

# ***International Conference on the Future of Cognitive Aging Research***

Pennsylvania State University

May 20-22, 2005  
Penn Stater Conference Center  
University Park, PA 16802

## **Organizers**

Duane F. Alwin, Dept. of Sociology  
Scott M. Hofer, Dept. of Human Development and Family Studies

Building upon the mandates set by the National Research Council's Committee on Future Directions for Cognitive Research on Aging, articulated in *The Aging Mind: Opportunities in Cognitive Research* (National Research Council, 2000), this conference will further explore the state of our knowledge in the field of cognitive aging with an eye toward developing a shared multidisciplinary agenda for the next few decades of research.

Leading international experts on cognitive aging representing the fields of developmental psychology, psychiatry, neuroscience, behavioral genetics, demography, gerontology, sociology, economics, biostatistics, and epidemiology will gather for a two and one-half day working conference focusing on the state of research in the field of cognitive aging and its future.

The conference has attracted top researchers from Australia, Germany, The Netherlands, Switzerland, Sweden, United Kingdom, and the United States; countries where the majority of research on cognitive aging is done. The main objectives of the conference are to explore: (1) the current state of the cognitive theorizing as related to processes of aging, (2) empirical assessments of what is known about cognitive aging phenomena in terms of changes and causes, (3) methodological critiques of research designs and measurement models on which our current knowledge base rests, (4) the discussion of alternative designs and innovative lines of interdisciplinary research that promise how we can know more, and (5) the critical issues of the data needs for the future.

Results of the conference will be disseminated widely in both traditional academic outlets, as well as press releases at the time of the conference and executive summaries of the conference results for use by government research agencies.

## ***Advisory Committee***

|                         |                                 |
|-------------------------|---------------------------------|
| Fredda Blanchard-Fields | Georgia Institute of Technology |
| Robert M. Hauser        | University of Wisconsin         |
| John J. McArdle         | University of Virginia          |
| Martin J. Sliwinski     | Syracuse University             |
| Keith E. Whitfield      | Pennsylvania State University   |

## ***Organizing Committee***

|                    |                                   |
|--------------------|-----------------------------------|
| David M. Almeida   | Pennsylvania State University     |
| Paul Eslinger      | Penn State Hershey Medical Center |
| Melissa A. Hardy   | Pennsylvania State University     |
| Mark D. Hayward    | Pennsylvania State University     |
| Andrea M. Piccinin | Pennsylvania State University     |
| K. Warner Schaie   | Pennsylvania State University     |
| Sherry L. Willis   | Pennsylvania State University     |
| Linda A. Wray      | Pennsylvania State University     |
| Steven H. Zarit    | Pennsylvania State University     |

## ***List of Invited Speakers***

|                         |   |
|-------------------------|---|
| Kaarin J. Anstey        | Australian National University                    |
| Paul Baltes             | Max Planck Institute for Human Development / UVA  |
| Cynthia A. Berg         | University of Utah                                |
| Fredda Blanchard-Fields | Georgia Institute of Technology                   |
| Herman Buschke          | Albert Einstein College of Medicine               |
| Roberto Cabeza          | Duke University                                   |
| Neil H. Charness        | Florida State University                          |
| Helen Christensen       | Australian National University                    |
| Fergus I. M. Craik      | University of Toronto                             |
| Dale Dannefer           | Case Western Reserve University                   |
| Gwenith G. Fisher       | University of Michigan                            |
| Jeremy Freese           | University of Wisconsin—Madison                   |
| Robert M. Hauser        | University of Wisconsin—Madison                   |
| Christopher Hertzog     | Georgia Institute of Technology                   |
| Lesa Hoffman            | Pennsylvania State University                     |
| John L. Horn            | University of Southern California                 |
| William J. Hoyer        | Syracuse University                               |
| Susan Kemper            | University of Kansas                              |
| Matthias Kliegel        | University of Zurich                              |
| Margie Lachman          | Brandeis University                               |
| Ulman Lindenberger      | Max Planck Institute for Human Development        |
| Mary Luszcz             | Flinders University                               |
| Andrew Mackinnon        | Australian National University                    |
| Jennifer Manly          | Columbia University                               |
| Michael Marsiske        | University of Florida                             |
| John J. McArdle         | University of Virginia                            |
| Gerald E. McClearn      | Pennsylvania State University                     |
| Mark A. McDaniel        | Washington University                             |
| Joan McDowd             | University of Kansas                              |
| Peter Molenaar          | University of Amsterdam                           |
| John R. Nesselroade     | University of Virginia                            |
| Denise C. Park          | University of Illinois                            |
| Patrick M. A. Rabbitt   | Oxford University                                 |
| Naftali Raz             | Wayne State University                            |
| Patricia Reuter-Lorenz  | University of Michigan                            |
| Chandra Reynolds        | University of California—Riverside                |
| Timothy A. Salthouse    | University of Virginia                            |
| Mary Sano               | Mt. Sinai School of Medicine                      |
| K. Warner Schaie        | Pennsylvania State University                     |
| Martin J. Sliwinski     | Syracuse University                               |
| Avron Spiro III         | VA Boston Healthcare System and Boston University |
| Paul Verhaeghen         | Syracuse University                               |
| Keith E. Whitfield      | Pennsylvania State University                     |
| Keith Widaman           | University of California—Davis                    |
| Robert J. Willis        | University of Michigan                            |
| Sherry L. Willis        | Pennsylvania State University                     |
| Robert S. Wilson        | Rush University Medical Center                    |
| Lisa L. Barnes Young    | Rush University Medical Center                    |
| Elizabeth M. Zelinski   | University of Southern California                 |

