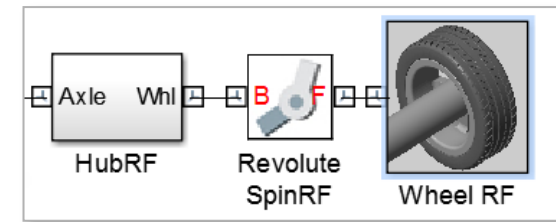


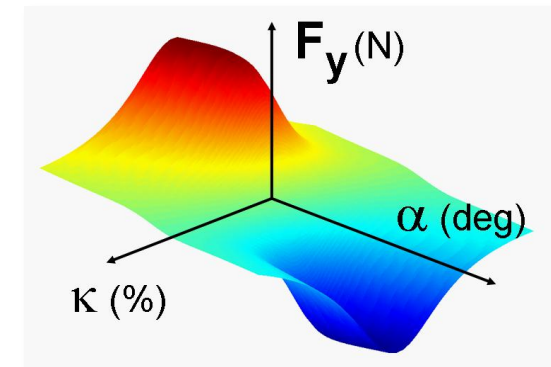
Tire Models in SimMechanics

Delft-Tyre from TNO Automotive

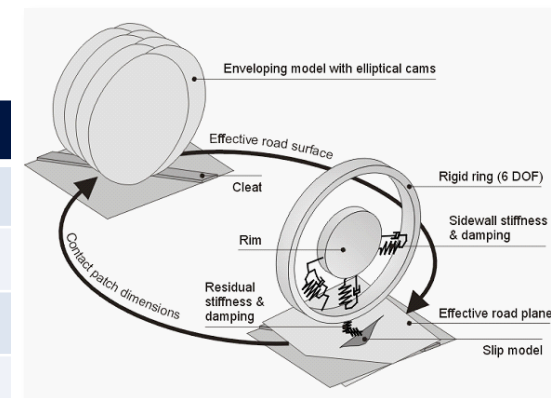
- MF-Tyre (free)
 - Pacejka Magic Formula tire model
 - Contact force and moment for steady-state and transient simulation
- MF-Swift (license required)
 - Rigid ring model, accurate for frequencies where bending modes of tire belt can be neglected (60 – 100 Hz).



MF-Tyre



MF-Swift



Dynamics Mode	Freq. Range	Component
Steady-State	<1 Hz	MF-Tyre
Relaxation behaviour, linear	<10 Hz, linear	MF-Tyre
Relaxation behaviour, nonlinear	<10 Hz, linear	MF-Tyre
Rigid ring	<100 Hz, nonlinear	MF-Swift
Rigid ring + initial statics	<100 Hz, nonlinear	MF-Swift