What is claimed is:

1. A laparoscope-holding robot system for laparoscopic surgery, comprising: a trolley rack wherein the trolley rack comprises a base, a stationary post immovably fixed to the base, and a sliding sleeve on the post; and

a mechanical arm on the trolley rack, wherein the mechanical arm is connected at one end thereof to the sliding sleeve, wherein the mechanical arm has at least six degrees of rotational freedom and at least one degree of translational freedom, and wherein one degree of translational freedom is provided to the mechanical arm by the sliding sleeve sliding on the post,

wherein the mechanical arm comprises a terminal joint and an intermediate joint respectively connected to a first connecting arm and a second connecting arm, and the terminal joint comprises a first joint connected to the trolley rack and a sixth joint connected to a mounting seat of a surgical tool,

wherein the intermediate joint comprises a second joint rotationally connected to the first joint, a third joint connecting the first connecting arm and the second connecting arm, a fourth joint rotationally connected to the second connecting arm and a fifth joint respectively rotationally connected to the fourth joint and the sixth joint,

wherein a top end of the post is provided with a mechanical interface, and the mechanical arm is fixedly connected to the mechanical interface.

2. The laparoscope-holding robot system for laparoscopic surgery according to claim 1, wherein when the second connecting arm is rotated with an axis of the third joint as a rotation axis, a maximum rotation angle is 360 °.

3. The laparoscope-holding robot system for laparoscopic surgery according to claim 1, wherein when the first connecting arm is rotated with an axis of the second joint as a rotation axis, a maximum rotation angle is 180 °.

4. The laparoscope-holding robot system for laparoscopic surgery according to claim 2, wherein when the first connecting arm is rotated with an axis of the second joint as a rotation axis, a maximum rotation angle is 180 °.

5. The laparoscope-holding robot system for laparoscopic surgery according to claim 1, wherein the first joint is provided with a wire pipe at a position connected to the trolley rack, and an axial direction of the wire pipe is perpendicular to an axial direction of the first joint and a height direction of the post, respectively.

6. The laparoscope-holding robot system for laparoscopic surgery according to claim 1, wherein a bottom of the base is provided with two directional casters and two universal casters having a braking function, respectively.

7. A laparoscope-holding robot system for laparoscopic surgery, comprising: a trolley rack,

wherein the trolley rack comprises a base and a single stationary post immovably fixed to the base; and

a mechanical arm on the post,

wherein the mechanical arm includes an extension plate having a quick-release device configured to receive a surgical tool,

wherein the mechanical arm has at least six degrees of freedom comprising rotational freedom, translational freedom, or a combination thereof,

wherein the mechanical arm comprises a first joint having a rotational axis and a second joint having a rotational axis;

wherein the rotational axis of the first joint is offset from and parallel to a height direction of the post,

wherein the rotational axis of the first joint is perpendicular to the rotational axis of the second joint, and

wherein a top end of the post is provided with a mechanical interface, and the mechanical arm is fixedly connected to the mechanical interface.

8. The laparoscope-holding robot system for laparoscopic surgery according to claim 7, wherein the mechanical arm comprises a terminal joint and an intermediate joint respectively connected to a first connecting arm and a second connecting arm, and the terminal joint comprises the first joint connected to the trolley rack and a sixth joint connected to a mounting seat of the surgical tool.

9. The laparoscope-holding robot system for laparoscopic surgery according to claim 8, wherein the intermediate joint comprises a second joint rotationally connected to the first joint, a third joint connecting the first connecting arm and the second connecting arm, a fourth joint rotationally connected to the second connecting arm and a fifth joint respectively rotationally connected to the fourth joint and the sixth joint.

10. The laparoscope-holding robot system for laparoscopic surgery according to claim 9, wherein a rotation axis of the fourth joint, a rotation axis of the fifth joint and a rotation axis of the sixth joint are perpendicular to each other.

11. The laparoscope-holding robot system for laparoscopic surgery according to claim 7, wherein a rotation axis of the fourth joint, a rotation axis of the fifth joint and a rotation axis of the sixth joint are perpendicular to each other.

12. The laparoscope-holding robot system for laparoscopic surgery according to claim 7, wherein the first joint is provided with a wire pipe at a position connected to the trolley rack, and an axial direction of the wire pipe is

perpendicular to an axial direction of the first joint and a height direction of the post, respectively.

13. The laparoscope-holding robot system for laparoscopic surgery according to claim 7, wherein a bottom of the base is provided with two directional casters and two universal casters having a braking function, respectively.

14. The laparoscope-holding robot system for laparoscopic surgery according to claim 8, further comprising:

a mounting base coupled to the sixth joint, the mounting base having a top surface,

wherein the extension plate has a bottom surface, the bottom surface having a mounting portion coupled to the top surface of the mounting base.

15. The laparoscope-holding robot system for laparoscopic surgery according to claim 1, wherein the first joint is connected to the sliding sleeve.

16. The laparoscope-holding robot system for laparoscopic surgery according to claim 15, wherein the first joint is connected to the sliding sleeve by an adapter flange.

17. The laparoscope-holding robot system for laparoscopic surgery, comprising

a trolley rack,

wherein the trolley rack comprises a base and a single stationary post immovably fixed to the base;

a mechanical arm on the post,

wherein the mechanical arm includes an extension plate having a quick-release device configured to receive a surgical tool,

wherein the mechanical arm has at least six degrees of freedom comprising rotational freedom, translational freedom, or a combination thereof,

wherein the mechanical arm comprises a first joint having a rotational axis and a second joint having a rotational axis;

wherein the rotational axis of the first joint is offset from and parallel to a height direction of the post,

wherein the rotational axis of the first joint is perpendicular to the rotational axis of the second joint, and

wherein the mechanical arm comprises a terminal joint and an intermediate joint respectively connected to a first connecting arm and a second connecting arm, and the terminal joint comprises the first joint connected

to the trolley rack and a sixth joint connected to a mounting seat of the surgical tool; and

a mounting base coupled to the sixth joint, the mounting base having a top surface,

wherein the extension plate has a bottom surface, the bottom surface having a mounting portion coupled to the top surface of the mounting base.

18. The laparoscope-holding robot system for laparoscopic surgery according to claim 17, wherein the intermediate joint comprises a second joint rotationally connected to the first joint, a third joint connecting the first connecting arm and the second connecting arm, a fourth joint rotationally connected to the second connecting arm and a fifth joint respectively rotationally connected to the fourth joint and the sixth joint.

19. The laparoscope-holding robot system for laparoscopic surgery according to claim 18, wherein a rotation axis of the fourth joint, a rotation axis of the fifth joint and a rotation axis of the sixth joint are perpendicular to each other.

20. The laparoscope-holding robot system for laparoscopic surgery according to claim 17, wherein a rotation axis of the fourth joint, a rotation axis of the fifth joint and a rotation axis of the sixth joint are perpendicular to each other.

21. The laparoscope-holding robot system for laparoscopic surgery according to claim 17, wherein the first joint is provided with a wire pipe at a position connected to the trolley rack, and an axial direction of the wire pipe is perpendicular to an axial direction of the first joint and a height direction of the post, respectively.

22. The laparoscope-holding robot system for laparoscopic surgery according to claim 17, wherein a bottom of the base is provided with two directional casters and two universal casters having a braking function, respectively.