## PRELIMINARY PROGRAM

### Morning Session – Friday, May 20

#### **PRELIMINARIES**

8:00 – 8:30 Coffee

8:30 – 8:45 Welcome

Chair: Duane Alwin, Penn State University

Ray Coward, Dean of College of Health and Human Development

Susan Welch, Dean of College of the Liberal Arts

8:45 – 9:00 [Integrating Demographic and Developmental Perspectives](#)

Duane Alwin, Penn State University

Scott Hofer, Penn State University

#### **WHAT DO WE KNOW ABOUT COGNITIVE AGING?**

9:00 – 10:20 Presentations (20 minutes each)

Chair: Scott Hofer, Penn State University

[\*The Multiple Layers of Cognitive Aging\*](#) – Ulman Lindenberger, Max Planck  
Institute for Human Development

[\*The Future of Cognitive Aging: An Individual Differences Perspective\*](#) –  
Christopher Hertzog, Georgia Institute of Technology

[\*Integrating Health \(and Disease\) into Cognitive Aging: Quo Vadis?\*](#) – Avron Spiro,  
VA Boston Healthcare System and Boston University

[\*Public Policy and Cognitive Aging Research\*](#) – Denise Park, University of Illinois,  
Urbana-Champaign

10:20 – 10:40 Break

10:40 – 11:30 Discussants (15 minutes each)

Robert M. Hauser, University of Wisconsin-Madison

K. Warner Schaie, Penn State University

Robert Wilson, Rush University Medical Center

11:30 – 12:00 Open Discussion – Leader, John Horn, University of  
Southern California

12:00 – 1:30 Lunch Break

## Afternoon session – Friday, May 20

### **INNOVATIONS IN MEASUREMENT AND DESIGN**

#### **Strategies of Measurement of Cognition and Dementia**

1:30 – 2:45 Presentations/Discussants (15 minutes each)

Chair: Linda Wray, Penn State University

[\*Cognitive Measurement in the Health and Retirement Study\*](#) – Robert Willis, University of Michigan

[\*Longitudinal Studies on the Dynamics of Cognition in the Health and Retirement Study\*](#) – John J. McArdle, University of Virginia

[\*The Aging, Demographics, and Memory Study \(ADAMS\): Assessing Dementia in a National Community Sample\*](#) – Gwenith Fisher, University of Michigan

[\*Race, Culture, Education, and Neuropsychological Test Performance\*](#) – Jennifer Manly, Columbia University

Discussant: Mary Sano, Mt. Sinai School of Medicine

#### **Developments in Neuro-Imaging**

2:45 – 3:45 Presentations/Discussants (15 minutes each)

Chair: Paul Eslinger, Penn State Milton S. Hershey Medical Center

[\*Linking Cognitive Aging Theories to Functional Neuroimaging Data\*](#) – Roberto Cabeza, Duke University

[\*Differential Aging of the Brain: Patterns, Cognitive Correlates and Modifiers\*](#) – Naftali Raz, Wayne State University

[\*Combining Performance Measures and Neuro-Imaging in a Community Study of Aging\*](#) – Helen Christensen, Australian National University

Discussant: Patricia Reuter-Lorenz, University of Michigan

3:45 – 4:00 Break

#### **Memory and Attention**

4:00 – 5:00 Presentations/Discussants (15 minutes each)

Chair: Herman Buschke, Albert Einstein College of Medicine

[\*Age-related Changes in Memory Processes\*](#) – Fergus Craik, University of Toronto

