



Participant Profile

for the
Turkish-German Strategy Workshop 2006
TÜBİTAK Marmara Research Center,
Istanbul- Gebze Turkey
13 – 15 December 2006



International Bureau (IB)
of the Federal Ministry of
Education and Research
(BMBF)

1. Contact details and personal information

Name:	Günhan Dünder	Phone:	+90 212 3596860
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¹ **Role/function** e.g. working group leader, managing director, postdoc, PhD etc.

² **Organisation type** e.g. university, research institution, small and medium enterprise (SME), industry etc.

Working Group:	<input type="checkbox"/> 1 Material Technologies <input type="checkbox"/> 2 Biotechnology, Genomics and Food <input type="checkbox"/> 3 Energy <input checked="" type="checkbox"/> 4 Information and Communication Technologies <input type="checkbox"/> 5 Environmental Protection, Climate Change and Sustainable Development
Areas of activity:	<input checked="" type="checkbox"/> research <input checked="" type="checkbox"/> technology development <input type="checkbox"/> demonstration <input type="checkbox"/> training <input type="checkbox"/> dissemination <input type="checkbox"/> other:
Keywords characterising your area of research:	Please choose the appropriate key words (max. 5) from the following list: http://www.cordis.lu/fp6/keywords Design engineering, Electronic engineering, Wireless systems, Systems analysis and models development, Micro-technology
Expertise, technologies and infrastructures available in your institution:	Research activities / expertise: Analog design automation systems, sigma delta A/D converters, design of various analog and digital integrated circuits. Methods: Software development, design of IC's on CAD systems, fabrication through Europractice or CMP. Key technologies: In house developed CAD tools, knowledge base on Sigma-Delta A/D converters. Infrastructures: Various models of workstations, full MentorGraphics suite, HSPICE, Altera FPGA systems, a large number of highly skilled graduate students. Key publications: <ul style="list-style-type: none">- S. Balkır, G. Dünder, and A. S. Öğrenci, <i>Analog VLSI Design Automation</i>, CRC Press, 2003.- G. Alpaydın, S. Balkır, and G. Dünder, "An evolutionary approach to automatic synthesis of high performance analog integrated circuits," <i>IEEE Transactions on Evolutionary Computing</i>, Vol. 7, No. 3, pp. 240-257, 2003.- G. Alpaydın, G. Dünder, and S. Balkır, "Evolution based design of neural fuzzy networks using self-adapting genetic parameters," <i>IEEE Transactions on Fuzzy Systems</i>, Vol. 10, No. 2, pp. 211-221, April 2002.- A. S. Öğrenci, G. Dünder, and S. Balkır, "Fault tolerant training of neural networks in the presence of MOS transistor mismatches," <i>IEEE Transactions on Circuits and Systems</i>, Vol. 48, No.3, pp. 272-281, March 2001.



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- S. Talay and G. Dündar, "A Sigma-Delta ADC design automation tool," *Proceedings of PRIME 2005*, pp. 40-43, July 25-28 2005, Lausanne, Switzerland.
- E. Deniz and G. Dündar, "Performance estimator for an analog design automation system using EKV modeled analog circuits," *Proceedings of ECCTD'05*, August 29-September 2, 2005, Cork City, Ireland.



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2. Past and present research collaborations

Are you familiar
with the European
Framework
Programme?

Yes

No

- with Framework Programme 5
- with Framework Programme 6
- with Framework Programme 7

EU-projects you are
involved in:

Programme title / contract number / title / acronym / your function
(coordinator / partner / contractor)

Past projects

None

Present projects

None

Other international
collaborations:

Univ. Paris, VI. Lip6 Lab. (Joint project Tubitak-PIA)
Univ. of Auburn (Joint project Tubitak-NSF)

Name(s) and
contact details of
potential partners:
(NB: Graeb will not
be able to participate
SK 21 Sept. 06)

If you would like to suggest the participation of particular partners from the
partner country based on existing contacts or collaboration experience,
you are welcome to indicate their names and contact details below:

Dr. Helmut Graeb, Tel. +49-89-289-23679
Technische Universitaet Muenchen, Arcisstr. 21, 80333 Munich
<http://eda.ei.tum.de/~hlq/index.htm>, graeb@tum.de

3. Presentation at the Workshop

I will give a presentation at the workshop (approx. 10 min.) to present my institution, my expertise, and my collaboration interests. The contents of my presentations is summarised below (max. 1 page).

First, the department of Electrical and Electronic Engineering will be briefly described. Various research areas and groups will be mentioned. Then, the BETA laboratory will be described in more detail. Projects within the BETA laboratory will be outlined. These projects are as follows:

- Design automation and methodologies for analog IC design. Various aspects of this subject will be discussed such as automatic layout generation, circuit synthesis, and high level design of analog and mixed signal systems.
- Sigma delta A/D converters. Both discrete time and continuous time converters will be mentioned. Not only the design, but also design methodologies for these systems will be proposed.
- Design of integrated circuits for telecommunication applications. Among these, UWB systems will be emphasized.

I am interested in collaborating on these subjects and am open to various tools for collaboration.

I agree with the publication of my data on the Workshop website!

PLEASE FILL IN THIS FORM UNTIL 22 SEPT. 2006 AND RETURN IT TO:

Internationales Buero des BMBF
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Christian.schache@dlr.de

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