SMC eNewsletter's Student Corner Column (June 2025 Issue)

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In this issue of the Student Corner Column, we interview Oddy Virgantara Putra from Universitas Darussalam Gontor, Indonesia.

1. Can you tell us about your academic journey and how you arrived at your current research topic?

My academic journey began with a strong interest in artificial intelligence during my undergraduate studies in computer science. After completing my Bachelor's degree in 2012 and Master's in 2017, I pursued a PhD focused on 3D point cloud understanding, which I completed in February 2025. Over time, I became increasingly interested in how machines perceive their environment using data from multiple sensors. This led me to focus on multi-sensor 3D point cloud learning, particularly from LiDAR and mmWave radar, to address the challenges of robustness, noise, and cross-sensor representation in perception systems.

2. What inspired you to pursue research in your chosen field? How do you see it impacting society and humanity?

The idea that machines can understand the physical world using 3D perception from various sensors fascinated me. Combining data from LiDAR and mmWave radar presents exciting opportunities for improving the reliability of autonomous systems, especially in challenging weather and lighting conditions. My research contributes to making perception systems more resilient and accurate, which can benefit autonomous vehicles, robotics, disaster response, and assistive technologies—ultimately promoting safer and more inclusive environments.

3. What motivated you to join the IEEE and the SMC Society?

Because of the rejection from the SMCS Thesis Grant Initiative in 2017, I became even more intrigued to join the SMC Society to learn more about its vision, values, and the kind of research it supports. That moment pushed me to improve my work and explore how I could contribute meaningfully to the community. I eventually joined IEEE and the SMC Society because of their strong interdisciplinary focus and commitment to nurturing emerging researchers. More recently, I was honored to be selected as an IEEEXtreme 18 Section Lead for Indonesia, which has allowed me to mentor students and further contribute to IEEE's educational and professional development efforts.

4. How has being a member impacted your academic or professional journey?

IEEE and the SMC Society have played a significant role in shaping my journey. Through access to top-tier research, collaboration opportunities, and conference participation, I've been able to grow as both a researcher and a professional. My role as an IEEEXtreme Section Lead also developed my leadership and mentoring skills which allow me to support aspiring technologists in my region.

5. Where do you see yourself in the next 5-10 years?

In the next 5 to 10 years, I see myself as a professor in computer vision based in Indonesia, leading impactful research and mentoring the next generation of AI researchers. My goal is to specialize in multimodal perception systems, combining LiDAR, radar, and vision for spatial intelligence. Beyond research, I aim to contribute to AI policy, education, and innovation ecosystems in Indonesia, helping integrate cutting-edge technologies into areas such as smart transportation, disaster response, and public safety, especially in resource-constrained settings.

6. What advice would you give to other students considering joining IEEE or a society like SMC?

Becoming a student member of IEEE, particularly within the SMC Society, opens up numerous valuable opportunities beyond just technical knowledge. Membership provides access to various grants and programs that support both individual growth and community engagement. Grants such as the HTB (Humanitarian Technologies Board) and Tech4Good empower students to pursue socially impactful innovations. Within SMC, members can also benefit from Chapter Start-Up Grants, Initiative Grants, EDI (Equity, Diversity & Inclusion) Grants. Additionally, the SMC Mentorship Program connects junior and senior members in a 6–12 month mentoring experience, offering regular virtual interactions and optional in-person engagement. It's a great way to build guidance, confidence, and connections in both research and career paths. Since the Student Branch has not been established in my university yet, I plan to pioneer it this year. My goal is to bring more opportunities for my students—to help them build global networks, exchange knowledge, and grow through an active technical community. My advice to other students is: don't just join—actively participate. Apply for grants, initiate events, and seek mentorship. IEEE and SMC are not just professional organizations; they are powerful ecosystems for learning, leadership, and lasting impact.

Biography:

Dr. Oddy Virgantara Putra is an Assistant Professor in the Department of Informatics at Universitas Darussalam Gontor, Indonesia. He earned his Ph.D. and M.Eng. in Electrical Engineering from Institut Teknologi Sepuluh Nopember, with a Bachelor's degree in Information Systems. His research focuses on 3D point cloud understanding, deep learning, and multimodal perception, with numerous publications in international journals and IEEE conferences. He is also active in academic leadership roles and currently a professional member of the IEEE Systems, Man, and Cybernetics Society. Dr. Putra is passionate about applying AI to solve real-world problems in education, agriculture, and autonomous systems.