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## **Prof. Michio Kaku walks audience into a profound future during RSNA session**



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Thursday afternoon's plenary session at RSNA 2017 in Chicago last week saw audience members gather for one of the week's most profound and informative, yet deeply optimistic discussions, where Professor Michio Kaku engaged the audience in an enlightening walk into the future through the eyes of a theoretical physicist.

Titled "The Next 20 Years: How Science and Technology Will Revolutionize Business, the Economy, Jobs and Our Way of Life", Prof. Kaku delivered a glimpse of where science will take us in the next hundred years, as warp drives, teleportation, inter-dimensional wormholes, and even time travel converge with our scientific understanding of physical reality.

As one of the world's most recognised scientists, Prof. Kaku was able to identify three waves of wealth generation in modern economies in a very engaging way: the first being the invention of steam power in the 1800s, next came the discovery of electricity, while the third wave brought high-tech innovations.

Asking audience members what is the fourth wave, he explained that it is advancements at the molecular level, in particular artificial intelligence (AI), nanotech and biotech, all linked together by the cloud.

According to a future envisioned by the scientist himself, we will indeed live in a combination of virtual and augmented reality, allowing us to therefore create imaginary worlds while simultaneously extracting vital information. This concept is known as "information everywhere and nowhere".

While firing up audience members' imaginations about the future, Prof. Kaku also went into details on the opportunities and threats that AI can bring to life and what exactly its role is in the future.

Acknowledging that AI is no doubt the most popular and current innovation that appears to be set to replace jobs across the industry, Prof. Kaku also reminded the audience that there are of course limitations to what AI can do and that robots cannot in fact replace skilled and semi-skilled workers.

“Robots are weak in three areas,” he said.

The first is pattern recognition, the second is common sense, and the third is in handling human interactions.

“Robots can’t argue a legal case or understand morals and values.”

Other areas which Prof. Kaku spoke about involved the digitisation of medicine which related to how our present day will be able to tackle cancer due to the fact that we now have a road map, lasers, computers and the Genome Project, in addition to the smart technologies which also exist. Prof. Kaku actually predicted, the word “tumour” will disappear in the future.

And finally, Prof. Kaku also described to audience members how the next big science project to be tackled is to map the human brain, the Human Connectome Project.

According to the scientist, that capability will open up new opportunities in medicine as researchers will apparently be able to map neural pathways and extract images from a living brain.

Prof. Kaku said that the U.S. Pentagon is funding \$150 million to connect a living brain with an exoskeleton. The map will provide the blueprint to do this, providing new treatments for injured soldiers and athletes.

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