



## Dr. Dra. Siti Rusdiana, M.Eng

<b>Position</b>	<b>Research Interest</b> Mathematical Optimization, Simulation, Operations Research Mathematics and Machine Learning <b>Teaching Responsibilities:</b> Bachelor Degree of Mathematics, Master Degree of Mathematics and Master Degree of Industrial Engineering University of Syiah Kuala (USK)
-----------------	--

<b>Academic Career</b>	<b>Doctorate course:</b> Universitas Sumatera Utara, Indonesia-Mathematics, (2009-2013); <b>Magister Course:</b> Osaka University, Japan-Applied Mathematics (1995-1998) ; <b>Bachelor Course:</b> Institut Teknologi Sepuluh Nopember, Indonesia - Matematika (1984-1988).
<b>Employment</b>	Senate of FMIPA, USK (2022 – present); Head of Laboratory of Dynamic Optimization, FMIPA, USK (2021 – Present); Assessor of BAN PT (2019 – 2024); Head of Mathematics Department, FMIPA, USK (1998 - 2003)
<b>Research and development projects (last 5 years)</b>	<ol style="list-style-type: none"> <li>1. Prediksi Curah Hujan-Limpasan Dengan Menggunakan Support Vector Machine Untuk Pengelolaan Sumberdaya Air Berkelanjutan/ Professor Research Grant-USK PTNBH/IDR68.000.000/2024.</li> <li>2. Estimasi Risiko Relatif Demam Berdarah Dengue Di Provinsi Aceh Menggunakan Pendekatan Bayesian Conditional Autoregressive/ Assistant Professor Research Grant USK PTNBH/IDR23.000.000/2023.</li> <li>3. Identifikasi Wilayah dan Faktor–Faktor Yang Berhubungan dengan Balita Pendek (Stunting) di Kota Banda Aceh/Professor Candidate Research Grant - USK PTNBH/IDR60.000.000/2021</li> </ol>
<b>Collaborations (last 5 years)</b>	<ol style="list-style-type: none"> <li>1. Head of Event at International Webinar about Mathematics for Machine Learning/ Jarvis Christian University/2024.</li> <li>2. Keynote Speaker at Seminar Nasional Matematika dan Terapan (SiManTap) “Sustainable Development With AI and Collaborating Knowledge Digitally“/STIKOM Tunas Bangsa/2024.</li> <li>3. Instructor in community service activities the theme Creating Green Homestay to Increase the Number of Foreign Tourists/Desa Uning, Pegasing, Aceh Tengah/2023.</li> <li>4. Assistance in improving the socio economic potential of agriculture/ Pemerintah Aceh Besar/2022.</li> <li>5. Speaker at Coordination Meeting between Provincial Office of SMEs and District/Disperindag/2022</li> </ol>
<b>Patents and proprietary rights</b>	Copyright Patent (HAK CIPTA): Radial Kernel_SVM_Climate V.1 (computer programs) ; Program COND KRUSKAL-APPL (computer programs) EEG signal conversion to Heatmap visualization (computer programs); EEG Signal Heatmap Visualization Classification using Vision Transformer Architecture (computer program).
<b>Publications (last 5 years)</b>	<ol style="list-style-type: none"> <li>1. Meutia Hanum Rahmaniari, <b>Siti Rusdiana</b>, Zahnur Zahnur (2024) “Predicting Land Use Changes Using Markov Chain Analysis and Hierarchical Analysis Of Public Service Centers In Banda Aceh City”/BAREKENG: Jurnal Ilmu Matematika dan Terapan, 18(4), pp. 2319-2328.</li> <li>2. Latifah Rahayu, <b>Siti Rusdiana</b>, Hizir Sofyan, Rumaisa Kruba, Selvi Mardalena (2024, August) Dengue fever trends in Aceh using single moving average, weighted moving average and exponential smoothing/In AIP Conference Proceedings (Vol. 3123, No. 1). AIP Publishing.</li> <li>3. <b>Siti Rusdiana</b>, Diana Febriana, Ikhsan Maulidi, Vina Apriliani (2023) Comparison Of Weighted Markov Chain And Fuzzy Time Series-Markov Chain Methods In Air Temperature Prediction In Banda Aceh City/ BAREKENG: Jurnal Ilmu Matematika dan Terapan, 17(3), pp.1301-1312.</li> <li>4. Ichwana Ramli, <b>Siti Rusdiana</b>, Ashfa Achmad, Azizah, Monisa Eka Yolanda (2023) Forecasting of Rainfall Using Seasonal Autoregressive Integrated Moving Average (SARIMA) Aceh, Indonesia. Mathematical Modelling of Engineering Problems, 10(2).</li> <li>5. Ivanizam, Zulfan, Puti F. Nasir, Marzuki, Siti Rusdiana, Nany Salwa (2022) An extended MULTIMOORA based on trapezoidal fuzzy neutrosophic sets and objective weighting method in group decision-making/ IEEE Access, 10, pp.47476-47498.</li> </ol>
<b>Membership</b>	The Indonesian Mathematical Society (IndoMS)/Member-IMS-01-0003 (2013 present); Ikatan Alumni Institut Teknologi Sepuluh Nopember (IKA ITS)/Member (1988-present), Women’s Empowerment of Women in The Indonesian Micro, Small, and Medium Enterprises Sector (PPUMI) 2023-present
<b>External Link</b>	<a href="http://fsd.usk.ac.id/str/">http://fsd.usk.ac.id/str/</a>