

Analyze Tool Checklist: Joint Reactions from Static Optimization Results

Model (.osim file)

- To open a model file in the GUI, select File Menu → Open Model

Kinematics (.mot or .sto file)

- Main Settings → Motion → From File → <your kinematics file>
- Filter Kinematics: Depends on your data

Time Range

- Start and End time

Residual Actuators

- If static optimization required residual actuators, use the same actuators for the Joint Reaction Analysis.

External Loads

- Actuators and External Loads → Force set file
- External Loads data
- External Loads kinematics
- Filter settings

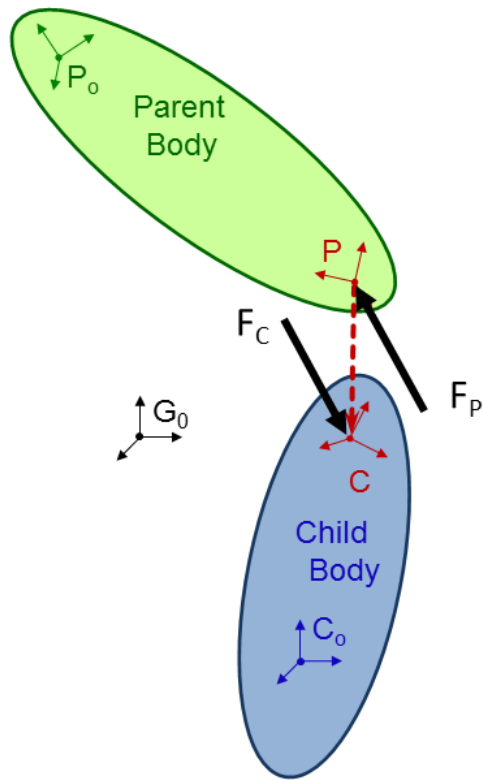
Analyses

- Add Joint Reaction analysis

Force Data from Static Optimization

Analyses → JointReaction → Edit → <forces_file>

Choosing the Joint Load Representation



Legend:

G_0 : Origin of the ground reference frame

P_0 : Origin of the parent body and reference frame

C_0 : Origin of the child body and reference frame

P : Location of the joint in the parent body

C : Location of the joint in the child body

F_P : Joint reaction load on the parent body

F_C : Joint reaction load on the child body

<joint_names> : List the names of the joints that interest you. The Joint Reaction Analysis will report joint loads for all listed joints it recognizes

<apply_on_bodies> : List “parent” or “child” for each joint you’ve specified in <joint_names>. With the “parent” option, Joint Reaction will report the reaction load acting on the parent body at point P . With the “child” option, Joint Reaction will report the reaction load acting on the child body at point C .

<express_in_frame> : List “ground”, “parent”, or “child” for each joint you’ve specified in <joint_names>. The “ground” option will express the joint reaction loads as vectors expressed in the ground reference frame located at G_0 . Likewise for the “parent” and “child” options, the loads will be expressed in the parent or child reference frames located at P_0 or C_0 .