Because randomly placed points don't lend themselves to traditional linear interpolation routines (table lookups) like factorial points do, we fit a response surface to the results of Monte-Carlo explorations. It's this response surface that you see in the slice charts of the study viewer and which we evaluate at the point defined by the dimension sliders to give the red line on the parallel coordinates plot.
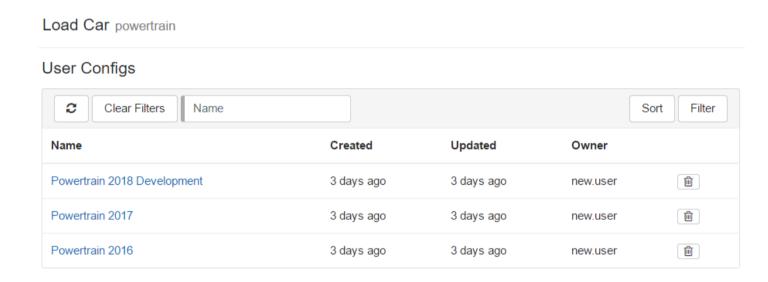
Parameter Paths

When entering the path for an array element, or for a subfield thereof, you must index that element using square brackets and a zero-based integer index. If you would like to, for instance, explore the effect of the z-position of your pushrod outboard point, you can enter the parameter path for just the z-coordinate of the pushrod outboard point like so: `car.suspension.front.external.pickUpPoints.rPRO[2]`. If you would like to perturb one of the parameters of an electric motor, you must remember that the electric motors element is itself an array (to allow multiple motors to be specified), and that this array must be indexed-into before you can refer to a parameter of one of the motors. For instance if you have only one electric motor, and you'd like to change the harvest power allowed, you should enter the following into the *Parameter Path* field of your exploration: `car.powertrain.electric.electricMotors[0].deployment.PHarvestRegulatoryLimit`. The same syntax is used to refer to polynomial terms within one of the aero polynomial definitions, for instance to refer to the coefficient of the second term in the front downforce polynomial you would use the path: `car.aero.PolynomialCLiftBodyFDefinition[1].coefficient`.

Saved Configs

A saved car is intended to be a snapshot representing only the components that could be fitted to an individual car at any one time. This keeps the car file size small and helps with simulation speed.

If there is a choice between multiple components where only one can be fitted to a car at any time, it may be desirable to produce a list of saved configs, in effect building up a database of components to select between. For example, if there are a number of different powertrains, then one way to save these options into a list of saved configs is to use the "Save As" button next to the Powertrain section. This allows you to later select a powertrain from the list and load this into your car:

It is possible to run a simulation to compare the effect of different saved configs. They can be entered as part of an exploration as follows: 1) Select Enumerated Sweep. 2) Enter the Parameter Path (e.g. car.powertrain). 3) For Source, select Saved configs, and enter these into the list as shown in the example below.