AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1-15. Canceled

16. (Currently Amended) A humanoid robot comprising:

a torso;

a head coupled to the torso;

an articulated arm coupled to torso; and

an end effector coupled to the articulated arm and comprising:

(a) a tactile sensor assembly including (i) a first strain gauge, and (ii) an electronics assembly communicatively coupled to the first strain gauge and configured to: receive signals from the strain gauge as input, process the received signals, and output processed data based on the received signals, and

(b) an energy attenuation member comprising (i) an interior region having a first compression/deflection ratio, and (ii) an exterior region at least partially surrounding the interior region and having a second compression/deflection ratio that is less than the first compression/deflection ratio,

wherein the energy attenuation member is configured to receive an external force and transfer at least a portion of the received external force to the tactile sensor assembly.

17. (Original) The humanoid robot of claim 16, wherein the energy attenuation member further comprises an intermediate region located at least partially between the exterior region and the interior region, and wherein the intermediate region has a third compression/deflection ratio that is between the first compression/deflection ratio and the second compression/deflection ratio.

18. (Currently Amended) The humanoid robot of claim 16, wherein the interior region of the energy attenuation member comprises a curvilinear ~~outside~~ outer surface.

19. (Original) The humanoid robot of claim 16, wherein the exterior region of the energy attenuation member comprises an outside surface with a pattern of ridges and grooves.

20. (Currently Amended) The humanoid robot of claim 16, wherein the exterior region of the energy attenuation member comprises a plurality of ridges and grooves, and wherein said plurality of ridges and grooves covers at least a majority of the ~~outside~~ outer surface of the energy attenuation member.

21. (Original) The humanoid robot of claim 16, wherein the end effector further comprises a force distributor member arranged between the tactile sensor assembly and the energy attenuation member, wherein the force distributor member is fixed to the energy attenuation member and transfers the portion of the received external force to the tactile sensor assembly.

22. (Original) The humanoid robot of claim 21, wherein the force distributor member comprises a base positioned over the first strain gauge and an extension flange at a rear of the base extending upward and away from the first strain gauge, wherein the force distributor member transfers the portion of the received external force to the tactile sensor assembly by moving towards the tactile sensor assembly, and wherein an amount of such movement is limited by a hard stop acting against a bottom surface of the force distributor member.

23. (Original) The humanoid robot of claim 16, wherein the tactile sensor assembly further includes a bridge comprising:

(a) a base section, and

(b) three flexure arms,

wherein each flexure arm includes a sloped section extending upwards from the base section and a load section extending away from the sloped section and parallel to the base section, and

wherein the first strain gauge is coupled to the sloped section of a first flexure arm of the of the three flexure arms, a second strain gauge is coupled to the sloped section of a second flexure arm of the of the three flexure arms, and a third strain gauge is coupled to the sloped section of a third flexure arm of the of the three flexure arms.

24. (Original) The humanoid robot of claim 23, wherein each sloped section extends upwards from the base section at an angle between 1° and 60°, measured as an interior angle between a dominant plane of the base section and a dominant plane of the sloped section.

25. (Original) The humanoid robot of claim 23, wherein each flexure arm of the three flexure arms is configured to repeatably deform a known amount in response to a known force applied normal to the load section of the respective flexure arm and return to a non-deformed state when the known force is removed.