

autonomous mobile home printed on a 3D printer]. Retrieved from <https://www.radiosvoboda.org/a/28997630.html>

- Schukin, A. (2012). From thermos house to concept house. *Expert*, 13(796), 23-25. Retrieved from <https://expert.ru/expert/2012/13/>

PROSPECTS OF ARTIFICIAL INTELLIGENCE

Oleksandr Luhovyi

Faculty of Chemical Technology,

National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”

Artificial intelligence is, first of all, the property of intelligent systems to perform creative functions, which are traditionally the prerogative of man. Unfortunately, today intelligent systems have a fairly narrow field of application. Programs that can beat a person at cards or chess cannot answer the questions, etc. But nobody cannot deny the fact, that sooner or later, artificial intelligence will become an integral part of the technological industry. And with its help it will be possible to solve any, even the most complex problems.

Artificial intelligence is already gradually starting to spread in medicine, the defense industry, as well as in scientific research. Just imagine that in a few years, with the help of intelligent systems, it will be possible to determine the diagnosis without any difficulties and successfully carry out treatment without the presence of a doctor! This can be done using Speech Recognition technology. The technology is a combination of speech recognition and natural speech processing used to describe the symptoms of patients. It will also save doctors the need to record data and automatically create electronic medical records to help doctors work more efficiently.

Artificial intelligence has found tremendous use in the defense industry and continues to develop. For example, aircraft simulators use artificial intelligence to process data from flight simulations. Besides flight simulation, there is also aircraft combat simulation. In such cases, computers can offer the best success scenarios. Computers can also create strategies based on placement, size and speed. Pilots can

be assisted by computers in the air in a battle. Perhaps, in the near future artificial intelligence systems will completely replace the work of a pilot. In any cases, the absence of the pilot in the cockpit will save his life in a battle. (Sun, 2021).

Technology has always played a role in scientific research, and artificial intelligence is expected to take a step forward and raise the bar in scientific research to a new level. It can assist in peer review the image quality search and extraction, plagiarism detection and data tampering (Fuse machines, 2019).

References:

1. Fuse machines. (2019, April 19). *How artificial intelligence will impact scientific research*. Medium. Retrieved from <https://fusemachines.medium.com/how-artificial-intelligence-will-impact-scientific-research-4e6f4face1ae>.

2. Sun, D. (2021, October 22). *Prospects of Artificial Intelligence: Daily sun*. Retrieved from <https://www.daily-sun.com/magazine/details/117932/PROSPECTS-OF-ARTIFICIALINTELLIGENCE>.

SPIRIT-BASED BIOFUELS

Dmitry Melnik

Faculty of Electric Power Engineering and Automatics,

National Technical University of Ukraine 'Igor Sikorsky Kyiv Polytechnic Institute'

The current increase in the number of cars, which has resulted in increased demand for motor fuel amid declining oil reserves and stringent environmental requirements for fuels and their combustion products, is prompting scientists to create alternative fuel resources. Among them the most promising are spirit-based biofuels.

Biofuels are a new milestone in the history of civilization. A sensible approach to the production of biofuels can solve the economic and environmental problems of mankind. It is an organic fuel obtained from raw materials of vegetable or animal origin, as well as from industrial waste. It is a renewable resource that can produce energy without harming the environment. The use of alcohols in a mixture with gasoline can significantly reduce the release of carbon monoxide, which is the cause