

# **Advanced Psychometric Methods in Cognitive Aging Research**

**Neuroimaging, AD Biomarkers, & Cognition**

Friday Harbor Laboratory

University of Washington

June 6 - 10, 2011

## Acknowledgements

- Funded in part by Grant R13AG030995 from the National Institute on Aging
- The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention by trade names, commercial practices, or organizations imply endorsement by the U.S. Government.

# Meeting Structure

- Tuesday lectures - ADNI overview, neuroimaging methods, data analysis methods, GWAS introduction
- Wednesday - Friday workgroups
  - Workgroups applying methods ADNI dataset
- Goal is to generate scientific manuscripts and presentations based on analyses initiated at this meeting
- Methods in service of **SCIENCE**

# Datasets

- Alzheimer's Disease Neuroimaging Initiative
  - Michael Weiner, M.D., PI
  - Longitudinal study of neuroimaging, biomarker, and cognitive measures of Alzheimer's disease

# Workgroups

- Item Response Theory - How do psychometric properties related to effectiveness of cognitive outcome measures in AD studies?
- Longitudinal Neuroimaging and Cognition - How does change in cognition correspond to change in brain structure and function?
- Voxel Based Morphometry and Genome Wide Association Studies in AD - How can genes and localized brain changes be combined to explain cognitive decline in AD?
- Sequencing of Biomarkers, Neuroimaging, and Cognition in AD - What are the temporal and causal sequences underlying cognitive decline in AD?

# Schedule

- Tuesday - Lectures
- Wednesday Morning - Workgroup Organization
- Wednesday Afternoon - Free
- Thursday- Workgroups
- Friday - Workgroups and Wrap-up

# Acknowledgements

- Alzheimer's Disease Neuroimaging Initiative (ADNI)
  - Mike Weiner and many, many others
- National Institute on Aging
  - Dallas Anderson

# Organizing Committee

- Paul Crane
- Laura Gibbons
- Scott Hofer
- Rich Jones
- Jennifer Manly
- Dan Mungas



# Logistics, Administration, Web Site, Legal Counsel

- Robin Sanchez, esq

# Dataset Creation and Dissemination, Software Installation

- Laura Gibbons
- Elizabeth Sanders

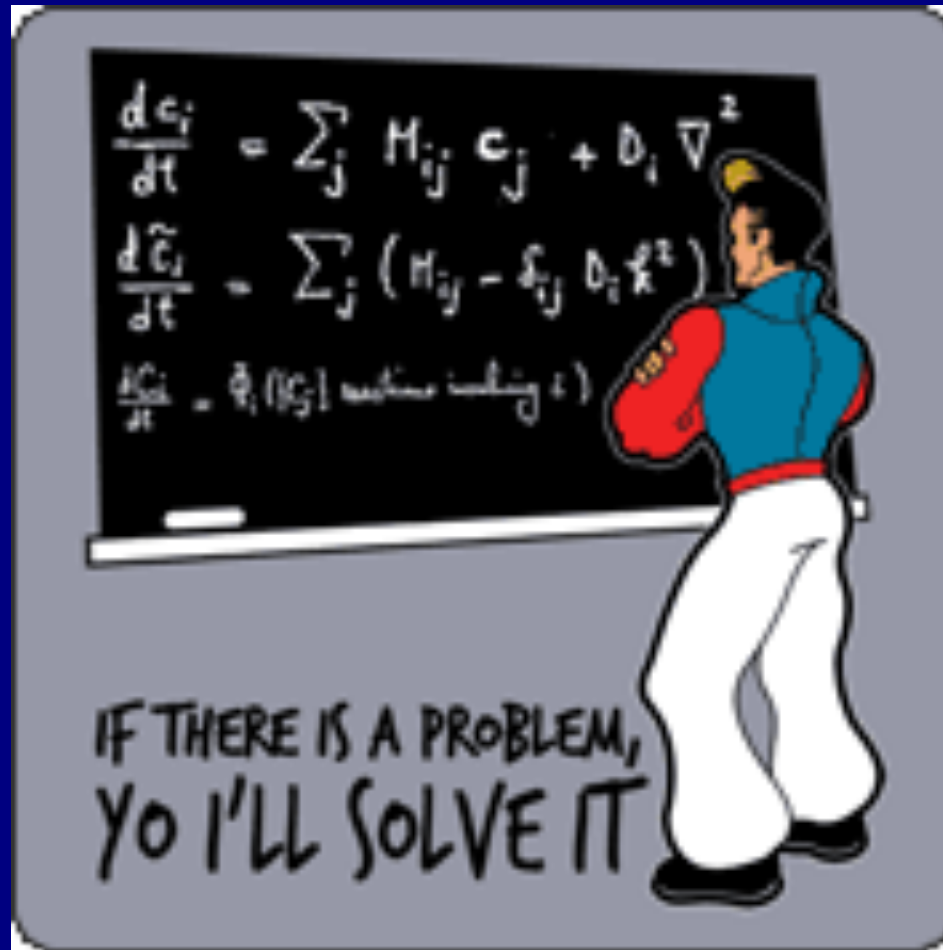
# **Enforcement Division**

## **Completion of Lecture and Conference Evaluations**

- Jennifer Manly

# Introductions

# Conference Slogan Competition - 2010



# **2010 Conference Slogan Contest**

It's the thought that counts

## **2010 Conference Slogan Contest**

ICCs: The not so slippery slopes

## 2010 Conference Slogan Contest

I know it's only latent growth but  
I like it



## **2010 Conference Slogan Contest**

Friday Harbor Psychometrics:  
... but we go to 11

## **2010 Conference Slogan Contest**

Friday Harbor Psychometrics:  
Theta is not a 4 letter word.

# 2011 Competition - Best Quote

- Rules
  - Must be something somebody actually said
  - Can be related in some way to science, neuroimaging, genetics, Alzheimer's disease, cognition, psychometric methods, data analysis
  - Extra points if it has appeared on the Colbert Report

# Examples (already taken)

“What a waste it is to lose one’s *mind*,  
or not to have a *mind* as being truly wasteful.  
How true that is.”

--Dan Quayle

“Essentially, all models are wrong, but some  
are useful.”

--George Box

“The scientist is not a person who gives the right answers, he's one who asks the right questions.”

--Claude Lévi-Strauss

“Some scientists work so hard there is no time left for serious thinking.”

--Francis Crick



“If everything seems under control you’re  
just not going fast enough.”

--Mario Andretti

“Tact is taking time to think before saying  
nothing.”

--sign posted outside of a church

“When an idea is lacking, a word can always  
be found to take its place.”

--from W. E. Deming who attributed it to Goethe