



Prof. Shlomi Dolev

Rita Altura Chair in Computer Sciences

Department of Computer Science

Faculty of Natural Sciences

פרופ' שלומי דולב קתדרת ריטה אלטורה למדעי המחשב

המחלקה למדעי המחשב הפקולטה למדעי הטבע

אוניברסיטת בן-גוריון בנגב

Tel. 972-8-6428101, Mobile. 052-5793087

E-Mail: dolev@cs.bgu.ac.il

02/03/2025

Politechnika Wroclawska,

Rada Dyscypliny Naukowej Informatyka Techniczna i Telekomunikacja

Wyb. Wyspianskiego 27

50-37 Wroclaw

Poland

I am pleased to state that, in my opinion, the doctoral dissertation "Random Access Channel in Time-Critical Ad Hoc Network Synchronization" by Patryk Stopyra meets the requirements of a PhD thesis.

The thesis presents general theoretical knowledge in the field of access control for Ad Hoc networks and demonstrates strong capabilities to conduct original and independent scientific work. The thesis consists of original solutions for the scientific problem formulated to achieve efficient access control in the scope of Ad Hoc networks.

An agent chooses several time slots for the sake of having one with no collisions. Comparison between the Bernoulli trials (BT) strategy that is based on a choice to transmit in each slot with a predefined probability p and the t -Slots strategy, in which every agent chooses at random exactly t out of n to transmit in, where t is a parameter. The thesis proves the superiority of t -Slots in every aspect when p and t are chosen to be optimal.

Novelty in such a fundamental, basic, and practical primitive is a significant achievement. The analysis and proofs are deep and thus contribute much to the advancement of the state of the art and technology.

Sincerely,



Professor Shlomi Dolev

WPLYNĘŁO

13.05.2026

13.05.2026

13.05.2026