

11. The system of claim 10 wherein said transducer comprises an electroactive polymer connected to said first and said second levers and having a dimension alterable in response to said first signal.

12. The system of claim 10 wherein said transducer comprises a piezoelectric actuator connected to said first and said second levers.

13. The system of claim 10 wherein said transducer comprises a pneumatic actuator connected to said first and said second levers.

14. The system of claim 13 wherein a rate of actuation of said pneumatic actuator is responsive to said first signal.

15. The system of claim 10 wherein said transducer comprises a hydraulic actuator connected to said first and said second levers.

16. The system of claim 15 wherein a rate of actuation of said hydraulic actuator is responsive to said first signal.

17. The system of claim 10 wherein said transducer comprises a motor having an output alterable in response to said first signal.

18. The system of claim 10 wherein said transducer includes a rheological fluid having a flow characteristic responsive to said first signal.

19. The system of claim 10 wherein said transducer comprises a polymer-metal composite element connected to said first and said second levers.

20. The system of claim 1 further comprising:

(a) a sensing transducer outputting a second signal to said data processing device, said sensing transducer being responsive to a condition of at least one of said bracing element and said attaching element; and

(b) a program instruction relating said second signal and said first signal.

21. The system of claim 20 wherein said sensing transducer responsive to a condition of at least one of said bracing element and said attaching element comprises a transducer arranged to output said second signal in response to a force exerted on said limb by said attaching element.

22. The system of claim 20 wherein said attaching element comprises a binding having a length arranged to confine said bracing element and said limb.

23. The system of claim 20 wherein said sensing transducer is arranged to output said second signal in response to a change in a tension in said binding.

24. The system of claim 23 wherein said sensing transducer comprises an electroactive polymer.

25. The system of claim 23 wherein said sensing transducer comprises a link connecting a portion of said binding to one of another portion of said binding and said bracing element, said link producing said second signal in response to a change in said tension.

26. The system of claim 25 wherein said link comprises a piezoelectric transducer.

27. The system of claim 20 wherein said sensing transducer outputting a second signal responsive to a condition of at least one of said bracing element and said attaching element comprises a transducer arranged to output a signal in response to deflection of a portion of said bracing element.

28. The system of claim 20 wherein said sensing transducer outputting a second signal responsive to a condition of at least one of said bracing element and said attaching

element comprises a transducer arranged to output a signal in response to a rotation of said first lever relative to said second lever.

29. The system of claim 28 wherein said transducer comprises an electroactive polymer having an electrical characteristic responsive to a change in a dimension, said electroactive polymer being connected to said first and said second levers such that relative rotation of said first and said second levers will change said dimension.

30. The system of claim 28 wherein said transducer comprises a polymer-metal composite element having an electrical characteristic responsive to a change in a dimension, said polymer-metal composite element being connected to said first and said second levers such that relative rotation of said first and said second levers will change said dimension.

31. An adjustable orthotic brace comprising:

(a) a first lever having a distal end and a proximal end;

(b) a second lever having a distal end and a proximal end, said proximal end and said proximal end of said first lever hinged for substantially relative rotation of said levers;

(c) a first attaching element restraining said first lever to a first element of a limb;

(d) a second attaching element restraining said second lever to said second element of said limb; and

(e) a loading transducer to alter a force exerted on at least one of said first element of said limb by said first attaching element and said second element of said limb by said second attaching element.

32. The apparatus of claim 31 wherein at least one of said attaching elements comprises a binding having a length arranged to confine at least one of said first and said second levers and said limb.

33. The apparatus of claim 32 wherein said loading transducer is arranged to alter said length of said binding.

34. The apparatus of claim 33 wherein said loading transducer comprises an electroactive polymer.

35. The apparatus of claim 33 wherein said loading transducer comprises a link connecting a portion of said binding to one of another portion of said binding and said bracing element, said link having a length responsive to said first signal.

36. The apparatus of claim 35 wherein said link comprises a piezoelectric actuator.

37. An adjustable orthotic brace comprising:

(a) a first lever having a distal end and a proximal end;

(b) a second lever having a distal end and a proximal end, said proximal end and said proximal end of said first lever hinged for substantially relative rotation of said levers;

(c) a first attaching element restraining said first lever to a first element of a limb;

(d) a second attaching element restraining said second lever to said second element of said limb; and

(e) a loading transducer arranged to displace said proximal end of at least one said first and said second levers