

Publications from the Humboldt Kolleg Ecuador 2019 “Breaking Paradigms: Towards a Multi-, Inter- and Transdisciplinary Science”

In commemoration of the 250th Anniversary of
February 21th – 24th, 2019.

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EDITORIAL

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**Breaking Paradigms: Towards a Multi-, Inter- and Transdisciplinary Science” In commemoration of the
250th Anniversary of Alexander von Humboldt**

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Portrait of Alexander von Humboldt, painted by Friedrich Georg Weitsch (8 August 1758, Braunschweig – 30 May 1828, Berlin)

On September 14, 1769, Alexander Von Humboldt was born, a German naturalist, explorer, and geographer. He was well known for his important contributions to the study of geophysics, meteorology, and oceanography. His fame is also due to his expeditions in Latin America. Humboldt explored the Orinoco and Amazon rivers in Venezuelan lands. He traveled through Cuba, the basin of the Magdalena River, was in Colombia, and in the Ecuadorian Andes. In Ecuador, he ascended to the Chimborazo volcano. He studied the currents of the ocean, the relative temperatures according to altitude, minerals, plants and animal life of these regions. He interacted with naturalists from the different countries he visited, whom he supported in his research. Among the scientific findings of his expeditions, the study of the oceanic current of the west coast of South America, a novel system of climatological representation in the form of isobars and isotherms, the comparative studies between climatic and ecological conditions, and his conclusions about volcanism and its relation to the evolution of the earth's

crust. He also managed to collect huge amounts of data on the climate, flora, and fauna of the regions visited. In other words: Alexander von Humboldt was a prominent German researcher, with a vast encyclopedic culture.¹

In 1859, the year in which Alexander von Humboldt died, his close friends decided to establish a foundation to immortalize their interest in the scientific, artistic and humanistic world. The establishment of the Alexander von Humboldt Foundation, initially, was intended to support the research activities of German scientists abroad.

However, since 1925, the [Alexander von Humboldt Foundation](#) allows the participation of foreign researchers in the field of education and research in Germany, with the sole objective of using an academic and scientific exchange as

factors that promote peace. The Alexander von Humboldt Foundation promotes academic cooperation between foreign and German scientists. It promotes international cultural dialogue and academic exchange. Among the various programs that this foundation promotes, it is worth mentioning the support to its fellows for organizing scientific meetings in their countries of residence².

To celebrate the 250th anniversary of Alexander von Humboldt, from February 22th to February 24th occurred in the city of Ibarra, Ecuador the Humboldt kolleg “Breaking Paradigms: Towards a Multi-, Inter- and Transdisciplinary Science”. The event was held at the facilities of the Hotel Ajaví. This Humboldt kolleg aimed to create a space for Humboldtians, young doctors in science and young researchers of Latin America for disseminating their results, as well as to create collaborative and cooperative relationships and strengthen the existing one, in order to take steps forward in scientific knowledge within Latin America. The event also had the purpose of creating the space for the dissemination of the programs offered by the Alexander von Humboldt Foundation to young doctors in science for conducting their research in leading laboratories in Germany.

The Humboldt Kolleg “Breaking Paradigms: Towards a Multi-, Inter- and Transdisciplinary Science” had the characteristic of occurring in Ecuador, a country that is betting on the development of science as never before and therefore, engaged in the creation and development of human resources in the short term. This is the reason why the presence of researchers from other countries was of extreme importance for the exchange and gain of experiences. Researchers from the chemical, biological, physical, mathematical and geological sciences exchanged their scientific experiences in this multidisciplinary meeting. We counted on the presence of 4 German professors, 26 Humboldtians, 34 junior researchers, 16 other researchers, and about 110 students of YachayTech University from Ecuador. These participants represented Germany, Mexico, Uruguay, Argentina, Brazil, Cuba, Bolivia, USA, Spain, Poland, Venezuela, New Zealand, France, Portugal, Colombia, Canada, China, and Ecuador. Among the scientific activities developed, we had 6 keynote lectures, 24 oral presentations and 61 scientific papers presented in poster format.

Both, in opening words during the inauguration of the event, and in each of the presentations made by Humboldtians and other speakers, the Alexander von Humboldt Foundation was present. First, we highlighted the support that Alexander von Humboldt Foundation offers to the researchers of the world without distinction of country, race, sex or specialty for the development of the scientific career throughout our lives and we expressed our deep gratitude to the Foundation. Alexander von Humboldt and his relationship with America was also present, his figure is a source of inspiration for young researchers. In this sense, we would like to thank the German guest professors who took a few minutes of their presentations to dedicate them to highlight the figure of Alexander von Humboldt.

Because of this great meeting, collaboration intentions were established among some Humboldtians representing international and national institutions and researchers from various institutions in Ecuador and third countries. Among them, we can mention the Autonomous University of Mexico, Physical Institute of Sao Carlos, Montreal University, Ohio University, National Atomic Energy Commission (Bariloche Center, Argentine), National Polytechnic University of Ecuador, Technical University of Ambato and Yachay Experimental Technology Research University.



Additionally, on Monday 25th of February, our visitors were invited to the Yachay Experimental Technology Research University in Urcuquí. The program of the visit was interesting and it allowed our visitors to appreciate part of the effort made by Ecuador for the development of science in the country and feel more confidence for the development of scientific cooperation with the researchers of this university.

We would like to thank the staff of the AvH Foundation who totally supported the meeting and offered suggestions for the organization and development of the event.



Final considerations:

The First Ecuadorian Humboldt Kolleg “Breaking Paradigms: Towards a Multi-, Inter- and Transdisciplinary science” had the following objectives:

- to strength scientific collaboration and networking of Humboldtians within the Latin America region and between Latin America and Germany to develop research,
- to facilitate the exchange between young scientists and personalities of science in these fields,
- to create a space for the dissemination of programs offered by the Alexander von Humboldt Foundation to young doctors in science for conducting their research in leading laboratories in Germany, and
- to provide social and informal contacts between Humboldtians and young researchers to give them the opportunity to plan their future scientific careers and familiarize them with AvH Programmes.

These were our objectives from the very beginning when we started to design this meeting and these objectives have been met satisfactorily and with high quality according to what the AvH Foundation expects.

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