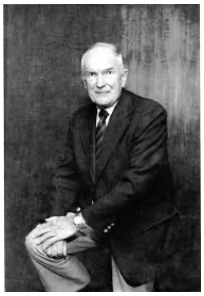
William C. Carter Award
DSN 2024



The William C. Carter Award is presented annually at the DSN Conference to recognize an individual who has made a significant contribution to the field of dependable computing through his or her graduate dissertation research.

The IEEE TC on Dependable Computing and Fault Tolerance (TCFT) and IFIP Working Group 10.4 on Dependable Computing and Fault Tolerance (WG 10.4) jointly sponsor the William C. Carter PhD Dissertation Award in Dependability. Instituted in 1997 as the William C. Carter Award, it was reformulated in 2016, where the present name and eligibility requirements aim at recognizing an individual who has made a significant contribution to the field of dependable and secure computing throughout his or her PhD dissertation.

The award commemorates the late William C. Carter, a key figure in the formation and development of the field of dependable computing. Bill Carter always took the time to encourage, mentor, and inspire newcomers to this field and this award honors and sustains this aspect of his legacy. The award recipient receives a $1200 US cash award as a contribution to travel expenses and a waived registration fee to attend the edition of the IEEE/IFIP International Conference on Dependable Systems and Networks (DSN) at which the award is presented. The recipient will be required to attend DSN to receive the award and is invited to give a short presentation to DSN attendees. To be eligible for the award, the nominee's PhD defense must be completed prior to the nomination deadline and must have occurred no more than 16 months prior to the nomination deadline. Previous recipients of the (old or renamed) Carter Award are not eligible.

The winner of the 2023 William C. Carter PhD Dissertation Award in Dependability is:

Romain Cayre
Eurecom-Digital security, France

PhD Dissertation title:
"Offensive and defensive approaches for wireless communication protocols security in IoT"

Defense date:
June 30, 2022

Thesis Advisor:
Prof. Dr. Guillaume Auriol, Prof. Vincent Nicomette, Prof. Mohamed Kaâniche (LAAS-CNR, France)

Excerpt from the report of the selection committee: The PhD Dissertation "Offensive and defensive approaches for wireless communication protocols security in IoT" focuses on the identification, assessment, and prevention of new threats linked to the deployment of wireless communication protocols in the context of the Internet of Things. With both a theoretical and experimental approach, the thesis investigates two orthogonal research lines in IoT: i: offensive security, by identifying novel attack strategies; and ii: defensive security, by defining and validating innovative intrusion detection and prevention strategies, as well as the design of more secure communication protocols. The scientific contributions of this thesis are highly innovative and of primary relevance in the area of resilient and secure computing. They have been the subject of several scientific publications in top top-tier international peer-reviewed venues, including three publications at IEEE/IFIP DSN. The practical impact of the achieved results is highly significant, since the discovered attacks, which target major wireless protocols such as BLE and ZigBee, affect billions of IoT devices around the world. The relevance at the industry level is also noteworthy, as the tools developed within the thesis are increasingly adopted by security organizations, such as ANSSI in France.

DSN-2024 Carter Award Committee

Chair
Felicita Di Giandomenico, *ISTI-CNR, Italy*

Members
Lelio Di Martino, *Nokia Bell Labs, USA*
Zbigniew Kalbarczyk, *University of Illinois at Urbana-Champaign, USA*
Cristina Nita-Rotaru, *Northeastern University, USA*
Elena Troubitsyna, *KTH Royal Institute of Technology, Sweden*