

Notes on the data files provided

Inputs and outputs are provided for the two-dimensional example problems described in the paper "Layout optimization of pin-jointed truss structures with minimum frequency constraints":

- Hemp cantilever example
 - 700Hz
 - 1000Hz
- MBB beam example
 - 200Hz
 - 225Hz

For each example five MATLAB data files are provided:

File Name	Description	Structure
Nd.mat	Node list for the domain	X, Y, sX, sY, pX, pY
Cn.mat	Connections list for full ground structure	node1, node2, length, active
K.mat	Global stiffness matrix for final structure	n/a
M.mat	Global mass matrix for final structure	n/a
members.mat	Data for elements in the final structure	con_no, node1, node2, area, length

These are intended to allow re-creation of the problem solved and also verification of the resulting structure (the stiffness (K) and mass (M) matrices can be used with the MATLAB eigs function).