CLAIMS

1. A system for monitoring foetal growth, the system comprising:

    a plurality of devices, each device of the plurality of devices configured to determine measurements of a baby bump over a time period, and further configured to store the measurements, wherein the measurements are determined by light detection and ranging technology; and

    a server configured to receive the measurements from each of the plurality of devices;

    wherein the server is configured to compare the measurements from different devices of the plurality of devices; and

    wherein the system is further configured to send an alert upon detecting an abnormality based on the measurements from the different devices of the plurality of devices.

2. The system according to claim 1,

    wherein each device of the plurality of devices comprises one or more sensors used in the determination of the measurements and the one or more sensors are selected from a group consisting of optical sensors, motion sensors, and ranging apparatuses.

3. The system according to claim 1 or claim 2, wherein the measurements of the baby bump are based on a distance between two points of the baby bump of a pregnant mother, wherein the plurality of devices are configured to:

    generate a plurality of discrete points between the two points;

fit a three-dimensional curve to the plurality of discrete points, the three-dimensional curve including a plurality of interpolated points;

determine a length between each pair of neighbouring interpolated points; and

sum all the lengths between the pairs of neighbouring interpolated points to be a length between the two points.

4. The system according to any one of claims 1 to 3,

wherein the measurements determined by each device of the plurality of devices relates to a fundal height of the baby bump.

5. The system according to any one of claims 1 to 4,

where each device of the plurality of devices further comprises a memory storage configured to store the measurements.

6. The system according to of claim 3, wherein the plurality of devices are further configured to:

prior to fitting a three-dimensional curve to the plurality of discrete points, generate a point cloud based on the plurality of discrete points; and

fit a three-dimensional curve to the plurality of discrete points in the point cloud.

7. The system according to any one of claims 1 to 6,

wherein each device of the plurality of devices further comprises a display for displaying information regarding the measurements.

8. The system according to any one of claims 1 to 7,

wherein the server is configured to compare the measurements of a predetermined group of pregnant mothers that is selected from one or more parameters.

9. The system according to claim 8,

wherein the one or more parameters comprise ethnicity, age, body height, body weight, gestational age and country of residence.

10. The system according to any one of claims 1 to 9,

wherein the system is configured to send the alert regarding the abnormality of the baby bump of a pregnant mother to communication devices of one or more preassigned contacts of the pregnant mother.

11. The system according to any one of claims 1 to 10,

wherein each device of the devices is a smartphone, a tablet, or a smart watch.

12. The system according to any one of claims 1 to 11,

wherein the system is further configured to send the alert upon detecting the abnormality by comparing measurements determined by a device of the plurality of devices at different times during the time period.

13. The system according to any one of claims 1 to 12,

wherein the system is further configured to send the alert upon detecting the abnormality by comparing the measurements from each device with clinical data stored in the server.

14. A method of forming a system for monitoring foetal growth, the method comprising:

providing a plurality of devices, each device of the plurality of devices configured to determine measurements of a baby bump over a time period, and further configured to store the measurements, wherein the measurements are determined by light detection and ranging technology; and

providing a server configured to receive the measurements from each of the plurality of devices;

wherein the server is configured to compare the measurements from different devices of the plurality of devices; and

sending an alert upon detecting an abnormality based on the measurements from the different devices of the plurality of devices.

15. A method of monitoring foetal growth, the method comprising:

determining measurements of a baby bump over a time period using each device of a plurality of devices, each device of the plurality of devices configured to store the measurements, wherein the measurements are determined by light detection and ranging technology;

receiving the measurements from each device of the plurality of devices by a server;

comparing, by the server, the measurements from different devices of the plurality of devices; and

sending an alert upon detecting an abnormality based on the measurements from the different devices of the plurality of devices.

16. The method according to claim 15,

wherein determining measurements of the baby bump comprises determining measurements of a fundal height of the baby bump.

17. The method according to claim 15 or claim 16,

wherein the measurements of the baby bump are based on a distance between two points of the baby bump of a pregnant mother.

18. The method according to claim 17,

wherein the two points are a point of a uterus of the pregnant mother and a point of a pubic symphysis of the pregnant mother.

19. The method according to claim 17 or claim 18,

wherein the distance is a curved distance between the two points.

20. The method according to any one of claims 15 to 19,

wherein each device of the plurality of devices comprises one or more sensors used in the determination of the measurements and the one or more sensors are selected from a group consisting of optical sensors, motion sensors, and ranging apparatuses.

21. The method according to any one of claims 17 to 19, further comprising:

generating a plurality of discrete points between the two points;

fitting a three-dimensional curve to the plurality of discrete points, the three-dimensional curve including a plurality of interpolated points;

determining a length between each pair of neighbouring interpolated points; and

summing all the lengths between the pairs of neighbouring interpolated points to be a length between the two points.

22. The method according to claim 21, prior to fitting a three-dimensional curve to the plurality of discrete points, the method further comprising:

generate a point cloud based on the plurality of discrete points; and

fitting a three-dimensional curve to the plurality of discrete points in the point cloud.

23. The method according to any one of claims 15 to 22, further comprising:

sending the alert upon detecting the abnormality by comparing measurements determined by a device of the plurality of devices at different times during the time period.

24. The method according to any one of claims 15 to 23, further comprising

sending the alert upon detecting the abnormality by comparing the measurements from each device with clinical data stored in the server.