



It is inevitable that human beings will run out for a long time. The influence of light on people has complex pathways, involving optics, psychology, neurobiology and other disciplines; Affects the visual, psychological and physiological properties of the human body. In the past 20 years, Prof. Yandan Lin has adhered to the front line in the field of light health, continuously carried out long-term and in-depth systematic scientific research at the forefront of the no-man's land in this field, played the leading role of outstanding female scientists in the field of engineering, and achieved a number of achievements and won multiple awards.

In the important pillar manufacturing fields such as aircraft, trains and automobiles, Prof. Yandan Lin solve the common mechanism problems of light safety and light health in driving, and tackle key technologies that affect safe driving.

1. Study the mathematical model of uncomfortable glare; A high-dynamic display dimming model and a multi-objective optimization algorithm based on visual safety in complex application scenarios are established to visualize the light environment and ensure driving safety for complex scenarios such as airplanes and trains.
2. Define the light scheme to improve emotional disorders and form a patent, which provides new phototherapy ideas and theoretical basis for the treatment of mood disorders.
3. Quantitatively predict the impact of light time points and light accumulation on human circadian rhythm phase shift, and guide the design and evaluation of health light environment.

Based on the above three aspects, the basic methodology of human factors engineering in lighting and the comprehensive system of light health assessment have been formed, and applied to the research and development and production of key cabins of many types of export trains such as civil aircraft (C919), CRRC Boston Orange Line Metro (76 trains and 152 cars), Boston Red Line Metro (126 trains and 252 cars), Tel Aviv Red Line trams (90 trains and 450 cars), Los Angeles

Metro (32 trains and 64 cars) and other key cabins of export trains to ensure light safety and Health and comfort, regulating the visual safety, emotional and mental health of long-term artificial light service members.

Due to the above achievements, Prof. Yandan Lin won the second prize of Shanghai Science and Technology Award in 2018: Research on the Theory and Method of Human-Machine Ergonomics Comprehensive Simulation of Civil Aircraft Cockpit.

Prof. Yandan Lin are well-known and few female engineers and researchers in their fields. In 2016, Prof. Yandan Lin won the Shanghai Woman Innovation Rookie Award and Shanghai Woman Pace-Setter, which was awarded by the Shanghai Women's Federation, the Shanghai Municipal Education Commission and the Shanghai Municipal Science and Technology Commission. This award recognizes her outstanding contributions as a woman in the field of education and scientific research.

As a professor, Prof. Yandan Lin's mentor several outstanding female engineering doctors or master who have progressed in the field of lighting engineering, published papers and patents, and continued to work in related fields. Among them, Dr. Dandan Hou received the "The IEA/Kingfar Award for Student Research in Human Factors and Ergonomics Issues in Industrially Developing Countries." from the International

Ergonomics Association (IEA) in 2021 in recognition of her achievements in the field of human factors engineering.

Prof. Yandan Lin has an outstanding entrepreneurial spirit as an academic researcher in the field of human factors engineering, and is committed to the development and promotion of engineering technology from the perspective of industry. Since 2012, Prof. Yandan Lin has organized the International Forum of Automotive Lighting (China) (IFAL) as the initiator and chairman of the conference for eleven consecutive years to promote the technological progress and development of China's automotive lighting field. IFAL provides a platform for enterprises and scholars in the field of automotive lighting to exchange and cooperate, and has achieved extensive influence in the industry. The applicant led the team to undertake a number of cooperative R&D projects of leading enterprises in the industry such as CRRC and Huawei, prospectively solved technical problems in the industry, and obtained a number of invention patents.

Many research results in cooperation with enterprises have been applied in civil aircraft, rail transit, and automobiles. She is also the executive vice president of Guanghua Lingang Engineering Application Technology R&D (Shanghai) Co., Ltd., committed to engineering technology research and development and application in industrialization platform. In 2022, the nominee received the 2022 China Audiovisual Health Industry Technology Innovation Leader Award, presented by the C3D Industry Alliance and the Visual and Auditory Health Industry Technology Innovation Alliance, in recognition of her contributions to leading innovation in the industry.