中國機械工程學會 114 年度年會暨第 42 屆全國學術研討會

CSME2025 Special Session
Advances in Biomimetic Aerial Robotics and Biosonar Sensing

今年研討會特別邀請美國維吉尼亞理工大學(Virginia Tech)的 Rolf Mueller 教授及其研究團隊參與，並分享他們在仿生僕翼飛行機器人與生物聲納感測方面的最新技術成果。

報告場次：3-4 **主持人：陳竺博淵 教授**		**日期：12/5** **地點：工程五館 1F EE112 教室**	
時間	論文編號	論文名稱	作者
13:10-14:40	E14-007	A Bioinspired Sonar Head for Studying and Replicating Bat Echolocation	Robert Lorence、Ben Westcott、Rolf Müller
	E13-016	Machine Learning for Biosonar Systems: Investigating Dynamic Sensing in Complex Natural Environments	Ibrahim Eshera、Rolf Müller
	E13-017	Positioning in the Shadows: Evaluating RTK GNSS Under Foliage as a Benchmark for Bat-Inspired Sonar	Grace Chen、Balamurugan Ramachandran、Rolf Müller
	E13-018	Echoes That Matter: Data Importance for Biomimetic Sonar Operation in Complex Natural Envirionments	Michael Goldsworthy、Grace Chen、Rolf Mueller
	E13-015	Physics-Informed Deep Learning for Estimating the Sound Fields of Bat Biosonar	Nicholas Rock、Rolf Müller
	E13-010	Deep Reinforcement Learning for Dynamic Bioinspired Sonar Sensing	Adam Hinson、Abdallah Elhilo、Rolf Müller

報告場次：4-4 **主持人：陳竺博淵 教授**		**日期：12/5** **地點：工程五館 1F EE112 教室**	
時間	論文編號	論文名稱	作者
15:00-16:30	E13-019	Bioinspired Acoustic Sensing: Lessons from Aye-Aye Tap Testing for Cavity Detection	Hamidreza Nemati、Ehsan Dehghan Niri
	E13-012	Widening the Data Pipeline between Bat Flight and Engineering: High-Speed Camera-Array Recordings of High-Agility Flight Kinematics	Chi Nnoka、Yihao Hu、Jervin S. K. Tan、Rolf Müller
	E13-014	A Model-based Optimization Approach to Reconstructing the Highly Articulated Kinematics and Wing Membrane of Bats	Yihao Hu、Chi Nnoka、Jervin Tan、Rolf Müller
	E13-009	A Comparative Study of Flight Kinematics in Bats and Biomimetic Drones	Maha Khalid、Brandon Dang、Rolf Müller