DLR Institute for Data Science: Making Citizen Science Data fit for Use

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On 29th of August 2017 the German Aerospace Center (DLR) Institute for Data Science was established in the city of Jena, Germany. This institute will focus on data related research such as big data analysis, data mining, software and IT security, or artificial intelligence. One of the six workgroups of this institute is dedicated to citizen science related scientific questions. The workgroup will benefit from the close cooperation with local and regional research institutes such as the Friedrich-Schiller-University Jena (Institutes for Informatics and Geography) and the Bauhaus University in Weimar (Departments for Media Informatics, Big Data Analytics/Web Technology and Information Systems).

Although the tremendous potential of citizen science has been recognized and partly used within various thematic fields, some important issues lack thorough research. This includes i) sociologic and psychologic aspects with regard to the engagement and motivation of people, ii) the processing of citizen science data, e.g. semantic attribution, knowledge discovery, data quality & reliability assessment, and iii) strategies to optimize the exploitation of the data, e.g. automation, visualization, or handling of heterogeneous data. The citizen science workgroup will undertake dedicated research on the mentioned topics. Thematically, the research will have close links to crisis management using social media data and volunteered geographic information as well as to earth observation (remote sensing), e.g. local to global reference data generation for model training and product validation. The activities of the workgroup will benefit from a permanent citizen science lab acting as contact point for interested citizens, providing tools and infrastructure to support citizen projects, and hosting capacity building and education activities.