

Agenda for the Aging Chain Webinar

- Introduction to Aging Chains in Powersim Studio
 - An Aging Chain is nothing but a simplified way of merging an array of rates with an array of levels. Logically there is no magic, but technically, it may look magic if you do not know how this works, and why the model behaves as it does. That is what we will explain in this Webinar.
 - The simplest Aging Chain could be a scalar model with two elements and one rate between them, for instance rookies becoming experienced.
 - The rate between the levels rookies and experienced would in many models/cases be dependent on the rookies only, and not the experienced. However, that single rate would have influence on both the levels.
 - If you add a third level (for instance seniors), you would also need a second rate (between experienced and seniors). The number of rates would always be one element less than the number of levels.
 - If your level is an array, and you connect a looping rate array, where the number of elements is one less than the number of elements in the level, Powersim Studio will automatically consider this as an Aging Chain.
- Aging chains used for Aging
 - The Aging chain feature really comes to its power when dealing with much more than three elements in the level array, for instance ages in a population.
- Aging forwards and backwards
 - Normally, the range/dimension definition for aging forwards is `FIRST(LevelRange)..LAST(LevelRange)-1`
 - To age backwards, simply use `FIRST(LevelRange)+1..LAST(LevelRange)`
 - Backwards aging is useful in cases where you have an inflow on the element you want to represent your delay. Then simply use the first element as delayed outflow.
- Aging chains used as delay functions
 - The same way as aging of people and their lifetime may be considered as a delay, we may use Aging chains as more advanced delay functions.
 - The `RESULTANTFLOW` function is useful when you need to separate the aging flow and other flows connected to the array of levels.
- Aging chains component
 - We look at some components using Aging chains for delay functionality.
- Questions