



Zakaria, S.Si., M.Si

Position	Electronics and Instrumentation (Physics Department: Bachelor Degree of Electronic Engineering Study Programme; Bachelor Degree of Physics Study Programme)
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Academic Career	<p>Magister Course: Universitas syiah Kuala (USK), Indonesia - Physics Department (2015-2017);</p> <p>Bachelor Course: Universitas syiah Kuala (USK), Indonesia - Physics Department (1995-2000)</p>
Employment	<p>Assistant Professor of Physics Dept., FMIPA, USK (2024 – present), Head of electronic and instrumentation laboratory at Physics Dept., FMIPA, USK (2022- 2024)</p> <p>Ketua KBM Elektronik dan Instrumentasi di Jurusan Fisika (2024-2025)</p> <p>Anggota Pusat Pengembangan Data dan Teknologi Informasi Mutu LPM USK (2022 - sekarang)</p>
Research and development projects (last 5 years)	<ol style="list-style-type: none"> 1. Navigasi Risiko Pertanian Holtikultura Berbasis Persepsi Petani Melalui Pendekatan Tipologi Wilayah Grant-USK PTNBH/IDR68.000.000/2024-2025 2. Strategi Adaptasi Teknologi Smart Farming dalam Meningkatkan Ketahanan Pangan di Aceh Grant-USK PTNBH/IDR80.000.000/2022-2024 3. Hilirisasi Instrumentasi Cuaca dan Data Logger Realtime Pada Aplikasi Early Warning System Untuk Tanah Longsor dan Likuifaksi Grant-USK PTNBH/IDR50.000.000/2022-2023 4. Perancangan Alat Uji Kinerja PCM untuk Thermal Energi Storage. Grant-USK PTNBH/IDR32.500.000/2021-2022 5. Pemanfaatan Teknologi Tepat Guna Dalam Membangun Sumber Energi Listrik Sebagai Solusi Alternatif yang Murah Bagi Masyarakat. PTNBH/IDR30.000.000/2021-2022 6. Karakterisasi dan perlakuan panas terhadap garam tradisional Aceh sebagai kandidat material penyimpan energi. Grant-USK PTNBH/IDR30.000.000/2020-2021
Collaborations (last 5 years)	<ol style="list-style-type: none"> 1. Sains Project Internasional SMA Lab School USK /2024-2025
Patents and proprietary rights	<p>(Patent) Alat Pengukur NPK Kelembapan Dan Keasaman Tanah Pertanian. Copyright Patent IDS000009602</p> <p>(HAK CIPTA): Membangun server dan jaringan komputer dengan Linux Ubuntu (books) Copyright Patent EC00202014768; Aplikasi Mekatronika: Desain dan Simulasi Rangkaian Elektropneumatik dengan FESTO FluidSIM (books); Copyright Patent EC00202112805;</p>
Selective Publications (last 5 years)	<ol style="list-style-type: none"> 1. ZU Al Munawir, Zakaria Husen (2025).Design and performance evaluation of a real-time heart rate and vibration monitoring system with arduino.Polimesin 23, 362-366 2. Zakaria Husen, N Ismail, MS Surbakti, F Omar, E Yusibani, F Kesuma, (2025).Marine Automatic Weather System (MAWS) instrumentation system for climate change monitoring based on The Internet of Things (IoT).BIO Web of Conferences 156, 02002 3. Gunawati, U Mahera, Zakaria, E Yufita, Zulfalina, A Setiawan (2024). Thermal conductivity measurement of NaCl produced traditionally in Aceh as raw material for energy storage application.AIP Conf. Proc 3082 (1) 4. Zakaria Husen, Z Albarra, K Suhud, F Fauzi, E Yusibani, I Irhamni (2023). Realtime instrumentation system towards blood oxygen saturation level monitoring with Liquid Crystal Display (LCD) and smartphone.Journal of Aceh Physics Society 12 (2), 8-11 5. Agussabti Agussabti, Rahmaddiansyah Rahmaddiansyah, Ahmad Humam Hamid, Zakaria, Agus Arip Munawar, Basri Abu Bakar (2022) Farmers' perspectives on the adoption of smart farming technology to support food farming in Aceh Province, Indonesia, <i>Open Agriculture</i>, 7, 857-870, . 6. Zakaria, Fauzi Fauzi, Irhamni Irhamni, Edwar Iswardy (2021) Rancang Bangun Sistem Pengontrolan Lampu Berbasis Komputer Dan Arduino Untuk Aplikasi Smart Home, <i>Kitektro</i>, 6, 26-31, 2252-7036. 7. Muhammad Syukri Surbakti, Muhammad Farhan, Muhammad Isa Zakaria, Elly Sufriadi, Sagir Alva, Elin Yusibani, Leni Heliawati, Muhammad Iqhrammullah, Khairi Suhud (2021) Development of Arduino Uno-Based TCS3200 Color Sensor and Its Application on the Determination of Rhodamine B Level in Syrup, <i>Indonesian Journal of Chemistry</i> 8. Gunawati, MN Nasruddin, A Setiawan, K Sebayang, A Makruf, Zakaria (2021).Design and Calibration of Temperature Monitoring Device for a Cold Box with Hydrated Salts as Phase Change Material (PCM).Proceedings of the 2nd International Conference on Experimental 9. I Ismail, Ismaturrahmi, Zakaria, Zulfalina, Z Jalil and S H Fadzullah (2019) Mechanical and physical properties of rice straw fiber-reinforced polypropylene composite, <i>IOP Conference Series: Earth and Environmental Science</i>, 364.
Membership	Physical Society of Indonesia (PSI) (2020/2025); Indonesian Association of Geophysicists (HAGI), APDOVI (2024)
External Link	https://fisika.usk.ac.id/zakaria-s-si-m-si/