

# SUPERHEROES 4SCIENCE



**AUREL**  
**SLOVAKIA**

Computing Center  
of the Service and Operations Center  
of the Slovak Academy of Sciences

[www.vs.sav.sk](http://www.vs.sav.sk)

Scientists at the Slovak Academy of Sciences (SAS) and partner universities have had a supercomputer for complex calculations in basic and applied research since 2012.

The project was launched due to an existing need to create a supercomputer and grid based infrastructure able to provide very complex numerical calculations and modelling for science and research in Slovakia. The Aurel supercomputer introduced a processing power of 128 teraflops per second, 4,000 times more powerful than a standard computer. It weighs 3,100 kilogrammes with an additional 2,000 for other necessary technology, its size can be compared to a standard closet and it contains up to 4,096 processor cores (a common PC has 2 to 8 cores), RAM of 32 terabytes and an external disk space of 600 TB, plus an internal disk space of 225.6 TB (a standard PC or laptop has 2-4 gigabytes of RAM).



## And why Aurel?

Name Albert Einstein is known all over the world. But the name of the person who taught him and whom he acquired, is known only a few Slovaks. Professor Aurel Stodola can be considered a Renaissance man who was born to a time of many discoveries. In addition to being considered "the father of steam turbines", he also had an unusual musical talent and was an excellent pedagogue. According to him they also named the distant planet 3981 discovered in the 1980's in the constellation of Cancer.

Ever since it was officially commissioned, the Aurel supercomputer has been used in 113 projects and areas of science and research. Its application is found in the sciences, behavioral economics, examining phenomena in sociology and also when modelling various group situations such as when designing emergency exits at stadiums and the like.

The Superheroes 4 Science project  
is supported by the Visegrad Fund.  
[www.visegradfund.org](http://www.visegradfund.org)

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