

Title (en)

METHOD FOR SIMULATING THE PHYSICAL BEHAVIOUR OF A TYRE AND APPLICATION TO REAL-TIME SIMULATION

Title (de)

VERFAHREN ZUR SIMULATION DES PHYSIKALISCHEN VERHALTENS EINES REIFENS UND ANWENDUNG AUF ECHTZEITSIMULATION

Title (fr)

PROCEDE DE SIMULATION DU COMPORTEMENT PHYSIQUE D'UN PNEU ET APPLICATION A LA SIMULATION EN TEMPS REEL

Publication

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Application

EP 19728493 A 20190503

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- FR 1853840 A 20180503
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Abstract (en)

[origin: WO2019211570A1] The invention concerns a method for simulating the physical behaviour of a tyre equipping a stationary or almost stationary vehicle on the ground, the method comprising the following steps for calculating a resultant force transmitted by the tyre between the ground and the vehicle at a given point in time: - modelling (Ea) the contact area in the form of a square surface, - discretising (Eb) the square surface by cutting into slices orthogonal to the direction of travel of the tyre, - for each slice, determining (Ec) the nature of the contact, gripping or sliding, between the slice and the ground depending on the steering angle, - for each slice, calculating (Ed) the elementary force applied to the slice by applying specific predetermined equations depending on the nature of the contact, gripping or sliding, and expressed as a function of dynamic parameters linked to the conditions of use of the tyre and as a function of physical parameters that are characteristic of the tyre, - calculating (Ee) the resultant force by integrating the elementary forces over the entire square surface.

CPC (source: EP US)

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Citation (search report)

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