

The SIPL Newsletter – Issue 2, September 2014

עדכונים מהמעבדה לעיבוד אותות ותמונות, הפקולטה להנדסת חשמל, הטכניון

SIPL Activities

A new staff member joins *SIPL*. **Ronen Talmon** completed his PhD in our department under the supervision of Prof. Israel Cohen and Prof. Sharon Gannot. He performed his Postdoct research in the Yale University with Prof. Ronald Coifman. His main research interests are statistical signal processing, analysis and modeling of signals, speech enhancement, biomedical signal processing, applied harmonic analysis, and diffusion geometry. Here's a link to [his homepage](#).

In our last issue, we reported on an [augmented reality pinball game](#) created by *SIPL* students. This game was presented on the main stage of the opening panel of the [DLD Tel Aviv Digital Conference](#) with **Mr. Yossi Vardi and Mr. Shimon Peres**. You can see Mr. Peres playing pinball [in his Facebook page](#). The system was also presented in the Makers Innovation Zone of this conference. Yair Moshe gave a talk on 'Innovation with Undergraduate Students' in one of the conference panels.

SIPL students have built a prototype system running a novel video quality assessment algorithm. The algorithm streams video in real-time with state-of-the-art quality assessment results. A short video showing this system can be found [here](#).

A new experiment for undergraduate students was developed in *SIPL*. The experiment deals with real-time echo cancellation on a multicore embedded OMAP platform. [A paper describing this experiment](#) was presented in [EUSPICO 2014](#) in Lisbon and a demo of this experiment was presented in [EDERC 2014](#) in Milano.

Seminars

Omer Bar-Ilan will present his MSc work (under the supervision of Prof. Yonina Eldar) in a seminar: **Sub-Nyquist Radar via Doppler Focusing**, Sunday, 28/9.

Conferences and Events

[IEEE 28th Convention in Israel](#) will take place 3-5/12 in Eilat. Four papers describing *SIPL* undergraduate projects as well as seven papers by *SIPL* graduate students will be presented in this event.

Other Signal and Image Processing News

The latest work from Yan Michalevsky, a *SIPL* graduate and currently a PhD student at Stanford University, shows that the gyroscopes found on modern smart phones are sufficiently sensitive to measure acoustic signals in the vicinity of the phone:

[Gyrophone: Recognizing Speech From Gyroscope Signals](#)

Microsoft's new Hyperlapse algorithm smooth jittery first-person video footage:

[First-person Hyperlapse Videos.](#)

OpenCV 3.0 alpha is out. OpenCV is a well-known library of image processing and computer vision functions. This major new version contains many important improvements such as a new C++ API, GPU-accelerated algorithms, iOS and Android platforms support, CUDA and OpenCL, Python and Java bindings. It also contains many new algorithms for (just to name a few) shape descriptors, image alignment, latent SVM, high dynamic range, text detection and recognition, car detection, TLD tracker, pose estimation. More information can be found [here](#).

SIPL Industry Collaborations in 2014



Comments and suggestions: sipl-newsletter@ee.technion.ac.il