What is claimed is:

1. A flexible tool having a first end and a second end, the flexible tool comprising:

a plurality of rigid members spaced along a longitudinal axis of the flexible tool, which extends from the first end to the second end; and

a plurality of flexible members extending between the plurality of rigid members, the plurality of flexible members including: (i) a plurality of control cables extending through at least some of the plurality of rigid members, and (ii) a plurality of flexible joints extending between adjacent rigid members of the plurality of rigid members, the plurality of flexible members being arranged to enable the plurality of rigid members to diverge from the longitudinal axis and define a work volume for the flexible tool, at least some of the plurality of flexible members being unevenly spaced around the longitudinal axis, or a physical characteristic of at least some of the plurality of flexible members varying along the longitudinal axis, to cause the work volume or stiffness of the flexible tool to be asymmetric relative to the longitudinal axis as the flexible tool extends from the first end to the second end.

2. The flexible tool as claimed in claim 1, wherein the plurality of control cables includes a first control cable, a second control cable, and a third control cable extending between at least two adjacent rigid members, the second control cable being positioned between the first control cable and the third control cable, a distance between the first control cable and the second control cable being less than a distance between the second control cable and the third control cable.

3. The flexible tool as claimed in claim 1, wherein the plurality of control cables includes at least one control cable positioned at a greater radial distance from the longitudinal axis than the other control cables of the plurality of control cables.

4. The flexible tool as claimed in claim 1, wherein the plurality of flexible joints includes a first flexible joint, a second flexible joint and a third flexible joint, the second flexible joint being positioned between the first flexible joint and the third flexible joint, a distance between the first flexible joint and the second flexible joint being less than a distance between the second flexible joint and the third flexible joint.

5. The flexible tool as claimed in claim 1, wherein two flexible joints of the plurality of flexible joints extend between two adjacent rigid members and define a pivot axis between the two adjacent rigid members, the pivot axis non-intersecting with the longitudinal axis.

6. The flexible tool as claimed in claim 1, wherein:

the plurality of rigid members includes a first rigid member, a second rigid member and a third rigid member, the second rigid member being positioned between the first rigid member and the third rigid member, and

the plurality of flexible joints includes a first subset of flexible joints extending between the first rigid member and the second rigid member, and a second subset of flexible joints extending between the second rigid member and the third rigid member, the first subset of flexible joints and the second subset of flexible joints overlaying one another when viewed along the longitudinal axis.

7. The flexible tool as claimed in claim 1, wherein the physical characteristic of the plurality of flexible members includes a length of the plurality of flexible members between

adjacent rigid members.

8. The flexible tool as claimed in claim 1, wherein the physical characteristic of the plurality of flexible members includes a thickness of the plurality of flexible members.

9. The flexible tool as claimed in claim 1, wherein the physical characteristic of the plurality of flexible members is defined as a material that forms the plurality of flexible members.

10. An apparatus for machining an object, the apparatus comprising:

a first flexible tool defined as the flexible tool as claimed in claim 1.

11. The apparatus as claimed in claim 10, further comprising:

a first base; and

a second base, the first base and the second base being rotatably coupled to one another, wherein

the first flexible tool as claimed in claim 1 is mounted on the first base.

12. The apparatus as claimed in claim 11, further comprising:

at least one support member configured to support the object, the at least one support member being mounted on the second base.

13. The apparatus as claimed in claim 10, further comprising:

a second flexible tool; and

a controller configured to:

determine relative positions of the first flexible tool and the second flexible tool; and control movement of the first flexible tool or the second flexible tool to avoid collision between the first flexible tool and the second flexible tool.

14. A flexible tool having a first end and a second end, the flexible tool comprising:

a plurality of rigid members spaced along a longitudinal axis of the flexible tool, which extends from the first end to the second end; and

a plurality of flexible members extending between the plurality of rigid members, the plurality of flexible members including sets of at least two of the plurality of flexible members extending between adjacent rigid members of the plurality of rigid members, each set of the at least two of the plurality of flexible members being evenly spaced apart around the longitudinal axis, the plurality of flexible members being arranged to enable the plurality of rigid members to diverge from the longitudinal axis and define a work volume for the flexible tool by each of the sets of the at least two of the plurality of flexible members progressively increasing in distance from the longitudinal axis from the first end towards the second end of the flexible tool to cause the work volume or stiffness of the flexible tool to be asymmetric

relative to the longitudinal axis as the flexible tool extends from the first end to the second end.

15. A flexible tool having a first end and a second end, the flexible tool comprising:

a plurality of rigid members spaced along a longitudinal axis of the flexible tool, which extends from the first end to the second end; and

a plurality of flexible members extending between the plurality of rigid members, the plurality of flexible members including sets of at least two of the plurality of flexible members extending between adjacent rigid members of the plurality of rigid members, each set of the at least two of the plurality of flexible members being evenly spaced apart around the longitudinal axis, the plurality of flexible members being arranged to enable the plurality of rigid members to diverge from the longitudinal axis and define a work volume for the flexible tool by each of the sets of the at least two of the plurality of flexible members progressively changing a physical characteristic of the at least two of the plurality of flexible members in each set along the longitudinal axis from the first end towards the second end of the flexible tool to cause the work volume or stiffness of the flexible tool to be asymmetric relative to the longitudinal axis as the flexible tool extends from the first end to the second end.