

August Newsletter of RS Xi'an Chapter

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The 2019 Colloquium on Logic in Engineering Dependable Software (LEDS), which is organized by IEEE RS Xi'an Chapter, and hosted by Yili Normal University at Xinjiang province in China. LEDS2019 is concerning with promoting the theoretical research, technical development and industrial application for dependable software and system in China, and it intends to strengthen the cooperation and academic exchange among member of reliability society. The colloquium was held at Wenzhou International Hotel, Yining city, Xinjiang, from 10th to 11st, August 2019, as shown in Figure 1. During the two days' colloquium, more than fifty attendees shared their recent works and exchanged different academic ideas.



Figure 1. Attendees at LEDS2019 in Yining City

At the opening speech, the president of LEDS2019, Professor Chaochen Zhou, who is an Academician fellow of Chinese Academy of Science and the third Academy of Science, delivered a speech for the opening ceremony of the colloquium and announced the start of the colloquium, as is shown in Figure 2.



Figure 2. LEDES2019 opening ceremony

In the keynote speech, professor Zhenhua Duan, who come from Xidian University, as shown in Figure 3, presented the relationship between formulas specified by index set expressions and concise syntax by means of fixed point approach.



Figure 3. Professor Zhenhua Duan presented temporal logic formula using index set expression technique

Dr. Naijun Zhan, a Senior researcher from the Software Research Institute of the Chinese Academy of Sciences, presented various approaches to analysis and correct-by-construction design of dynamical systems subjected to delayed information exchange, as shown in Figure 4.



Figure 4. Professor Naijun Zhan presented trends and challenges in verification and synthesis of time-delay

Professor Yunwei Dong, from Northwestern Polytechnical University, gave a speech on AADL vulnerability modeling and analysis method. He expanded the AADL language and implemented the AADL vulnerability annex model sublanguage to analyze the security of complex embedded systems, as show in Figure 5.



Figure 5. Professor Yunwei Dong introduced AADL vulnerability modeling and analysis method

Researcher Xining Cui, who is an industry representative from Xi'an Institute of Aeronautical Computing Technology, introduced the software architecture design of Integrated Modular Avionics (IMA) system. Moreover, a total of 15 reports were presented at this colloquium. They are about the formal methods of software, the theory of software model design, software analysis and verification and software engineering application. All attendees were actively involved in the discussion, and the colloquium was interesting and the discussions were lively, as is shown in Figure 6 and Figure 7.



Figure 6. Attendees listened carefully



Figure 7. Professor YiXiang Chen actively participated in the discussion

We would like to give a special acknowledgment to YiliNormal University and Special committee on formal methods of China Computer Federation.