CLAIMS

1. An apparatus on a movable vessel for providing a retractable platform for launching or landing of aerial vehicles comprising:

a base member having a central axis and being adapted for mounting to a long side of a vessel body;

a compensating arm having two ends, a first end being mounted to the base member, and the compensating arm being rotatable about the central axis of the base member;

a multi-axis connector adapted to be pivotably connected to a second end of the compensating arm;

a platform adapted for coupling to the multi-axis connector, said platform being capable of movement with at least two degrees of freedom;

at least one sensor to sense three-dimensional orientation of the platform;

wherein two or more supporting members extend from the vessel body to the retractable platform; and

one or more controllers coupled to the at least one sensor to process sensor information and provide instructions to the compensating arm, multi-axis connector and supporting members to orient the platform thereby, to maintain a stable orientation of said platform.

2. The apparatus according to claim 1, wherein a predetermined position or orientation is such that the platform remains substantially level with the earth's horizon.

3. The apparatus according to claim 2, wherein the platform is rotatable about the central axis of the base member.

4. The apparatus according to claim 3, wherein the multi-axis connector has a transverse axis and the platform is rotatable about the transverse axis of the mufti-axis connector.

5. The apparatus according to claim 2, wherein multi-axis connector has a longitudinal axis and the platform is rotatable about the longitudinal axis of the multi-axis connector.

6. The apparatus according to claim 2, wherein multi-axis connector has a longitudinal axis and the platform is translatable about the longitudinal axis of the multi-axis connector.

7. The apparatus according to claim 1, further comprising a controller operatively connected to at least one sensor mounted on the platform, wherein the controller receives information from at least one sensor to effect movement of the compensating arm.

8. The apparatus according to claim 7, wherein the at least one sensor comprises position and level sensors for detecting yaw, roll and pitch of the vessel body.

9. The apparatus according to claim 1, wherein the vessel has a vertical axis and the platform rotates about the central axis of the base member in a direction opposite to the direction of rotation of the vessel body with respect to the vertical axis of the vessel body.

10. The apparatus according to claim 1, wherein the vessel body has a longitudinal axis and the platform rotates about the longitudinal axis of the multi-axis connector in a direction opposite to the direction of rotation of the vessel with respect to the longitudinal axis of the vessel body.

11. The apparatus according to claim 1, wherein the vessel body has a transverse axis and the platform rotates about the transverse axis of the multi-axis connector in a direction opposite to the direction of rotation of the vessel with respect to the transverse axis of the vessel body.

12. The apparatus according to claim 1, wherein the compensating arm further comprises at least two arm members, each pivotably connectable to each other at one end.

13. The apparatus according to claim 1, wherein the platform further comprises a gas-inflatable bag.

14. The apparatus according to claim 1, wherein the base member is adapted for connection to an upper deck of the vessel body.

15. The apparatus according to claim 1 wherein the platform is made of a flexible, resilient material.

16. The apparatus according to claim 1 wherein the platform extends along at least a part of the length of the vessel body.

17. The apparatus according to claim 1, wherein the two supporting members are hydraulic members.

18. The apparatus according to claim 1, wherein each supporting member has two ends, each operatively coupled to a multi-axis connector.

19. A method for launching and landing of unmanned aerial vehicles comprising:

connecting a retractable platform along an edge of a vessel;

raising the retractable platform from a retracted position to an extended position;

connecting two or more supporting members to the retractable platform, wherein the two or more supporting members are extended from the vessel;

sensing the movement of the vessel independent of the platform based on information collected by at least one sensor mounted on the retractable platform; and

self-levelling the retractable platform to a position substantially level with the earth's horizon by moving the retractable platform in at least two degrees of freedom based on the information collected by the at least one sensor.

20. The method according to claim 19, wherein the at least one sensor further comprises level sensors to detect the yaw, pitch and roll of the vessel.

21. The method according to claim 20, wherein the step of self-leveling further includes the step of processing the information collected by the at least one sensor by a control system.

22. The method according to claim 21, wherein the step of self-leveling further includes sending instructions to a compensating arm adapted for connection to the platform so as to effect movement of the platform in response to the yaw, pitch and roll of the vessel.