



Schloss Dagstuhl:

Running 101 km in 24 min—only computer scientists can do that

On Friday, August 24th, for the first time a team of the Leibniz Center for Informatics (LZI – Schloss Dagstuhl) participated in a road footrace.

The mixed team (Dagmar Glaser, Moritz Thern, Michael Didas) was ranked 98th out of 228 in the “1. IKK Südwest Firmenlauf” company challenge in St.Wendel.

But how is it possible to run 101 km in 24 min? It’s not a problem for computer scientists—computers function on a binary basis, only with zeroes and ones. If a distance of five kilometers is written as a binary number, it is represented as “101”. This binary number has to be read as 1 times four plus 0 times two plus 1 times one. Using decimal numbers, which are the ones we usually come across in our everyday lives, but which need eight more numerals, twenty-four is written as “24”—a representation to be read as 2 times ten plus 4 times one.

Modern binary numbers, which, as the foundation of digital electronics, are a base of our modern world, were discovered by Gottfried Wilhelm Leibniz more than 300 years ago. In 1697 he wrote a letter to Rudolf August, Duke of Brunswick, describing the representation of numbers using only zeroes and ones. He added religious thoughts to his mathematical explanations, and summed them up with the statement: “Omnibus ex nihilo ducendis sufficit unum.”



The road footracing team of the Leibniz center for Informatics.
From left to right: Moritz Thern, Dagmar Glaser und Michael Didas.

Mitglied der Leibniz-Gemeinschaft

Background:

During the whole year, Schloss Dagstuhl invites scientists from all over the world to come to northern Saarland in the south west of Germany to debate the newest scientific findings in informatics. More than 3,500 computer scientists from universities, research institutions and industry take part in various scientific events at Dagstuhl each year. Since 2005, Schloss Dagstuhl is a member of the Leibniz Association. The Leibniz Association connects 93 independent research institutions and scientific infrastructure facilities all over Germany that range in focus from the natural, engineering and environmental sciences via economics, spatial and social sciences to the humanities. Leibniz Institutes address issues of social, economic and ecological relevance. They conduct knowledge-driven and applied basic research, maintain scientific infrastructure and provide research-based services. The Leibniz Association identifies focus areas for knowledge transfer to policy-makers, academia, business and the public. Leibniz institutions collaborate intensively with universities – in the form of “Leibniz ScienceCampi” (thematic partnerships between university and non-university research institutes), for example – as well as with industry and other partners at home and abroad. They are subject to an independent evaluation procedure that is unparalleled in its transparency. Due to the importance of the institutions for the country as a whole, they are funded jointly by the Federation and the Länder, employing some 19,100 individuals, including 9,900 researchers. The entire budget of all the institutes is approximately 1.9 billion Euros.

For interviews, reports or shooting footage, please contact:

Michael Gerke

Phone: +49 681 302 4392

Email: michael.gerke@dagstuhl.de

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