

Interview  
with  
Researcher

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## PROFILE

Prof. Carolin was born in Germany and completed the doctoral course of the Institute of Human Geography, Faculty of Geoscience, University of Freiburg in 1998, and found a position in the Faculty of Integrated Arts and Sciences, Hiroshima University in the same year. Prof. Carolin has been in her present position since 2014, with her field of expertise being tourism geography. She has done aikido since her student days, and holds a dojo for citizens in Saijo, Higashihiroshima City.

Changing tourism in Japan  
and related problems

I originally specialized in geography, but have been engaged in the study of tourism geography since coming to Japan, because the differences in the tourism styles in Japan and in Germany interest me. I conduct research on the factors that contribute to the development of different areas as tourist destinations, and the image that tourists have of certain areas, in search of an overview of the relationship between tourism and visited areas. Since around 2003, the Japanese government has adopted a range of national policies for promoting inbound tourism. Consequently, the number of foreign tourists to Japan has rapidly increased over the past several years, causing radical changes that reject traditional assumptions and create ever-diversifying behavioral patterns.

Working towards tourism that benefits  
both tourists and visited areas

I have studied sustainable tourism. For example, just as mass tourism first became spread in the 1960s, group tourism on large cruise ships is popular these days, as a method of traveling as a group. While such tours provide substantial economic benefits for the visited areas, the negative impact that cruise ships have on the environment is regarded as a problem. Sustainable tourism can only be achieved when both tourists and the visited areas benefit. To resolve such problems, individual components of the relevant type of tourism should be examined, including, for example, environmental measures by ship design companies and by tour operators, and their relations with the ports of call. I conduct research concerning the mechanism of cruises and the relations thereof with visited areas, and analyze related problems in all aspects, including the environment and employment. It is an urgent matter to establish theories for overviewing various phenomena related to diversifying tourism, including cruises, from a broad perspective.

## Hottest leading-edge research activity

## [Field of biology]

Recently, artificial DNA-cutting enzymes have been developed that are capable of breaking and modifying target genes. These enzymes can be used for all living things including bacteria and plants, and have therefore drawn attention as potentially contributive to the elucidation of various functions in life phenomena. Our research team has succeeded in developing two proprietary artificial DNA-breaking enzymes, and has promoted genetic modification in cultured cells and animals in collaboration with universities and research

institutions across Japan. Recently, we have particularly focused on genome editing in human cells (e.g. iPSCs) using artificial DNA-breaking enzymes, aiming to open a door to the treatment of various diseases by establishing technologies for modifying disease genes.

