation, and Principles of Child Development

Prof Andrew Meltzoff, University of Washington

Teaching for Understanding in K-12 Science & Mathematics

Associate Prof Tamara Holmlund Nelson, Washington State University, Vancouver

Preparing Teachers for Tomorrow's Schools

Professor George D. “Pinky” Nelson, Western Washington University

Speaker Panel with Audience Q&A

6:00 – 6:45 **Reception**

6:45 – 9:00 **Dinner**

Education for the Next Generation: Meeting the Challenge

After Dinner Speaker: Brad Smith, Microsoft Corporation, and Chair of Washington Higher Education Funding Task Force

Moderator: R. James Cook, Washington State University, Emeritus, and WSAS President

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GUEST TEACHERS AND STUDENTS AND THEIR SPONSORS

Aviation High, Seattle

Reba Gilman, Principal

Scott McComb, 9th Grade Physical Science/
Physics of Flight Instructor

Jake Hecla, Junior

Cedarcrest High School, Duvall

Kelly Halverson, High School Science Teacher

Nick Vergara, Senior

Kathryn McClintic, Senior

Cleveland High School, Seattle

Jeff Shaver, High School Science Teacher

Katie Bui, Junior

Carmina Tugade, Junior

Delta High School, Richland

Deidre Holmberg, Principal

Stevie-Jean Luke, Senior

Krystal Reitan, Senior

Hanford High School, Richland

Andrey Sushko, Senior

Kendall Elementary School, Maple Falls

Paul Spring, Elementary Science Teacher

Meridian Middle School, Kent

Michelle Chamberlain, Middle School Science Teacher

Odessa High School, Odessa

Jeff Wehr, High School Science Teacher

Kira Powell, Senior

Olympia High School, Olympia

Jennifer Echtle, High School Science Teacher

Sky Valley Education Center, Monroe

Karina Champion, Middle and High School science
and High School Health Teacher

Erin McQuin, Junior

Helen McPeters, 8th Grade

St. Cecilia Catholic School, Bainbridge Island

Kate Schrock, Elementary School Science Teacher

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WASHINGTON STATE SCIENCE FAIRS & SYMPOSIA

Members of the Washington State Academy of Sciences are encouraged to attend and participate (e.g. as a judge or a student mentor) in the activities of the various annual state fairs and symposia. Following is a listing of such events and contact persons:

Mid-Columbia Regional Science and Engineering Fair (<http://www.mcsf.net/>)

Kennewick, WA

March

Joyce Stark, Fair Director

Phone: 509 837-2601; E-mail: director@mcsf.net

Larry Chick, Judging Director

Phone: 509-375-2145; E-mail: larry.chick@pnl.gov

South Science Regional Science Fair (<http://www.plu.edu/scifair/>)

Pacific Lutheran University, Tacoma, WA

March - April

Steve Colgan, Fair Director

Phone: 253-535-7148; E-mail: colgansj@plu.edu

Central Sound Regional Science and Engineering Fair (<http://scidiv.bellevuecollege.edu/sami/scifair/>)

Bellevue College, WA

March

Kate Souza, Program Manager

Phone: 425-564-3055; E-mail: kathryn.souza@bellevuecollege.edu

Southwest Washington Science & Engineering Fair

Vancouver, WA

February - March

Carol Ramsey, Fair Director; E-mail: carolramsey1@comcast.net

Washington State Science and Engineering Fair (<http://www.wssef.org/>)

Bremerton, WA

March - April

Michael Huey, President

Lois Jane Lugg, Fair Director;

E-mail: ljlugg@bpa.gov

Gary Foss, Educational Outreach Chairman

E-mail: gary.c.foss@boeing.com

Washington Junior Science and Humanities Symposium (<http://wjshs.org/>)

Seattle Pacific University, Seattle, WA

March

Ray Myers, Director

Phone: 206-218-8830; E-mail: remyers@spu.edu

Northwest BioExpo (<http://nwabr.org/teachers/student-bio-expo-teachers/about-expo>)

Jeanne Chowning, Expo Director

E-mail: jchowning@nwabr.org

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BUSINESS MEETING AGENDA

Business Meeting, 10:30 – 11:30 am

Welcome and Introductory Remarks, **Jim Cook**

Secretary's Report, **Ed Lazowska**

Treasurer's Report, **Gene Nester**

Executive Director's Report, **Bob Bates**

Puget Sound Partnership Science Panel Study Committee Report, **Gordon Orians**

Introduction of New Members, **Jim Cook**

Introduction of New Board Members, **Jim Cook**

Election of Officers

Nominees:

