

GIST hosts the 2022 Creative Convergence Contest

- College students who returned to school to develop table tennis robots and algorithms competed fiercely for two months
- Held annually to foster talents in convergence technology fields such as artificial intelligence and next-generation energy-based technologies



▲ Students who participated in the 6th GIST Creative Convergence Contest are taking a commemorative photo after the awards ceremony.

GIST (Gwangju Institute of Science and Technology, President Kiseon Kim) Institute of Integrated Technology (Director Je Ha Ryu) held the “6th Creative Convergence Contest” in August to nurture talented people with creative and convergent thinking required in the era of the 4th Industrial Revolution. The awards ceremony was held on the 23rd (Tuesday) and the two-month competition schedule was successfully completed.

The “Creative Convergence Contest,” which started in 2017 and celebrated its 6th anniversary this year, was held in the field of convergence technology corresponding to the era of the 4th Industrial Revolution, such as artificial intelligence, intelligent robot, virtual environments, healthcare, and next-generation energy-based technology. It is held every year to discover talented students, and it provides an opportunity to foster cooperation and group creativity by conducting joint research in a team of 3 to 4 participating students.

In particular, the professors and graduate students of the GIST Convergence Technology Institute serve as mentors for each team and provide practical help such as on-site guidance and advice, establishing a place for the students to express their infinite creativity and realize innovative ideas.

This year's competition, in which 24 undergraduates from Korean universities formed seven teams competed for about two months from the end of June, was divided into two tracks: the Table Tennis Robot Contest and the Campus Energy Management System (EMS)* Development Contest. After returning from summer vacation, the students participated in the competition for two months, immersing themselves in the development of innovative table tennis robots and algorithms.

* EMS: Energy Management System

The 'Table Tennis Robot Contest' was conducted in a way that competed for rankings by performing challenging tasks, in which the ping-pong robot hit the ping-pong ball coming out of a ping-pong machine and by participating students playing ping-pong against the robot.



▲ Students from the participating team who challenged the 'Table Tennis Robot Contest' section of the 6th Gist Creative Convergence Contest are playing a game with the table tennis robot.

The 'Campus EMS Development Contest' is a contest to develop a load prediction algorithm, a solar power generation amount prediction algorithm, and an electricity rate minimization algorithm based on the data provided by the organizer, and the ranking by was determined by calculating the electricity cost used.

The winner of this year's competition was the 'Zipingi' team consisting of students majoring in mechanical engineering (Jeong-Woo Lee, Hyun-Beom Shin, and Han-Seok Han) in the GIST undergraduate program for their <Development of a table tennis robot using computer vision and robot reinforcement learning> in the 'Table Tennis Robot Contest' section. They won a cultural gift certificate worth 2.5 million won.

The first prize was awarded to the 'Cat Decided by the Cat' team in the 'Table Tennis Robot Contest' category and the 'Today's Weather' team from the 'Campus EMS Development Contest' category. Team 'CP' in 'Table Tennis Robot Contest' and 'MySolar' Team in 'Campus EMS Development Contest' won the prizes.

※ [참고] 제6회 지스트 창의융합경진대회 수상팀

상명	참가트랙	수상팀명	아이디어명
대상	탁구로봇	지핑이(GIST대학) 이정우 , 신현범, 한정석	컴퓨터 비전과 로봇 강화학습을 이용한 탁구 로봇 개발
최우수상	탁구로봇	고양이가 정해준(GIST대학) 김승은 , 김규민, 현승혁	지도학습과 강화학습을 활용한 4 자유도 탁구로봇
	캠퍼스 EMS 개발	오늘의 날씨(GIST대학) 고준희 , 장원식, 유동근, 안유진	지스트 캠퍼스 EMS 개발
우수상	탁구로봇	Zaqqum 장연성(GIST대학) 강현욱(안양대) 권예준(인하대) 이정현(한양대)	3축 베벨기어를 활용한 다관절 탁구 로봇 제작
장려상	탁구로봇	CP(GIST대학) 이은결 , 성정훈, 이유승, 지유나	3관절 로봇팔
	캠퍼스 EMS 개발	MySolar(GIST대학) 김민서 , 김이름	Energy Management System with Solar Power

Institute of Integrated Technology Professor Jung Won Yoon, who served as the head of the contest, said, "This event was held in the form of a contest using a convergence research theme that combines artificial intelligence and hardware (robot), and the enthusiasm and interest of the students was very high. The Creative Convergence Contest will be able to provide a new educational platform that can nurture convergence specialists with a challenging spirit necessary for the era of the 4th Industrial Revolution."