

## **ANALYTIC APPROACHES FOR NEUROPSYCHIATRIC SYMPTOM SCALES**

Friday, July 14, 2023 | 8 a.m. – noon  
Hilton (Ballroom AB) — Amsterdam, Netherlands  
All times are in Central European Time  
In-person attendance only  
*Laptops are required*

### **Overview**

This workshop is a collaboration of the Design and Data Analytics (DaDA) and the Neuropsychiatric Syndromes (NS) PIAs. It will review commonly-used neuropsychiatric scales and statistical approaches depending on the distribution. Examples from different AD datasets will be used to demonstrate regression techniques (sample code will be provided). The workshop will begin with an overview of the different scales used to measure neuropsychiatric symptoms in neurocognitive disorders will be provided. Next, we will discuss data generated from neuropsychiatric scales, their key characteristics, and how to determine the best modeling approach. We will then provide a dataset and R code for hands-on practice modeling the data using linear and ordinal approaches. Attendees will have the opportunity to work interactively with the workshop presenters on analyzing the provided data.

This workshop will enhance the statistical rigor used in analyzing neuropsychiatric data in neurocognitive disorders. By providing practical examples from known AD datasets, attendees will gain the knowledge and skills needed to understand the distributions of their datasets and how to apply the correct statistical techniques.

### **Organizing Committee**

- Ana Capuano, Rush University, United States
- Byron Creese, University of Exeter, United Kingdom
- Mike Malek-Ahmadi, Banner Health, United States

### **Target Audience**

Participants from any career stage are encouraged to join, including undergraduate students, graduate students, post-doctoral researchers, assistant professors, and professors engaged in clinical practice, research, or teaching.

For the analytic portions of the workshop, attendees will need to [install R and R Studio](#) on their personal computers to demonstrate many of the analytic techniques. Datasets and relevant codes used to conduct the analyses will be provided to attendees before the workshop.

## Learning Objectives

- Review Neuropsychiatric Scales commonly used to quantify affective and behavioral syndromes in the AD spectrum.
- Review the distribution of Neuropsychiatric Scales from different AD studies and discuss model selection and adequacy.
- Learn how to utilize linear and ordinal modeling approaches to neuropsychiatric scale data.

## Registration

Pre-conferences are offered for in-person attendance only. Preconferences require a separate registration fee in addition to AAIC full conference registration, or they may be purchased as stand-alone events.

[Register today](#) to attend Analytic Approaches for Neuropsychiatric Symptom Scales.

## Agenda

Time	Session Details	Speakers
8-8:15 a.m.	<b>Welcome, Introductions, Technical and Software Check for Attendees</b>	Byron Creese Mike Malek-Ahmadi
8:15-9 a.m.	<b>Overview of Select Neuropsychiatric Assessments</b>	Byron Creese
9-10 a.m.	<b>Characteristics of the NPI Scales, Model Building and Model Fit</b>	Mike Malek-Ahmadi
10-11 a.m.	<b>Using Ordinal Regression Models for Zero-Inflated NPI and Item Severity Scores</b>	Ana Capuano
11 a.m. – noon	<b>Discussion and Hands-On Analysis in R</b>	Byron Creese, Mike Malek-Ahmadi, Ana Capuano