



DEVELOPMENT OF CUSTOM ANALOG INTEGRATED CIRCUITS

Presented by Luke J. Turgeon of Turgeon Engineering, Inc.

Date: Tuesday evening, 2011 December 06

Place: Sheraton University City, 36 & Chestnut Streets, Philadelphia PA 19104
Fairmount/Franklin Suite – downstairs from main lobby

Free Parking: Sheraton indoor garage – entrance on 36th Street.

Take your garage ticket, and have it stamped when you sign in to the meeting.

Networking/Social time: Starts at 5:30 PM

Dinner: 6:15 PM Allow for rush-hour traffic.

Program: 7:00 to 9:00 PM

The IEEE Philadelphia Consultants Network (CONET) is an Affinity Group of the IEEE. Most Members are electrical or computer engineers. The CONET mission is to share knowledge through technical and business networking. Details are on the Web site www.PhilaConet.com.

Open: You do not have to be an IEEE member or a CONET Member to attend this meeting.

Meeting updates will be sent by e-mail: Be sure your current e-mail address is in our records. If in doubt, confirm your current e-mail address to CONET.Phila@IEEE.org.

SHOW AND TELL: Two CONET Members will each demonstrate their 3-minute pitches to prospective clients. The audience will critique both their content and their presentations.

REAL-WORLD PUZZLER: One senior Member will pose a challenging consulting problem taken from the real world. He will respond to questions from the audience but will withhold the actual solution until later in the program.

MAIN SPEAKER: Luke J. Turgeon, PhD, P.E.

- President of Turgeon Engineering, Inc.
- Turgeon Engineering, Inc. specializes in the design and production of electronic circuits since 1994. Turgeon has served both major and smaller companies with their electronic needs, having supplied the old AT&T companies (Lucent, Agere) with circuits for communications, Tyco with circuits for their undersea cable repeaters, Raytheon with circuits for their airborne radars, and a plethora of other applications.

Main Speaker's Abstract:

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The analog integrated circuit (IC) development process will be presented from component concept to production. The distinction between analog and digital will be made as it pertains to integrated circuits. Included, will be a summary of wafer fabrication companies (FABS) and their key process features such as the available components, maximum voltage permitted and maximum speed achievable. The integrated components will be compared to discrete components in terms of their availability, process tolerance and matching properties. In terms of performance, it is the matching properties of the integrated components that are exploited to obtain best performance. This will be illustrated by example. In contrast to discrete design, integrated transistors are very low cost, resistors cost more and capacitors are very costly and typically have a very limited range of values (less than one nano-Farad). For that reason ICs tend to mostly use transistors using resistors and capacitors sparingly.

Admission, Reservations, and Payment

| Admission Fees | | | |
|------------------------|----------------------|-----------------------------|-------------------|
| | CONET Members | IEEE Student Members | All Others |
| A: With Dinner | \$30 | \$40 | \$40 |
| B: Meeting-Only | Free | Free | \$15 |

A: With Dinner (All you can eat buffet): Reservations and advance payment are required.

- 1) Reserve by sending an e-mail to CONETtreasury@gmail.com. Include your full name and telephone number.
- 2) You will get an e-mail confirmation with instructions for paying by check or credit card.
- 3) Advance payment is required to reserve space for dinner.
- 4) Payment by check must be received no later than Wednesday, 2011 November 30. The credit card deadline is Friday, 2011 December 2.

B: Meeting-Only: Reservations are preferred. Walk-ins are accepted if space is available.

- 1) Reserve by sending an e-mail to CONET.Phila@IEEE.org. Include your full name and telephone number.
- 2) You will get an e-mail confirmation with instructions for paying by check or credit card.
- 3) Advance payment is not required for meeting-only admission.
- 4) Check or exact cash is accepted at sign-in. (No credit card payment at sign-in.)

Questions about this meeting can be directed to Robert Peruzzi at (610) 462-3939 or by e-mail to Peruzzi@RPeruzzi.com.