

Examples 1

Topic	Filename = Versions	PF*	Notes
Rotating DC machine driving an elastic shaft	ElaWe_GM_ZuReg	X	with state control structure
	ElaWe_GM	-	without control
	ElaWe_GM_ZuReg_ERW	-	with state control structure and power
Rotating DC machine driving a stiff shaft	GM_EE	Pd**	with computation of energy efficiency, power and energy
Belt conveyor	Foerderband_Skalar	X	structure of a scalar Bond Graph consisting of 3 KVE's per motion direction
	Foerderband_KV_Element	-	one Kelvin-Voigt Element (KVE); power
	Foerderband_KV_Element_ERW	-	KVE: versions by comparison; power
	Foerderband_Vektoriell	X	structure of a vectorial Bond Graph with one 1-node only, number of elements fixed by matrices, scalar model in parallel
Pendulum	Pendel_Borutzki	X	two variants regarding separated resp. common consideration of mass and moment of inertia simulated in parallel to ODE
Clutch in hybrid electric vehicles	Clutch_Lhomme	Pd**	scalar and vectorial Bond Graph in parallel; without structure shift in comparison to the reference (EMR ¹); no Bond Graph internal non-linearity but non-linear source element
Mechanics	SpringCableCylinder	X	motion study – please see PDF-File
Subway traction drive	TractionDrive	X	actuator model: pulse rate resp. mean value; POG ² parallel – see paper
	TractionDrice1, TractionDrive_V2	-	
Gimbal	Gimbal	X	With derivative causality and bidirectional minus sign – see paper
Planetary gear	SimFig_2b_BG_POG_EMR_03	X	Comparison with methods EMR ¹ und POG ² , example in chapter 2, pp. 19-44, Springer 2021, doi: 10.1007/978-3-030-76787-7_2

PF*: Automatically loadable (currently for *.mdl only) parameter file available and useable for additional files of same topic. Pre-condition for use: the corresponding directory was included in search path or is identical to the current directory.

Pd^{**} : Parameter directly inserted in block masks

EMR¹ : Energetic Macroscopic Representation (by Bouscayrol, A. / University Lille, France)

POG² : Power Oriented Graph (nach Zanasi, R. / Universität Modena, Italien)