

# Controlling leakage power in nanometer CMOS: Technology meets design

on Friday, September 14, 2007 in Munich, Germany

<http://www.edacentrum.de/controlling-leakage-power/>

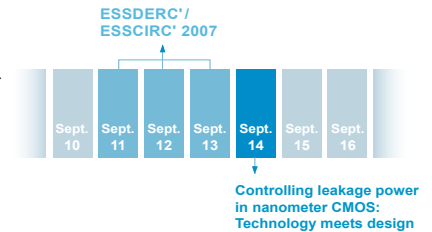


Leakage power is becoming a significant part of the global IC power budget requiring novel circuit design solutions in addition to innovation in technology leakage control techniques. The Workshop will strongly focus on leakage aware design techniques and the technological possibilities to reduce leakage. In addition, the state of the art and future research directions on leakage control from the technology to design techniques at different levels of abstraction will be presented.

## Date and Location:

The workshop will take place on **Friday, September 14, 2007** at Technical University Munich (TUM) in Germany in conjunction with the **35th Solid-State Device Research Conference ESSDERC'2007 and the 31st Solid-State Circuits Conference ESSCIRC'2007**.

<http://www.esscirc2007.org/main.html>



## Program:

Time	Module	Speaker
8:30	Registration	edacentrum
9:00	Welcome	Joan Figueras, UPC Barcelona, Herman E. Maes, IMEC
9:05	Overview of the CLEAN Integrated Project	Roberto Zafalon, STM
9:15	Overview of the PullNANO Integrated Project	Dominique Thomas, STM
9:25	Perspectives on Technological Options to control leakage in advanced Si CMOS devices	Thomas Hoffmann, IMEC
<b>09:55</b>	<b>Coffee break</b>	
10:25	High-gate stacks: the solution for leakage reduction?	Luigi Pantisano, IMEC
10:55	Leakage Currents in Nanometer CMOS Devices	Thomas Schulz, Infineon
11:25	Leakage and Leakage Variability in nano-CMOS devices	Asen Asenov, University of Glasgow Jürgen Lorenz, FhG-IIS, Erlangen
11:55	Leakage Reduction in sub-100nm CMOS Technologies: Bridging the Gap between Technology, Circuit Design and Product Requirements	Christian Pacha, Infineon
<b>12:40</b>	<b>Lunch</b>	
14:10	Invited Keynote: High Level Energy and Power Reduction Strategies	Christian Piguët, CSEM
14:55	Circuit Level Leakage Aware Design	Edith Beigne, LETI
<b>15:40</b>	<b>Coffee break</b>	
16:10	Adaptive Architectural Leakage Control Techniques	Joan Figueras, UPC Barcelona
16:55	Q&A and general discussion	Joan Figueras, UPC Barcelona, Herman E. Maes, IMEC
<b>17:00</b>	<b>Closing</b>	

## Participation fee (plus 19% VAT)

Industry	400,- Euro
Professors	200,- Euro
PhD students and students	100,- Euro

## Registration:

See registration form on the reverse side.

The participation fee includes: lunch, coffee breaks, printed slides binder

Registration deadline is August 24, 2007.

Registrations after that deadline will be charged with an additional fee of EUR 50,- (plus 19 % Sales Tax).

## Organization and information:



edacentrum  
Schneiderberg 32  
30167 Hannover  
Germany

fon +49 511 762-19699  
fax +49 511 762-19695  
info@edacentrum.de  
www.edacentrum.de

## Location

TU Munich, Theresienstr. 90, 80333 Munich, Germany

## Arrival ...

... by underground railway:

From the central station to the TUM it is about 7 minutes by underground railway. Enter U2 direction: „Feldmoching, München“ and leave at the second stop „Theresienstrasse“ More information and a map at the workshop webpage: <http://www.edacentrum.de/controlling-leakage-power/> .



... by train:

Long-distance trains arrive several times each day in Munich from all over Germany and Europe. From the central station to the TUM it is about 10 minutes on foot. Keep to the left on leaving the central railway station by the main exit and walk along Luisenstrasse. Cross Brienner Strasse at Königsplatz square, cross Gabelsberger Strasse and continue to Theresienstrasse. Keep to the right until the north entrance (Theresienstrasse 90) of the TUM. Then please follow the signposts to ESSDERC/ESSCIRC.



... by plane:

It takes approximately 60 minutes by rail from the Munich International Airport to the central station using the S1 or S8 line.




... by car:

Due to the traffic and parking situation near the campus, we do not particularly recommend driving to the TU Munich. There are no visitors' parking lots at the main campus. Should you nevertheless decide to travel by car, please bear in mind that you need about 1 hour to travel from the outskirts of the city to the town centre during the rush hour.

More information also on hotels & travel are available on <http://www.edacentrum.de/controlling-leakage-power/> .

## Registration Form (via ground mail or via fax to +49 511 762-19695 until August 24, 2007)

I register for „Controlling leakage power in nanometer CMOS: Technology meets design“, September 14, 2007

Name	_____	
First name	_____	
Title	_____	Invoice address (if differing)
Company*	_____	_____
Address	_____	_____
ZIP/City	_____	_____
Country	_____	_____
Phone	_____	<b>Participation fee (all prices +19 % VAT):</b> <input type="checkbox"/> Industry 400,- Euro* <input type="checkbox"/> Professors 200,- Euro* <input type="checkbox"/> PhD students and students 100,- Euro*
Fax	_____	
E-Mail	_____	



\* Employees, professors and students affiliated with a company, university or research center participating in CLEAN or PULLNANO are free of charge. Their participation cost is covered by the CLEAN and PULLNANO project. A complete List of all partners who are free of charge is available at <http://www.edacentrum.de/controlling-leakage-power/>.

Payment  by invoice or credit card:  MasterCard  VISA  American Express

Card # \_\_\_\_\_ Exp. Date \_\_\_\_\_

Card holder \_\_\_\_\_ card-verification code\*\* (in the signature field)

Registrations with credit card payments must be sent by fax. Safe handling of your credit card data is guaranteed only, if the fax is sent to +49 511 762-19695

Cancellation (only written requests) is possible free of charge until Aug. 24, 2007. Until Aug. 30, 2007 half of the participation fee is raised. There after the entire amount of participation becomes due. An agency of the announced participant with same affiliation is possible at any time.

Late-registrations after Aug. 24, 2007 will be charged with an additional fee of EUR 50 (plus 19 % VAT).

\*\* The card-verification code can be found in the signature field, following the printed replica of the credit card number embossed on the front of the plastic. The code is printed only and is not contained in the magnetic-stripe data (in case of American Express cards, the code is to be found half way down the right-hand side of the card).

\_\_\_\_\_  
City, Date, Signature of CARD HOLDER

\_\_\_\_\_  
City, Date, Signature of PARTICIPANT