Welcome

Ahlá w-sahá

לפקולטה להנדסת חשמל והמחשבים
ע"ש אנדרו וארוונה וטרבי
שנה טובה
Happy New Year
07-9-2021
Have a good week
Dr. Alejandro Cohen, New Faculty Member

Research Areas:
Information Theory, Signal Processing, Security and Networks

Research Interest:
Data processing, computation in networks, communication, security, post-quantum security, network information theory and network coding, anomaly detection, coding, and speech enhancement.

Returning from a Post-Doc at MIT
Electro-Optics and Microelectronics Seminar
Sub-Hz semiconductor laser locked to a fiber-based Mach-Zehnder interferometer with active fiber noise cancellation

Artiom Sydnev
Monday, 13/09/2021
14:30
Join Zoom Meeting

We propose and demonstrate a technique to reduce the linewidth of a commercially available semiconductor laser operating at 1550 nm from 20 kHz to the regime of sub to single Hz values by locking it to an all-fiber Mach-Zehnder interferometer (MZI) with a short path length imbalance of 5 m.
Congratulations for completing the PhD!

Dr. Sergei Masis
Advisor: Prof. Eyal Buks
PhD Thesis Title:
Dipolar Interactions between Dense Spin Ensembles in Diamond
Graduate Seminar
Transmitter Architectures for Capacity Enhancement in 5G Wireless Communications Systems

Nimrod Ginzberg

Monday, 13/09/2021
13:00
in ZOOM Meeting

Capacity enhancement requirements in next-generation 5G wireless systems have motivated extensive research of circuit-level solutions for enabling simultaneous transmission and reception (STAR) in in-band full-duplex (IBFD) radios, in which the transmitter and the receiver operation at the same time in the same frequency band.
Congratulations for completing the PhD!

Dr. Ori Reinhardt

Advisor:
Prof. Ido Kaminer

PhD Thesis Title:
Ultrafast Electron-Photon Quantum Interactions
1820
Thomas de Colmar builds the Arithmometer
Pixel Club online talk
3DeepCT: Learning Volumetric Scattering Tomography of Clouds

Yael Sde Chen
Tuesday, 14.09.2021
11:30
Zoom Meeting

We present 3DeepCT, a deep neural network for computed tomography, which performs 3D reconstruction of scattering volumes from multi-view images. The architecture is dictated by the stationary nature of atmospheric cloud fields. The task of volumetric scattering tomography aims at recovering a volume from its 2D projections. .......
Single pixel imaging at megahertz switching rates via cyclic Hadamard masks
Evgeny Hahamovich, Sagi Monin, Yoav Hazan & Amir Rosenthal
Nature Communications
July 2021
Congratulations for completing the PhD!

Dr. Nicolas Wainstein

Advisors:
Prof. Shahar Kvatinsky
Prof. Eilam Yalon

PhD Thesis Title:
Reconfigurable Radio Frequency Circuits based on Emerging Memory Technologies
Nowadays, both digital and analog electronics are reaching fundamental limits that will require revolutionary approaches to satisfy the power/bandwidth requirements of the next generation of data-driven applications. After a brief overview of the modern wireless transceiver architecture, some key elements that will characterize 5G and 6G networks will be discussed. The talk will continue by analyzing the power efficiency of the analog signal processing by highlighting the presence of a thermodynamic upper-bound which relates dynamic range, bandwidth and power dissipation. Alternative strategies to circumvent this limit will be discussed such as adaptivity, passive time-variant signal processing and quantized analog signal processing. In particular, the latter represents a novel approach where the analog and digital domain are fused together in a more fluid scenario compared to traditional mixed-signal circuits. This operation leads to superior power efficiency and flexibility. The effectiveness of the proposed solutions will be demonstrated through simulations and measurement results on different prototypes.

"Power efficiency in the next generation of 5G-6G analog front-ends"

Wednesday, October 6, 2021
16:30-18:00, online ZOOM session

Registration is free. Please register here:
http://acrc.net.technion.ac.il/registration-antonio-liscidini/
Zoom link: to be provided after registration

Prof. Antonio Liscidini
University of Toronto, Canada
Congratulations for completing the PhD!

Dr. Igor Khanonkin
Advisor:
Prof. Gadi Eisenstein

PhD Thesis Title:
Coherent Light - Matter Interaction in Optical Amplifiers based on InAs/InP Quantum Dots Operating at Room Temperature
History of Electronics

First Programmable Computer
16 Nov 1936

Konrad Zuse invented the Z1 Computer, the first freely programmable computer.

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Congratulations for completing the PhD!

Dr. Gilad Zeevi
Advisor:
Prof. Yuval Yaish

PhD Thesis Title:
Electrostatic interactions and charge transfer between carbon nanotube and its environment
The course deals with Image Sensors, starting with general requirements and specifications, sensor optics, image formation, resolution, Modulation Transfer Function (MTF), temporal and spatial noise, signal to noise ratio, and dynamic range. The course is focused on sensing devices, Charge Coupled Devices (CCD) and especially CMOS Image Sensors (CIS) where the modern CIS devices have CCDs-like components. The course especially emphasizes the Silicon device underlying the pixels. The course discusses in details the 3T and the 4T pixel technologies with buried, and with fully pinned (fully depleted) diodes. Different schemes of noise cancellation, advanced global shutter mode pixels and different schemes for wide dynamic range imaging will be discussed. There will be a short discussion on depth sensor based on time-of-flight (ToF) and the way they are implemented with CIS technology.

**October 17-19, 2021**

Auditorium 1003, Meyer Bld.
Andrew and Erna Viterbi Faculty of Electrical & Computer Engineering

**Dr. Amos Fenigstein**
Tower Semiconductor, Israel

**ACRC** – Advanced Circuit Research Center
Congratulations for completing the PhD!

Dr. Deborah Pereg
Advisor: Prof. Israel Cohen

PhD Thesis Title: Three-dimensional Seismic Imaging and Sparse Inversion
Congratulations for completing the PhD!

Dr. Avraham Sayag

Advisor:
Prof. Emanuel Cohen

PhD Thesis Title:
Efficiency Improvement of Digital Beam Forming Array
כשאומרים "יש להבריק ב-... זה לא תמיד נבון...
מילים שלגלות עלילות חידשים
בנדורדה אישה בספריה:

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