CMOS digital transmitters with free space constellation formation at 100 and 140 GHz were presented along with a 1–30 GHz fully digital I-Q transmitter with 20-dBm output power for 5G terminals. Finally, predistortion and spectral shaping techniques in the transmitter and receiver analog-to-digital converter-based equalization at 64 GBaud were discussed.

An audience of over 40 people attended the talk, which was held in the Tietze-Schenk Room of the FAU.

—Robert Weigel

SSCS DL Naveen Verma Visits Universitas Gadjah Mada

The IEEE Solid-State Circuits Society Indonesia Chapter organized a talk by Distinguished Lecturer (DL) Dr. Naveen Verma on 10 August 2017. The talk was held at the Universitas Gadjah Mada (UGM) at the Department of Electrical Engineering and Information Technology (DEEIT).

Verma, an associate professor with the Department of Electrical Engineering, Princeton University, New Jersey, is an expert on ultra-low-power systems and platform components for low-power processing and communication in advanced and emerging technologies.

Verma delivered the lecture “Exploiting Machine-Learning Algorithms for Very Low-Power Implementations,” which was attended by approximately 30 people consisting of faculty, staff, and students. The lecture was moderated by Dr. Agus Bejo, a member of the Digital System Laboratory.

Dr. Verma presents “Exploiting Machine-Learning Algorithms for Very Low-Power Implementations” at UGM.

Audience members listened to Dr. Verma’s lecture with great enthusiasm.
Verma explained a novel method on how to reduce the power consumption for machine-learning algorithm implementation on a circuit using smaller bit resolution based on an analog comparator. After the lecture finished, the attendees actively continued the discussion on technical aspects and specific issues. The meeting was closed by Bejo, who presented Verma with a gift on behalf of the DEEIT.

—Agus Bejo

DL Prof. Patrick Yue Speaks at IMECAS

IEEE Solid-State Circuits Society (SSCS) Distinguished Lecturer (DL) Prof. Patrick Yue visited the Institute of Microelectronics of the Chinese Academy of Sciences (IMECAS), China, on 12 October 2017. He gave an inspiring talk, “Recent Developments in Visible Light Communication—Applications and SoC Design,” which drew over 70 attendees, including IMECAS faculties, graduate students, undergraduate students, and local professionals. After the presentation, many interesting questions were asked and led to a thoughtful discussion.

Abstract
This talk presents two advanced visible light communication (VLC) modulator system-on-chips (SoCs). The first is an IEEE 802.15.7 PHY-I standard-compliant VLC transmitter. The second is an active matrix light-emitting diode (LED) micro-

display driver SoC with embedded VLC function.

Using ordinary LED lights for a wireless data link, VLC has received a great deal of research interest over the past decade due to a number of novel applications, including indoor navigation and location-based wireless broadcasting. Such applications can be deployed through LED lights, advertisement signs or liquid crystal display with LED backlights, and digital LED signage. Most of the VLC SoC development has focused on wireless optical receiver design,