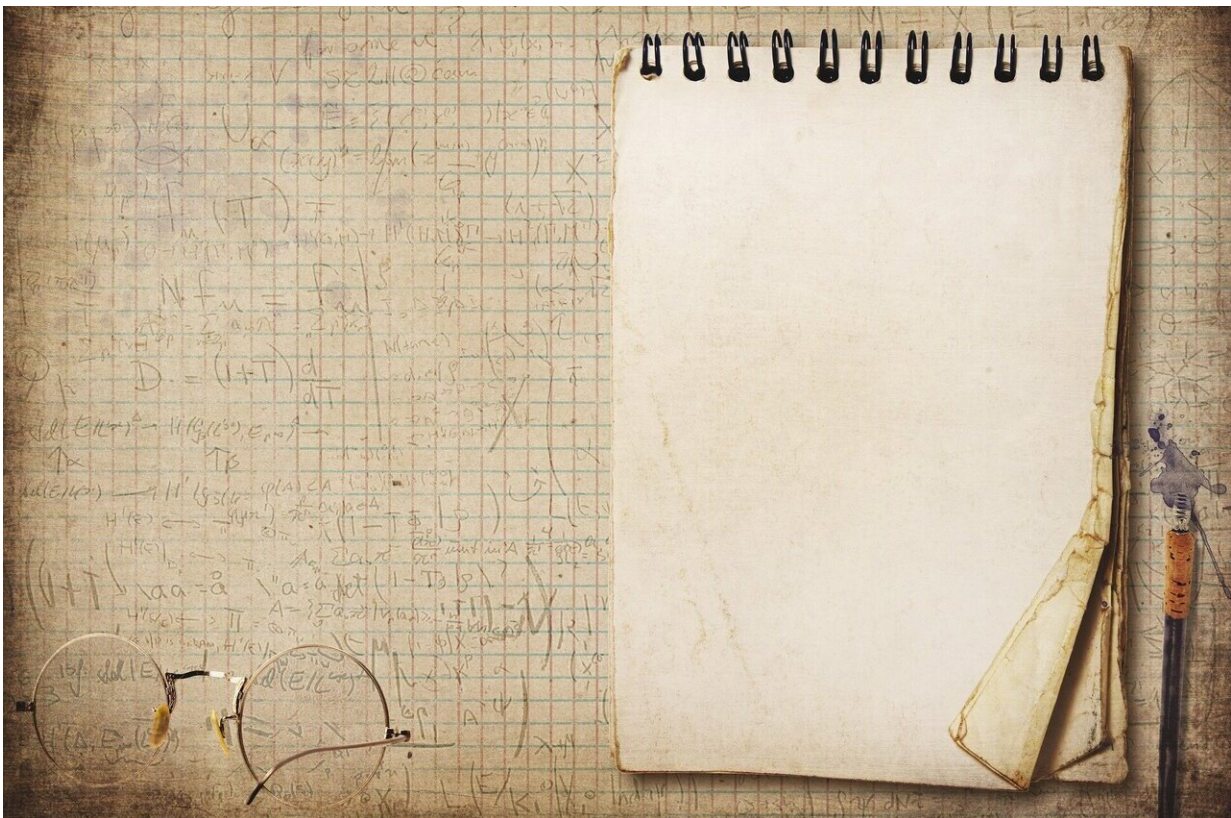


Cybersecurity pioneers win mathematics Abel Prize

March 17 2021



Credit: CC0 Public Domain

The Abel Prize, which honours achievements in mathematics, was awarded Wednesday to Hungarian Laszlo Lovasz and Israeli Avi Wigderson for their contributions to computer security, the Norwegian

Academy of Science said.

The pair were honoured "for their foundational contributions to theoretical computer science and [discrete mathematics](#), and their leading role in shaping them into central fields of modern mathematics," the jury said.

Lovasz, 73, who is affiliated with the Alfred-Renyi Institute of Mathematics and Eotvos Lorand University in Budapest, is credited with establishing a connection between discrete mathematics, such as the theory of networks, and computer science.

Together with Dutch brothers Arjen and Hendrik Lenstra, Lovasz developed the LLL algorithm, which has applications in areas such as [number theory](#), cryptography and mobile computing.

The algorithm serves as the basis for the only encryption systems "that can withstand an attack by a quantum computer," the academy noted.

Avi Wigderson, 64, a researcher at the Institute for Advanced Study, has widened and deepened the understanding of "[complexity theory](#)" meanwhile.

His research has led to advances in internet cryptography and serves as the basis for the technology powering crypto-currencies such as bitcoin.

"Thanks to the leadership of these two, discrete mathematics and the relatively young field of theoretical computer science are now established as central areas of modern mathematics," Hans Munthe-Kaas, chair of the Abel Committee, said in a statement.

Due to the COVID-19 pandemic it is not yet known when the prize—named after Norwegian mathematician Niels Henrik Abel—of

7.5 million Norwegian kroner (\$882,000, 741,000 euros) will be formally awarded.

© 2021 AFP

Citation: Cybersecurity pioneers win mathematics Abel Prize (2021, March 17) retrieved 21 June 2024 from <https://phys.org/news/2021-03-cybersecurity-mathematics-abel-prize.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.