[\*Challenges in Attention: Measures, Methods, and Applications\*](#) – Joan McDowd, University of Kansas and Lesa Hoffman, Penn State University

[\*Prospective Memory and Aging: Old Issues and New Questions\*](#) – Mark McDaniel, Washington University

Discussant: Matthias Kliegel, University of Zurich

5:00 – 5:30 Open Discussion – Leader, Andrew Mackinnon, Australian National University

6:30 Bus Transport to Gamble Mill for Reception and Dinner (Speakers/Discussants)

## Morning session – Saturday, May 21

### ***DIMENSIONS OF COGNITIVE AGING***

8:30 – 10:15 Presentations/Discussants (15 minutes each)

Chair: Andrea Piccinin, Penn State University

[\*Aging and Varieties of Cognitive Control: A Quantitative Review of Age-related Effects in Resistance to Interference, Coordination and Task Switching\*](#) –

Paul Verhaeghen, Syracuse University

[\*Cognitive Aging and Biomarkers\*](#) – Kaarin Anstey, Australian National University

[\*Decomposing Verbal Fluency\*](#) – Susan Kemper, University of Kansas

Discussants: Mary Luszcz, Flinders University

Elizabeth Zelinski, University of Southern California

10:15 – 10:30 Break

10:30 – 12:00 Presentations/Discussants (15 minutes each)

Chair: David Almeida, Penn State University

[\*The Future of Everyday Problem Solving: Linking Everyday Problem Solving to Real-World Indicators of Successful Aging\*](#) – Cynthia Berg, University of Utah

[\*Expertise and Knowledge\*](#) – Neil Charness, Florida State University

[\*Cognitive Interventions with Older Adults: The Transfer Challenge\*](#) – Michael Marsiske, University of Florida

Discussants: Sherry Willis, Penn State University

Fredda Blanchard-Fields, Georgia Institute of Technology

12:00-1:30 Lunch Break

## Afternoon session – Saturday, May 21

### ***EPISTEMOLOGICAL STRATEGIES: HOW DO WE KNOW WHAT WE KNOW?***

1:30 – 2:30 Presentations (20 minutes each)

Chair: Michael Rovine, Penn State University

[\*Contextual Analyses as a Means of Ensuring Cumulative Progress in Cognitive Aging\*](#) – Timothy Salthouse, University of Virginia

*Idiographic Psychology and Beyond: New Paradigms to Optimize Single-Subject Life-Span Developmental Processes* – Peter Molenaar, University of Amsterdam

[\*The Multiple Facets of Change: Implications for Cognitive Aging Research\*](#) – Martin Sliwinski, Syracuse University

2:30 – 2:50 Break

2:50 – 3:50 Discussants (20 min. each)

John Nesselroade, University of Virginia

Gerald McClearn, Penn State University

Patrick Rabbitt, Oxford University

4:00 – 5:00 Recapitulation and Open Discussion – Scott Hofer, Penn State University

6:00 Reception and Dinner, Penn Stater Conference Center

## Morning Session – Sunday, May 22

### **INTEGRATIVE PERSPECTIVES ON COGNITIVE AGING**

8:30 – 10:00 Presentations/Discussants (15 minutes each)

Chair: Dale Dannefer, Case Western Reserve University

[\*Genetic and Environmental Influences on Cognitive Change\*](#) – Chandra Reynolds, University of California – Riverside

[\*Minority Populations and Cognitive Aging\*](#) – Keith Whitfield, Penn State University

[\*Individual and Community Level Social Resources and Their Relation to Cognitive Function in Older Persons\*](#) – Lisa Barnes Young, Rush University Medical Center

[\*Demographic Issues in the Future of Cognitive Aging Research\*](#) – Duane Alwin, Penn State University and Ryan McCammon, University of Michigan

Discussants: Jeremy Freese, University of Wisconsin—Madison  
Keith Widaman, University of California—Davis

10:00 – 10:30 Open Discussion – Leader, David Almeida, Penn State

10:30 – 10:45 Break

### **FUTURE DIRECTIONS FOR RESEARCH ON COGNITIVE AGING**

10:45 – 11:30 Final Presentations (20 minutes each)

Chair: Duane Alwin, Penn State University

*Micro- and Macro-level Theories and Research Approaches in Cognitive Aging: New Findings Drive New Directions* – William Hoyer, Syracuse University

*Discussion of Conference Proceedings* – Paul Baltes, Max Planck Institute, Berlin

11:30 – 12:00 Open Discussion – Leader, Martin Sliwinski, Syracuse University

Buffet Lunch – Final Remarks – Jeffrey Elias and Molly Wagster, National Institute on Aging

Afternoon – Departure