

Modeling Nonlinear Change Over Time in R: Featuring New Function of the Package nlive

Friday, July 25, 2025 | 1-5 p.m.

Westin Harbour Castle- Pier 3 — Toronto, Canada All times
are in Eastern Standard Time

In-person attendance only

Overview

In this workshop, researchers and health professionals will be introduced to advanced analytical methods to model change of continuous outcomes (e.g., cognitive scores) over time. We will focus on modern techniques to model change that is nonlinear. These models are used to ascertain the (a) spline based models (b) the onset of accelerated change (e.g., fixed and random change-point models commonly used to study terminal decline) (c) sigmoidal mixed effect models (e.g., curves postulated in Jack's model). Concepts will be introduced along with codes in R. New features of nlive R package will also be introduced.

Organizing Committee

- Ana W. Capuano, Ph.D
- Maude Wagner, PhD

Target Audience

This ISTAART immersive workshop is designed for individuals at all levels in Research and Teaching. Participants should bring their laptops with R studio installed and tested before the workshop. Good working knowledge of multiple regression models is required.

Learning Objectives

1. Understand the basic concept of advanced nonlinear mixed effect models. Learn the limitations and data requirements of these models. Practice modeling hands-on.

Registration

Educational workshops are offered for in-person attendance only. Workshops require a separate registration fee in addition to AAIC full conference registration, or they may be purchased as stand-alone events. Visit alz.org/AAIC.

Agenda: July 25, 2025 | 1:00 pm - 5:00 PM

Time	Session Details	Speakers and Moderator
12:00 - 1:00 pm	Lunch (<i>Westin Metropolitan Ballroom</i>)	
1:00 - 1:30 pm	Welcome Introduction and description of the activity	Ana Capuano
1:30 - 2:00 pm	Flash review of linear mixed effect models	Ana Capuano
2:00 - 3:15 pm	Nonlinear mixed effect models (spline, change point and sigmoid mixed effect models)	Ana Capuano
3:15 - 3:30 pm	Break and refreshments	
3.30 - 4:00 pm	Introduction of new features of the nlive R package	Maude Wagner
4:00 - 5:00 pm	Hands-on activity in R with provided data and code	Maude Wagner Ana Capuano

