Applications of Human Factors Engineering in Astronaut Training

Presented By: Jian Zheng

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About the Speaker: Mr. Jian Zheng is an Assistant Professor in China Astronaut Research and Training Center. He has extensive experience training Chinese astronauts in Shenzhou 9 and Shenzhou 10 spaceflight missions. His research interests are in human factors and cognitive ergonomics, human error in complex systems, human reliability, and human computer interaction.

Abstract: In this presentation, I will first give you a brief introduction of China Astronaut Research and Training Center (ACC) and astronaut training at ACC, including classification of astronaut training, training content and method. Then I will discuss the applications of Human Factors Engineering in astronaut training, including the establishment a national key laboratory of human factors engineering, the design of Shenzhen spaceship, the design of training programs, facilities, and equipment to improve the efficiency of astronaut training. Finally, I will present two research projects:

1) Study on training methods and operation strategies of manual rendezvous and docking (RVD)
2) Studying human cognition in space using eye-hand coordination test