Oded, Nov16:

However, if inconvenient, then suggest that you first formulate a dynamical systems model for the 2 element 'array' connected with a lumped mass payload (which I recall is limited to 2D).

You can verify that with the elimination of the payload, your individual elements decouple and reduce to a standard reduced-order 2D quad-rotor.

Ran:

Sent solution on ..