

Laboratory / Center profile

Science and Technology System Laboratory <http://lab.sdm.keio.ac.jp/hibiya/> (in Japanese)

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The Science and Technology System Laboratory was established with the aim of designing systems for science research and technology development. The trend has been for Japan's science research to base itself on the idea that we should keep our hands busy. Therefore, university laboratories are typically attended around the clock. This approach is not necessarily bad if you consider it as an exercise for science and technology students to prepare themselves for various challenges they might face in the future. Nevertheless, it is clear that this approach is not efficient. Even if it is for science research or technology development, it is important to prepare things in a front-loading manner. If one thoroughly anticipates "what evidence is sufficient to verify the hypothesis and how it can be derived in the most direct way possible" prior to commencing research, the research will be more efficient and productive. For this to happen, system-engineering oriented ideas are required during the course of research implementation.

Among the concrete themes that the laboratory deals with is the measurement of radiation dose rate in mountainous areas. The Azuma Mountain Range in Fukushima Prefecture is located in a mountainous area; Keio University's lodge is also located there. Since the accident at the Fukushima Daiichi Nuclear Power Station resulting from the Tohoku-Pacific Ocean earthquake, the number of mountain climbers has decreased. In nature, natural radiation, which is pertinent to geological conditions, exists. The reality is, however, that the existence of natural radiation is ignored and the public focuses solely on data related to air radiation dose rate, without duly considering the type of radiation and uncertainty. This has prompted fears about radiation from locals and mountain climbers. In collaboration with Keio Science and the Technology Alpine Club, the Science and Technology System Laboratory is implementing a plan to measure air radiation dose rate by specifying radiation type and distinguishing natural radiation from radiation resulting from the nuclear accident. These results will then be announced to the public.



Azuma Mountain Range in Fukushima Prefecture



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