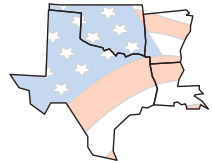


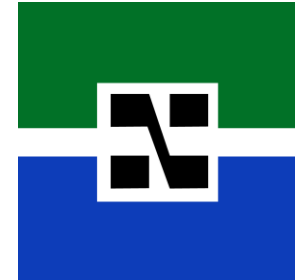
From I-635 or TX-114 exit MacArthur Blvd and go south - North Lake College will be on your Right



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Presents the First Conference of Italian Researchers:  
**The Contribution of the Italian Researchers in the World**  
**The Past -The Present -The Future**

Chairman - Vincenzo Arcobelli, President Comites  
 Moderator - Sabrina Forni, MS Analytical Chemistry

**Speakers**

Nicola Abate, M.D. Researcher (Medicine)  
 Tiziana Di Pucchio, Ph.D Researcher (Medicine)  
 Dario Crosetto, Inventor - Researcher (Physics)  
 Stefano Faccin, Ph.D, Inventor - Researcher (Telecommunication)  
 Angelo Pinto, Ph.D, Researcher (Microelectronic)

**Sunday, October 9th, 2005 -16.30**

North Lake College-Conference Hall-A206  
 5001 N.MacArthur Blvd  
 Irving, Tx 75038-3899

For information you can call 972-273-3562 or email to [italconference@hotmail.com](mailto:italconference@hotmail.com)



Refreshments will be provided by



# The Contribution of the Italian Researcher in the World

## The Past-The Present -The Future

**16:45-17:00**

Opening Remarks and Introduction

Moderator Sabrina Forni, MS Analytical Chemistry

Vincenzo Arcobelli- President(Comites) Committee for Italians Abroad

**17:00-17:15**

Speaker Nicola Abate, M.D. Associate Professor of Internal Medicine

The Center for Human Nutrition Division of Endocrinology and Metabolism

UT Southwestern Medical Center, Dallas, Texas

Recent Advances on Diabetes prevention

Audience Questions

**17:20 -17:35**

Speaker Tiziana Di Pucchio, Ph.D

Istituto Superiore di Sanita', Rome, Italy and Baylor Institute for

Immunology Research, Dallas, Texas.

An overview on cancer cell therapy

Audience Questions

**17:40-17:55**

Speaker Dario Crosetto, Inventor, 3-D Computing Inc. Texas

Innovative Technology for early cancer detection

Audience Questions

**18:00-18:15**

Speaker Stefano Faccin M.S. Computer Science - Inventor

Nokia Research Center, Dallas, Texas

Advances in ad-hoc communications

Audience Questions

**18:20-18:35**

Speaker Angelo Pinto Ph.D. Physics, PDF Solution Inc, Dallas Texas

High A Performance 0.18mm BiCMOS technology employing high

carbon content in the base layer of the SiGe HBT to achieve low

variability of hFE

Audience Questions

**18:45-19:30** Refreshments

### Recent Advances on Diabetes Prevention

Obesity affects 97 million adults in the USA and is considered an epidemic disease throughout the world. Accumulation of fat determines increased risk for diabetes and premature cardiovascular disease or death. During the past 10 years, Dr. Abate's clinical research has established mechanisms of interactions between genetic and fat accumulation in determining whether a person will develop diabetes and heart disease. These studies have the long term goals of finding new modalities for prevention and treatment of persons at risk.

### An overview on cancer cell therapy

In the last years, substantial results have been achieved in treatment of malignant diseases. Although new radiotherapy and chemotherapy protocols can lead to first remission in most patients, high systemic toxic effects have been observed.

New therapeutic strategies involve the development of cellular vaccines in order to induce a potent tumor specific immune response. Dendritic cells (DCs) play a pivotal role in induction of the immune response and can be manipulated prior to reinfusion into patients. DCs have been regarded as promising cellular adjuvants for therapeutic vaccines against cancer and chronic viral infections.

### Innovative Technology for early cancer detection

3-D Complete Body Screening (3D-CBS) technology combines CT (CAT scan) and Positron Emission Tomography (PET) technology. It is 400 times more efficient than current PET and visualizes cancer by looking at its biological activity process even before morphological changes take place. Because it exposes patients to 30 times less radiation than conventional PET, 3D-CBS allows safe screening of asymptomatic people at high risk as well as those who have previously had cancer substantially reducing cancer deaths through early detection.

### Advances in ad-hoc communications

Wireless ad-hoc networks enable information exchange among mobile entities without a fixed infrastructure, and are very attractive for applications where preexisting infrastructures are either infeasible or too expensive. (e.g. "home" scenarios, military and public safety applications). This new form of communications poses new challenges to traditional networking architectures and protocols designed for infrastructure-based wireless networks such as current cellular networks. This presentation summarizes some recent achievements in the area.

### High A Performance 0.18mm BiCMOS technology employing high carbon content in the base layer of the SiGe HBT to achieve low variability of hFE

We present a 0.18mm BiCMOS technology in which hFE variability of Silicon-Germanium Heterojunction Bipolar Transistors (SiGe HBTs) is greatly minimized by means of increased Neutral Base Recombination adding high carbon content in the base layer. In this work, we propose, for the first time, to use a high concentration of carbon in the base of SiGe HBTs as a practical way to increase the base current in a predictable and controlled way. Consequently, variability of hFE is greatly decreased and a significant improvement of device matching can be achieved. Furthermore, to guarantee a sufficiently high value of hFE we propose a Silicon-Germanium cap architecture to increase the collector current. HBTs fabricated using this technology exhibit a peak  $f_T$  of 90GHz and a peak  $f_{MAX}$  of 140GHz with an  $f_{Tx}BV_{ceo}$  of 255GHzV. Together with state of the art 0.18mm CMOS platform and high quality passives this technology is a viable candidate for the design of high frequency analog circuits.