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Biosensor's system of remote-presence robot for monitoring of infected patients

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The covid pandemic that has taken over the world since 2019 has shown the need for the development of remote patient monitoring and control systems. The need to protect personnel from contamination has led to the use of various methods of disinfection of medical and sanitary facilities in which patients (staff) may be at the time of treatment.
All these problems that humanity faced at that moment actualized the tasks of modifying and developing new medical systems that would not only clean and disinfect medical premises, but also record the basic medical indicators of the patient. Data on temperature, oxygenation, general condition and tests for the virus are the basic markers that guide the doctor when examining the patient.
Therefore, as one of the ways to protect the doctor (medical personnel in general), we proposed a robotic biomedical (measuring) system based on the Texas Instruments Robotics System Kit (TI-RSLK), which includes a set of sensors for measuring human biological parameters, a disinfection unit, power supply (charging station) and control unit.
As a result, such a system was modeled and developed. The measuring part that interacts with the patient includes: a fingerprint sensor, a non-contact temperature sensor, a saturation sensor, a heart rate sensor. Also, the system has its own battery, a disinfection system based on ultraviolet lamps and a visual interaction system with the patient

Topics

Session D. Biomedical optics and sensors technology

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