Secretary, Ed Lazowska (second term)

President Elect, Guy Palmer

Other Business/General Discussion

Transfer of the Gavel to President Elect Earll Murman

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WSAS LEADERSHIP 2011 - 2012

Officers

Earll Murman, President, Massachusetts Institute of Technology (emeritus)
Guy H. Palmer, President-Elect, Washington State University
Edward D. Lazowska, Secretary, University of Washington
Eugene Nester, Treasurer, University of Washington

Board members

Anjan Bose, Washington State University
R. James Cook, Washington State University (emeritus)
Bonnie J. Dunbar, Dunbar International LLC
Kristina Katsaros, Northwest Research Associates, (emeritus)
Allan Konopka, Pacific Northwest National Labs
Estella Leopold, University of Washington (emeritus)
Donald Patrick, University of Washington
R.G. Hamish Robertson, University of Washington
Subhash Singhal, Pacific Northwest National Laboratory
Nancy F. Woods, University of Washington

WSAS Committees

Executive Committee, Earll Murman, Chair
Finance Committee, Eugene Nester, Chair
Membership Committee, Nancy Woods, Chair
AJAS Selection Committee, Subhash Singhal, Chair
2012 Annual Meeting Committee, Guy Palmer, Chair
Nominations Committee for Election of Officers, Earll Murman, Acting Chair
Study Oversight Committee, Anjan Bose, Chair

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NEW MEMBERS

New members inducted into the Washington State Academy on September 22, 2011

Section 1 – Physical and Mathematical Sciences

Sarah Keller Professor, Department of Chemistry and Associate Dean of Research, University of Washington
Peter Ward Professor, Department of Earth and Space Sciences, University of Washington

Section 2 – Engineering and Technology

Susan Dumais Principal Researcher, Microsoft Research, NAE
Alex K-Y. Jen Boeing/Johnson Chair Professor of Materials Science & Engineering, University of Washington
Shaoyi Jiang Boeing-Roundhill Professors of Chemical Engineering and Adjunct Professor of Bioengineering, University of Washington
Mohammed Khaleel Director of the Computational Sciences and Mathematics Division, Pacific National Northwest Laboratory
Henry Levy Chairman and Wissner-Slivka Chair, Department of Computer Science & Engineering University of Washington, NAE
Alan Waltar Chairman of Advanced Medical Isotope Corporation's Scientific Advisory Board and Senior Advisor, Pacific Northwest National Laboratories

Section 3 – Biological Sciences

P.Deer Boersma Wadsworth Endowed Chair in Conservation Science and Professor, Department of Biology, University of Washington
Gerald Edwards Regents Professor in the School of Biological Sciences, Washington State University
James Fredrickson Chief Scientist of the Biological Sciences Division, Pacific Northwest National Laboratory
Robert Horsch Deputy Director, Agricultural Development, Bill and Melinda Gates Foundation
Mary Lidstrom Frank Jungers Chair of Engineering and Professor in Chemical Engineering and Microbiology, University of Washington
Usha Varanasi Director of the Northwest Fisheries Science Center, NOAA Fisheries Service

Section 4 – Medicine and Health Sciences

Gary Darmstadt Director of Family Health, Global Health Program at the Gates Foundation
David Eaton Associate Vice Provost, Office of Research and Professor, Environmental and Occupational Health Sciences, University of Washington
Daniel Gottschling Cell Biologist, Fred Hutchinson Cancer Research Center, NAS
Lee Huntsman President Emeritus and Executive Director of the Life Sciences Discovery Fund Authority
Randall Moon William and Marilyn Conner Professor and Founding Director of the Institute of Stem Cell & Regenerative Medicine, University of Washington
Kenneth Stuart Director and President of the Seattle Biomedical Research Institute and Affiliate Professor, Department of Global Health, University of Washington

Section 5 – Anthropology, Economics, Social and Political Sciences

Donald Grayson Professor of Anthropology, University of Washington, NAS
Thomas Marsh Professor and IMPACT Director, School of Economic Sciences, Washington State University
Peter May The Donald R. Matthews Distinguished Professor of American Politics and Chair of Political Science, University of Washington
Stewart Tolnay The Frank Miyamoto Professor of Sociology, University of Washington