We claim:

1. A fin sensor (102) with a base (106) and a rib (118), the base (106) coupled to and supporting a first fin (108a) and a second fin (108b), the fin sensor (102) further having at least two transducers (104a and 104b) coupled to the fins (108a and 108b), the base coupler (116) is coupled to the base (106), the base coupler (116) defining the rib (118), the rib (118) being coupled to the base (106), wherein the rib (118) couples the first fin (108a) and the second fin (108b), and the rib (118) configured to at least partially restrict motion of the base (106) in a vertical axis (151), the rib (118) extending along a longitudinal axis of symmetry of the base (106).

2. A fin sensor (102) as claimed in claim 1, the rib (118) coupled to the base (106) between a position on the base (106) at which the first fin (108a) is coupled and a position on the base (106) at which the second fin (108b) is coupled, on a cross axis (131) of the base (106).

3. A fin sensor (102) as claimed in claims 1 and 2, the rib (118) coupled to a portion of the base coupler (116) collocated with a longitudinal axis of symmetry of the base coupler (116).

4. A fin sensor (102) as claimed in claims 1 to 3, the rib (118) being coupled to the base (106) at a position equidistant from the position on the base (106) at which the first fin (108a) is coupled and the position on the base (106) at which the second fin (108b) is coupled, on the cross axis (131), the rib being configured to at least partially restrict motion of the fins (108a and 108b) in a vertical axis (151).

5. A fin sensor (102) as claimed in claims 1 to 4, the rib (118) coupled to the base (106) between the first fin (108a) and the second fin (108b).

6. A fin sensor (102) as claimed in claims 1 to 5, the rib (118) having a cross-sectional thickness of a downstream (145) end of the rib (118) that is less than a thickness of a cross-sectional thickness of a middle portion of the rib (118), and having a cross-sectional thicknesses of an upstream (145) end of the rib (118) that is less than a

thickness of the cross-sectional thickness of a middle portion of the rib (118), wherein the upstream end of the rib (118) is the end of the rib (118) that first contacts a fluid when the fin sensor is in use, and the downstream end of the rib (118) is the end of the rib (118) that last contacts the fluid when the fin sensor is in use.

7. A fin sensor (102) as claimed in claims 1 to 5, the rib (118) having a cross-sectional thicknesses of a downstream (145) end of the rib (118) that is greater than a thickness of a cross-sectional thickness of a middle portion of the rib (118), and having a cross-sectional thicknesses of an upstream (145) end of the rib (118) that is greater than a thickness of the cross-sectional thickness of a middle portion of the rib (118), wherein the upstream end of the rib (118) is the end of the rib (118) that first contacts a fluid when the fin sensor is in use, and the downstream end of the rib (118) is the end of the rib (118) that last contacts the fluid when the fin sensor is in use.

8. A fin sensor (102) as claimed in claims 1 to 7, further comprising at least one fin coupler (120a and/or 120b), the at least one fin coupler (120a and/or 120b) coupled to the fins (108a and 108b).

9. A fin sensor (102) as claimed in claims 1 to 8, the base (106) being a varying base (306) that has varying hardness.

10. A fin sensor (102) as claimed in claim 9, the varying base (306) having a softer portions proximal to the longitudinal axis of symmetry of the base coupler, and harder portions distal to the longitudinal axis of symmetry of the base coupler.

11. A fin sensor (102) as claimed in claims 9 and 10, the varying base (306) being thinner proximal to the longitudinal axis of symmetry of the base coupler, the varying base (306) being thicker more distal to the longitudinal axis of symmetry of the base coupler.

12. A fin sensor (102) as claimed in claims 9 to 11, the varying base (306) having varying material composition along a lateral axis thereof.

13. A fin sensor (102) as claimed in claim 12, the varying base (306) having softer material more proximal to the longitudinal axis of symmetry of the base coupler and harder material on distal edges of the varying base that are parallel to the longitudinal axis of symmetry of the base coupler.

14. A fin sensor (102) as claimed in claims 9 to 13, wherein a portion of the varying base (306) between the fins (108a and 108b) along a longitudinal axis of the varying base is softer than the portions of the varying base (306) between each of the fins (108a and 108b) and the distal edges of the varying base that are parallel to the longitudinal axis of symmetry of the base coupler.

15. A method of making a fin coupler assembly having a first fin (108a), a second fin (108b) and at least one fin coupler (120a and/or 120b), comprising forming a fin coupler assembly in which the fins (108a and/or 108b) are coupled to the at least one fin coupler (120a and/or 120b), further comprising forming a rib (118) and coupling the rib (118) to either a base (106) or a base coupler (116), or both the base (106) and the base coupler (116).

16. A method as claimed in claim 15, wherein the base (106) is formed as a varying base (306) with varying hardness.

17. A method as claimed in claim 16, wherein the varying base (306) is formed as softer more proximal to the longitudinal axis of symmetry of the base coupler than distal edges of the varying base (306) that are parallel to the longitudinal axis of symmetry of the base coupler.

18. A method of using a fin sensor (102) with a driving transducer (104b) to drive vibrations in a first fin (108a) and a second fin (108b), the first and second fin (108a and 108b) coupled to a base (106), the fin sensor (102) having at least one sensing transducer (104a) to receive response data, the method comprising at least partially restricting, by at least one fin coupler (120a and/or 120b), a motion of a first fin (108a)

relative to a motion of a second fin (108b), the method further comprising, at least partially restricting the motion of the base (106) with a rib (118).