

International Conference and Exhibition on Automobile Engineering

September 01-02, 2015 Valencia, Spain

SOM - Self organizing maps

Carolina Senabre Blanes, Sergio Valero Verdú and Emilio Velasco Miguel Hernández University, Spain

There are different methods to fit the values of Pacejka-96 Formula parameters, but this is the first time that through Self Organizing Maps interactively, we can obtain the optimum Pacejka-96 tyre model parameters. The aim of the research is the use of a neural network such as SOM Self Organizing Map to obtain parameters for the mathematical Pacejca formula braking curves reproduce lateral brake forcevs lateral slip of a vehicle taking into account factors that affect the rolling. A comparison of several neural networks has demonstrated that SOM methodology is better for obtaining Pacejka-96 lateral brake formula parameters of the lateral brake-slide relationship when presented with data not used in network training.

Biography

Carolina Senabre Blanes received the Engineer degree from the Polytechnic University of Valencia in 1998. She finished her PhD degree in Industrial Engineering, at the Polytechnic University of Elche on January 2012. From 2000 to 2001 she was a member of the research staff at the Engineering and buildings, where she worked in the fields of structural design of buildings. In 2001, she became a Professor at the Miguel Hernández University of Elche. She is teaching drawing, and mechanical design, and managing some research projects in those fields. She has authored more than 30 publications and contribution to congresses and more than 20 papers to technical magazines. She has also published four books about teaching drawing, mechanical design, neural networks and research about brakes test.

csenabre@umh.es

Notes: