Annual Activity Report

For the period Sep. 1, 2005 - Aug. 31, 2006

Chania, Crete, Nov. 30, 2006
Message from the Chair

Dear Colleague,

The Department of Electronic and Computer Engineering (ECE) at the Technical University of Crete (TUC) was founded in the late '80's, and admitted its first class of (30) undergraduate students in 1990. Since then, the Department has grown considerably, by all counts. As of this writing, the incoming class of freshmen has grown to 125, and the number of faculty to 20 (with 2 more to join us shortly).

The Department is organized in four Divisions: Computer Engineering, Telecommunications, Electronics & Computer Architecture, and Control Systems. There is a successful research-oriented graduate studies program in place since the early 90's, which has grown considerably over the years.

The Department is proud of the accomplishments of its graduates. Many of our former students have pursued graduate studies here and abroad. Their ranks include faculty members at top-rated North-American Universities (Georgia Tech, McMaster University), researchers at University, Government, and Industry Research Labs (e.g., Rice-U.S., NICTA-Australia, Telcordia-U.S., Ericsson - Sweden), and successful professional engineers across Greece and Europe.

Over half of the faculty members have obtained their Doctoral degrees in top-rated foreign Universities, and several worked for many years as faculty members abroad prior to joining us. The current levels of peer-reviewed scientific publication activity and competitive research funding are testament to the talent, visibility, and productivity of the faculty. Faculty credits further include multiple best paper awards at the IEEE Society level, professional recognition in terms of associate editor and technical committee member appointments, and leadership in conference organization.

While the Department’s gradient is positive in all these metrics, there is still a lot of room for improvement. Towards this end, an Annual Activity Report (AAR) process was instituted in 2005. You are holding the Department’s second AAR, covering the period from Sep. 1, 2005 to Aug. 31, 2006. It is our hope that the AAR process will contribute towards improving the quality of our Department, and, at the same time, give a credible snapshot of the state of the Department as of this writing. Your feedback is most welcome.

Nikos Sidiropoulos
nikos@telecom.tuc.gr
Telecommunications Division

Faculty members:

- Vassilios Digalakis, Professor
- Michael Zervakis, Professor
- Georgios Karystinos, Visiting Associate Professor
- Polychronis Koutsakis, Post-Doctoral Researcher – Visiting Lecturer
- Athanasios Liavas, Associate Professor
- Michael Paterakis, Professor
- Alexandros Potamianos, Associate Professor
- Nikolaos Sidiropoulos, Professor
- Sophia Tsakiridou, Visiting Associate Professor
Annual Activity Report

For the period: September 1, 2005 to August 31, 2006

Name: Vassilis Digalakis

Rank: Full

Years in rank: 6

Full-time or part-time: Full-time

Division: Telecommunications

Lab affiliation: Information & Networking

A – Teaching

- Undergraduate courses taught
  - Introduction to speech processing

- Graduate courses taught
  - Advanced topics in speech processing

B – Publications

- Publications in refereed journals
  - Accepted
  - Published
    - N. Moustroufas and V. Digalakis, “Automatic pronunciation evaluation of foreign speakers using unknown text”, accepted for
publication in Computer, Speech and Language, expected publication date January 2007.

- Publications in refereed conferences
  - Submitted
  - Published

C – Awards & Distinctions

D – Funded Projects

- Current projects:
  - “Ανάπτυξη Πολυτροπικής Πλατφόρμας με ενσωματωμένες υπηρεσίες Αναγνώρισης και Σύνθεσης Φωνής για Φορητές Συσκευές”, ΠΕΝΕΔ, PI, PI’s Budget € 180.000.
  - Μοντελοποιηση, Συνθεση Και Αναγνωριση Φωνης Με Υπολογιστικη Αεροδυναμικη Αναλογια Του Ανθρωπινου Ηχητικου Σωληνα, ΠΕΝΕΔ, Co-PI, PI’s Budget € 277.628.

- Project proposals submitted:
  - ΠΑΝΟΠΤΗΣ, Εθνικό Ραδιοτηλεοπτικό Συμβούλιο. PI, PI’s Budget € 267.750.

E – Professional service

- Reviewer in several conferences and journals.
F – Service to the Department and the School

- Departmental responsibilities
  - Deputy Department Chair
  - Director, Information and Networking Lab

- School-level responsibilities
  - Director, TSI

G – Advising

- Active graduate students supervised
  - Ph.D. and M.Sc. students supervised
    - Costas Charizakis, PhD, 2003
    - Chris Vosnidis, PhD, 2004
    - Dimitris Oikonomidis, PhD, 2003
  - PhD. And M.Sc. degrees awarded
    - Nikos Tsourakis, MSc, 2006
    - Dimitris Pratsolis, MSc, 2006

- Undergraduate students supervised
  - Diploma theses in progress (supervisor)
    - K. Athanasoglou
    - Z. Malafouris
    - O. Tsergoulas
    - T. Zervopoulos
  - Diploma theses completed (supervisor)
    - T. Gjermani
    - G. Tsountzos
    - C. Mpoumpouka
    - P. Papadopoulos
    - D. Papaioannou
Annual Activity Report

For the period: Sept 1, 2005 to Sept 1, 2006

Name: Michalis Zervakis
Rank: Professor
Years in rank: Full-time
Full-time or part-time: Full-time
Division: Telecommunications
Lab affiliation: Digital Image and Signal Processing Lab, Lab of Automation

A – Teaching

- Undergraduate courses taught
  - Digital Signal Processing
  - Digital Image Processing

- Graduate courses taught
  - Pattern Recognition
  - Special Issues in Image Processing

- Labs taught
  - Digital Signal Processing
  - Digital Image Processing

- Curriculum & course development
  - New courses / labs developed:
  - Lecture notes / slides developed: Digital Image Processing, Digital Signal Processing, Pattern Recognition
  - Authored textbooks: none
B – Publications

Conference Papers


**Journal Papers**


Book Chapters


Submitted Papers- Under Review


- Patents: none

C – Awards & Distinctions

D – Funded Projects

2006-2008 Getting Cretan Businesses On-Line and Doing E-Business (eKONES)
Principal investigator for TUC
Funding Agency: Ministry of Development, General Secretariat for Research and Technology.
TUC budget 30.000 Euro

2006-2008 Meta-Genomic Methods and Technologies for Diagnosis and Therapy Selection: Analysis of Genotype and Molecular Markers (GONOTYPOS)
Principal investigator for TUC
Funding Agency: Ministry of Development, General Secretariat for Research and Technology.
Total budget 871.000 euros, TUC budget 100.000 Euro

2006-2008 Integrated Inspection System supported by Automated Motion Detection
Co-Principal investigator for TUC, (PI for TUC Euripides Petrakis)
Funding Agency: Ministry of Development, General Secretariat for Research and Technology
Total budget 800,000 Euros, TUC Budget 244,402 Euro

2006
Semantic Similarity for Knowledge Discovery in Medical Archives (MedSearch)
Participant,
Funding Agency: BIOPATTERN NoE, Fp6
TUC Budget 40,000 Euro

2006
District Technology Platform for Wideband Health Services
Principal investigator for TUC
Funding Agency: District of Crete under the Programme “Poles of Innovation”

2005-2007
Principal investigator for TUC, project HERPS Center:
Training Centre for Health Care, Prophylactic and Rehabilitation Services, LEONARDO DA VINCI
Community Vocational Training Action, 2nd phase, PI’s budget 46,538 Euro

2004-2007
Principal investigator for TUC, project OPTAG:

2004-2007
Principal investigator for TUC, project BIOPATTERN:
Computational intelligence for biopattern analysis in support of eHealthcare, Network of Excellence, FP6. Total budget 3,400,000 euros, PI’s budget 264,630 euros

- Project proposals submitted:
  - Over 4 from 2005 to Sept 2006

E – Professional service

- Associate Editor duties
- Society Technical Committee duties
  - 2006 Session Chair ICANN-06 (International Conference on Artificial Neural Networks)

- Conference Technical Program Committee service
  - Technical Committee Member: IEEE EMBC 2006 (Engineering in Medicine and Biology Conference).
  - Programme Committee Member: ESANN’2006 (European Symposium on Artificial Neural networks).
• Organizing Committee Member: MEDSIP 2006 (International Conference on Advances in Medical, Signal and Information Processing)
• Local Organizing Committee: ICANN-06 (International Conference on Artificial Neural Networks)

• Conference Organization (specify role)
• Reviewing activities:
• Participation in National Committees (e.g., EΔET)
• Other

F – Service to the Department and the School

• Departmental responsibilities
  ▪ Lab Director: Digital Image and Signal Processing Laboratory
  ▪ Lab Director: Automation Laboratory

• School-level responsibilities
  ▪ Member and vice-chair ELKE

G – Advising

• Active graduate students supervised
  ▪ Ph.D. and M.Sc. students supervised
    ▪ Zacharias Getsis MASc student - Graduated
    ▪ Ioannis Dimou PhD student
    ▪ Michalis Kounelakis, PhD student
    ▪ Michalis Blazantonakis PhD student
    ▪ Vaggelis Sakalis, PhD student
    ▪ Stefanos Goumas PhD student
    ▪ George Manikis MASc student
    ▪ Antonis Tsichlas MASc student
    ▪ Kostantina Moirogiorgou MASc student
    ▪ Nikolas MArkopoulos MASc student
    ▪ George Livanos MASc student
    ▪ Kostas Michalopoulos MASc student
  ▪ PhD. And M.Sc. degrees awarded

• Undergraduate students supervised
  ▪ Diploma theses in progress (supervisor)
    ▪ Over 10
  ▪ Diploma theses completed (supervisor):
- I don’t remember
- Diploma theses in progress (committee member):
  - I don’t remember
- Diploma theses completed (committee member)
  - I don’t remember
Annual Activity Report

For the period: Sep. 1, 2005 to Aug. 31, 2006

Name: George Karystinos
Rank: Assistant Professor
Years in rank: 1 (as Visiting Faculty, PD 407)
Full-time or part-time: Full-time
Division: Telecommunications
Lab affiliation: Telecommunications Laboratory

A – Teaching

• Undergraduate courses taught
  o TEL 501 – Mobile Communication Systems and Networks (Fall 2005)
  o TEL 502 – Statistical Signal Processing for Communications (Spring 2006)

• Graduate courses taught
  o TEL 609 – Special Topics on Communication Systems (Fall 2005)

• Labs taught
  o TEL 501 – Mobile Communication Systems and Networks Lab (Fall 2005)
  o TEL 609 – Special Topics on Communication Systems Lab (Fall 2005)
  o TEL 502 – Statistical Signal Processing for Communications Lab (Spring 2006)

• Curriculum & course development
  o New courses / labs developed
  o Lecture notes / slides developed
    TEL 501 – Mobile Communication Systems and Networks (Fall 2005)
    TEL 609 – Special Topics on Communication Systems (Fall 2005)
  o Authored textbooks
B – Publications

• Publications in refereed journals
  o Submitted
  o Accepted
  o Published

• Publications in refereed conferences
  o Submitted: those published (see below), plus
  o Accepted: those published (see below)
  o Published

• Books and edited book chapters

• Patents
C – Awards & Distinctions

  “... in the top 1% within its field according to Essential Science Indicators SM. Your work is highly influential, and is making a significant impact among your colleagues in your field of study.’’

D – Funded Projects

- Current projects

- Project proposals submitted
  - Submitted FP6 MC-IRG proposal “Power and rate efficient modulation in UHF-SHF multicarrier communications.”
  - Participated in FP6 FET proposal CoopCom, led by Prof. A. P. Liavas.

E – Professional service

- Associate Editor duties

- Society Technical Committee duties

- Conference Technical Program Committee service

- Conference Organization (specify role)

- Reviewing activities
  - Reviewer for journals
    - IEEE Trans. on Information Theory
    - IEEE Trans. on Communications
    - IEEE Trans. on Wireless Communications
    - IEEE Trans. on Signal Processing
    - IEEE Communications Letters
    - IEEE Signal Processing Letters
  - Reviewer for conferences
    - IEEE GLOBECOM 2006 - Global Communications Conference
    - IEEE ICC 2005 - International Conference on Communications
- IEEE WCNC 2006 – Wireless Communications and Networking Conference
- IEEE PIMRC 2006 – International Symposium on Personal, Indoor and Mobile Radio Communications
- IEEE ICT 2006 - International Conference on Telecommunications

F – Service to the Department and the School

- Departmental responsibilities
  - Organized the Spring 2006 Telecommunications Division Seminar Series, Department of Electronic and Computer engineering, Technical University of Crete.

- School-level responsibilities

G – Advising

- Active graduate students supervised

- Undergraduate students supervised
  - Diploma theses in progress (supervisor)
    - Dimitris Papailiopoulos, “Performance evaluation of PAPR reduction methods in OFDM systems that employ nonlinear power amplifiers.”
Annual Activity Report

For the period: Sep. 1, 2005 to Aug. 31, 2006

Name: Polychronis Koutsakis
Rank: Assistant Professor, McMaster University.
Years in rank: 1st year
Full-time or part-time: Full-time
Division (during the past year in TUC as a postdoctoral researcher):
Telecommunications
Lab affiliation: Telecommunications Laboratory

A – Teaching

- Undergraduate courses taught
  - TEL 401 – Computer Networks I (teaching assistant, Fall 2005)
  - TEL 411- Computer Networks II (teaching assistant, Spring 2006)

B – Publications

- Publications in refereed journals
  - Submitted


• **P. Koutsakis**, “Satellite Bandwidth Allocation Based on MPEG-4 Videoconference Traffic Prediction”, submitted to the Wireless Personal Communications Journal (Springer Publ.)


• T. Chiras, **P. Koutsakis** and M. Paterakis, “On Improving the Efficiency of the Extended Aloha Protocol for Broadband Powerline Communications”, submitted to the International Journal of Electronics and Communications (Elsevier Publ.)


  - Accepted

• **P. Koutsakis**, M. Vafiadis and H. Papadakis, “Prediction-Based Resource Allocation for Multimedia Traffic over High-Speed Wireless Networks”, *accepted for publication in the International Journal of Electronics and Communications (Elsevier Publ.)*

• **P. Koutsakis** and M. Vafiadis, “Medium Access Control for Integrated Multimedia Wireless Access with the use of a Video Packet Discard Scheme”, *accepted for publication in the Wireless Personal Communications Journal (Springer Publ.)*

Published


- Publications in refereed conferences
  - Submitted:
  - Accepted:

  - Published


C – Awards & Distinctions

D – Funded Projects

- Current projects:

E – Professional service

- Conference Technical Program Committee service
  - IEEE Conference on Pervasive Computing and Communications (PerCom)2006,
  - IEEE Conference on Local Computer Networks (LCN) 2006,
  - The First International Symposium on Pervasive Computing and Applications (SPCA 06)
  - The 10th Communications and Networking Simulation Symposium (CNS’07), part of the 2007 Spring Simulation Multiconference,

- Reviewing activities
  - IEEE/ACM Transactions on Networking.
  - IEEE Transactions on Vehicular Technology
  - IEEE Transactions on Mobile Computing
  - IEEE Network
  - IEEE Communications Magazine
  - IEEE Communications Letters
  - Wireless Personal Communications Journal (Springer Publ.)
  - Computer Networks Journal (Elsevier Science Publisher)
  - Computer Communications Journal (Elsevier Science Publisher)
F – Service to the Department and the School

G – Advising

- Active graduate students supervised
  - M.Sc. students (co-supervised with Prof. M. Paterakis)
    - Aggelos Lazaris, year of initial enrollment in program: 2006.

- Undergraduate students (co-supervised with Prof. M. Paterakis)
  - Diploma theses completed

- Pervasive and Mobile Computing (Elsevier Science Publisher)
- International Journal on Computers and Electrical Engineering (Elsevier Publ.)
- EURASIP Journal on Wireless Communications and Networking
- International Journal of Computers and Applications (ACTA Press Publ.)
- European Wireless 2006 Conference
Annual Activity Report

For the period: Sep. 1, 2005 to Aug. 31, 2006

Name: Athanasios P. Liavas
Rank: Associate Professor
Years in rank: 2+1/2
Full-time or part-time: Full-time
Division: Telecommunications
Lab affiliation: Telecommunications Laboratory

A – Teaching

• Undergraduate courses taught
  o TEL 201 – Signals and Systems (Fall 2005)
  o TEL 311 – Telecommunication Systems II (Spring 2006)

• Graduate courses taught
  o TEL 608 – Information Theory (Spring 2006)

• Labs taught
  o TEL 311 – Telecommunication Systems II Lab (Spring 2006)

• Curriculum & course development
  o New courses / labs developed
  o Lecture notes / slides developed
  o Authored textbooks
B – Publications

• Publications in refereed journals
  o Submitted
  o Accepted
  o Published

• Publications in refereed conferences
  o Submitted: those published/appeared (see below), plus
  o Accepted: those published (see below), plus
  o Published

• Books and edited book chapters
• Patents

C – Awards & Distinctions

D – Funded Projects

• Current projects:
• Project proposals submitted:
  o FET- Open “Cooperative and Opportunistic Communications for Wireless Networks,” (COOPCOM), Project Coordinator and PI for TSI. (accepted for funding June 2006).

E – Professional service

• Associate Editor duties
  o Associate Editor, IEEE Transactions on Signal Processing
• Society Technical Committee duties

• Conference Technical Program Committee service
• Conference Organization (specify role)

• Reviewing activities

**F – Service to the Department and the School**

• Departmental responsibilities

• School-level responsibilities
  o Member, Library Committee
  o Regular Member, University Senate

**G – Advising**

• Active graduate students supervised
  o Ph.D. and M.Sc. students supervised
    ▪ Despoina Tsipouridou (MsC),
      year of initial enrollment in MSc program: 2004.
    ▪ Efthimios Ambatzis (MsC),
      Year of initial enrollment in MSc program: 2004
    ▪ Apollon Maniadakis (MSc),
      year of initial enrollment in MSc program: 2004
  o PhD. And M.Sc. degrees awarded

• Undergraduate students supervised
  o Diploma theses in progress (supervisor)
    ▪ Ioannis Lazaridis, “Software implementation of a digital receiver for single carrier telecommunication systems.”
    ▪ Vassilios Vlahodimitropoulos, “Software implementation of a digital receiver for single carrier telecommunication systems.”
  o Diploma theses completed (supervisor)
    ▪ Theodora Zarbou, “Study and implementation of the Minimum Mean Square Error - Decision Feedback Equalizer”.
Annual Activity Report

For the period: September 1, 2005 to August 31, 2006

Name: Michael Paterakis
Rank: Professor
Years in rank: 7
Full-time or part-time: Full-time
Division: Telecommunications
Lab affiliation: Information and Computer Networks Laboratory

A – Teaching

Exemption, due to University administrative duties (Vice-Rector responsible for Academic Affairs and Personnel).

B – Publications

- Publications in refereed journals
  - Submitted

  - S. Chatziperis, P. Koutsakis and M. Paterakis, “A New Call Admission Control Mechanism for Multimedia Traffic over Next


- Accepted


- Published


- Publications in refereed conferences

- Submitted


- Accepted


C – Awards & Distinctions

D – Funded Projects

- Current projects:
  - “Technical Adviser of the National Administrative Authority of the Information Society Program for the project: Design, Development and


E – Professional service

- April 2004 – April 2007. Member of the Executive Board, Greek Universities Network (GUnet), a not for profit company founded by all the Greek Academic Institutions.

F – Service to the Department and the School

- Departmental responsibilities
  - June 1997 -. Director of the Graduate Program, ECE Department, Technical University of Crete.

- School-level responsibilities
  - Member of the Executive Board, Telecommunication Systems Research Institute (T.S.I.), Technical University of Crete.

G – Advising

- Active graduate students supervised
  - Ph.D. students supervised
    - Spyros Psychis
  - M.Sc. degrees awarded
HSDPA”.

- M.Sc. students supervised
  - Theodoros Chiras, email: theras@telecom.tuc.gr, telephone: 2821037235, co-supervision with Prof. P. Koutsakis.
  - Antonis Stephanogiannis, email: ant_stefan@telecom.tuc.gr, telephone: 2821037235.
  - Sotiris Bouros, email: sotiris@telecom.tuc.gr, 2821037391.
  - Aggelos Lazaris, email: alazaris@telecom.tuc.gr, telephone: 2821037343, co-supervision with Prof. P. Koutsakis.

- Undergraduate students supervised
  - Diploma Theses completed (supervisor)
Annual Activity Report

For the period: Sep. 1, 2005 to Aug. 31, 2006

Name: Alexandros Potamianos
Rank: Associate Professor
Years in rank: 3+1/2
Full-time or part-time: Full-time
Division: Telecommunications
Lab affiliation: Speech and Dialogue Group

A – Teaching

- Undergraduate courses taught
  - TEL 411 – Natural Language Processing
  - TEL 303 – Statistical Modeling and Pattern Recognition
  - TEL 211 – Probability and Random Processes

- Graduate courses taught
  - TEL 611 – Natural Language Processing

- Curriculum & course development

B – Publications

- Publications in refereed journals
  - Submitted
  - Accepted

- Published.
- Publications in refereed conferences
  - Submitted: those published/appeared (see below)
  - Accepted/Published
    - **A. Potamianos** et al, ``Towards speaker and enviromental robustness in ASR: the HIWIRE project,'' in *ITRW Workshop on Speech Recognition and Intrinsic Variation*, (Toulouse, France), May 2006.

- Books and edited book chapters
- Patents

### C – Awards & Distinctions

2005 IEEE Signal Processing Society Best Paper Award for the paper:

D – Funded Projects

- Current projects (Principal Investigator):

- Current projects (collaborator):
  - PENED: Multimodal platforms for mobile devices, GRST, PI: V. Digalakis
  - ASPI: Acoustics to phone inversion using audio-visual cues, IST-FP6 FET project, sub-contractor for NTUA.
  - ESCALE: Speech recognition in the cockpit, sub-contractor for Thales Avionics

- Project proposals submitted:

E – Professional service

- Conference Reviewer Committee
  - ICASSP 2006
- Conference Organization (specify role)
  - General Co-Chair for IEEE MMSP 2007 workshop
- Reviewing activities

F – Service to the Department and the School

- School-level responsibilities
  - Alternate representative of Dept. of ECE to ELKE

G – Advising

- Active graduate students supervised
Ph.D. and M.Sc. students supervised

- Manolis Perakakis (Ph.D.), 2004-
- Kleanthis Mokios (Ph.D.) (co-supervised with Prof. Sidiropoulos), 2006-
- Pirros Tsiakoulis (Ph.D.) (co-supervised with Prof. Karagiannis), Natl. Tech. Univ. of Athens, 2005-
- Michalis Toutoudakis (M.Sc.) 2002-
- Michail Maragkakis (M.Sc.) 2003-
- Ilias Iosif (M.Sc.), 2004-
- Ioannis Klasinas, (M. Sc.) 2005-
- Thanasis Tegos, (M. Sc.) (in collaboration with Demokritos Research Center), 2005-

PhD. And M.Sc. degrees awarded

- Apostolis Pangos (M.Sc. degree awarded), 2005.
- Panagiotis Karagiorgakis (M.Sc. degree awarded), 2005.
- Christos Koniaris (M.Sc. degree awarded), 2006.

Undergraduate students supervised

- Diploma theses in progress (supervisor)
  - Vasso Farantouri
  - Fotis Garitos
  - Giannis Milogianakis
  - Theofanis Kanetis
  - Zafiris Malafouris (co-supervised with V. Digalakis)

- Diploma theses completed (supervisor)
  - Andreas Tsiartas
  - Ioannis Klasinas
  - Thanasis Tegos
Annual Activity Report

For the period: Sep. 1, 2005 to Aug. 31, 2006

Name: Nikos Sidiropoulos
Rank: Professor
Years in rank: 4+1/2
Full-time or part-time: Full-time
Division: Telecommunications
Lab affiliation: Telecommunications Laboratory

A – Teaching

- Undergraduate courses taught
  - TEL 301 – Telecommunication Systems I (Fall 2005)

- Graduate courses taught
  - TEL 603 – Estimation and Detection (Spring 2006)

- Labs taught
  - TEL 301 – Telecommunication Systems I Lab (Fall 2005)

- Curriculum & course development
  - New courses / labs developed
  - Lecture notes / slides developed
  - Authored textbooks

B – Publications

- Publications in refereed journals
  - Submitted
    - G. Latsoudas, N.D. Sidiropoulos, "A Fast and Effective Multidimensional Scaling Approach for Node Localization in


- Accepted

- Published


- Publications in refereed conferences
  - Submitted: those published/appeared (see below), plus
  - Accepted: those published (see below), plus
  - Published

- Books and edited book chapters
- Patents
C – Awards & Distinctions

D – Funded Projects

- Current projects:
  - U-BROAD: Ultra High Bit Rate over Copper Technologies for BROADband Multiservice Access", European Commission, FP6 IST STREP project. Consortium led by Metalink, Inc. Israel; partners are Bar-Ilan University, Israel; Telecom Systems Institute, Tech. Univ. of Crete (Sidiropoulos is PI); Rad Data Com., France Telecom, TU Delft, Netherlands, and the Greek National Telecom Organization. Award Period: Dec. 2003 – Nov. 2005. Total budget is 2M Euro; Sidiropoulos' share is 170K €.

- Project proposals submitted:
  - Submitted proposal to GSRT, Division of International Collaboration in R&T; participated in FP6 FET proposal CoopCom, led by Prof. Liavas.

E – Professional service

- Associate Editor duties
  - Associate Editor, IEEE Transactions on Signal Processing

- Society Technical Committee duties

- Conference Technical Program Committee service
  - IEEE ICASSP 2006
  - IEEE SPAWC 2006
  - Several other smaller workshops

- Conference Organization (specify role)
- General Chair, TRICAP 2006, June 2006, Chania, Crete, Greece.

- Reviewing activities
  - Reviewer for *IEEE Trans. on Signal Processing*, *IEEE Trans. on Communications*.

### F – Service to the Department and the School

- Departmental responsibilities
  - Chair, Department of Electronic and Computer engineering, Technical University of Crete.
  - Laboratory Director, Telecommunications Lab, Department of Electronic and Computer engineering, Technical University of Crete.

- School-level responsibilities
  - Associate Director and Member of the Board, Telecommunication Systems Institute, Technical University of Crete.

### G – Advising

- Active graduate students supervised
  - Ph.D. and M.Sc. students supervised
    - Georgios Latsoudas (M.Sc.). Year of initial enrollment in program: 2004.
    - Alexandros Valyrakis (M.Sc.). Year of initial enrollment in program: 2004.
    - Evaggelia Matskani (M.Sc.). Year of initial enrollment in program: 2005.
  - PhD. And M.Sc. degrees awarded
    - Kleanthis Mokios (M.Sc. degree awarded). Year of initial enrollment in program: 2003.

- Undergraduate students supervised
  - Diploma theses in progress (supervisor)
    - Euthemios Tsakonas, “Particle filtering tools for tracking a time-varying harmonic”.
    - Dimitrios Evaggelinas, “Hybrid semidefinite programming – sphere decoding approaches to MIMO detection”.
- Georgina Abouelxir, “Experimental evaluation of PHY-layer multicasting algorithms using measured wireless channel data”.
- Valentina Oikonomakou, “Spectrogram segmentation-based tracking of a frequency-hopped signal”.
  - Diploma theses completed (supervisor)
    - Markos Bervenakis, “System integration aspects of experimental wireless ftp radio link over analog FM”.
Annual Activity Report

For the period: Sep. 1, 2005 to Aug. 31, 2006

Name: Sophia Tsakiridou
Rank: Visiting Lecturer (Π.Δ. 407/80)
Years in rank: 5
Full-time or part-time: Part-time
Division: Telecommunications
Lab affiliation: Information and Computer Networks Laboratory

A – Teaching

- Undergraduate courses taught
  - TEL 401 – Computer Networks I (Fall 2005)
  - TEL 411 – Computer Networks II (Spring 2006)

- Curriculum & course development
  - Lecture notes / slides developed
    - PowerPoint presentation slides for course TEL 401 (new)
    - PowerPoint presentation slides for course TEL 411 (revised)
    - Ethereal labs for course TEL 411 (revised)

B – Publications

C – Awards & Distinctions

D – Funded Projects

E – Professional service
F – Service to the Department and the School
G – Advising

- Undergraduate students supervised
  - Diploma theses in progress (co-supervisor)
    - Spiros Koutsorinakis,
    - Dimitrios Keramidas.
Computer Engineering Division

Faculty members:

- Michalis Lagoudakis, Assistant Professor
- Katerina Mania, Assistant Professor
- Euripides Petrakis, Associate Professor
- Vassilis Samoladas, Assistant Professor
- Stavros Christodoulakis, Professor
Annual Activity Report

For the period: Sep. 1, 2005 to Aug. 31, 2006

Name: Michail G. Lagoudakis
Rank: Assistant Professor
Years in rank: 1
Full-time or part-time: Full-time
Division: Computer Science / Informatics
Lab affiliation: Intelligent Systems Laboratory

A – Teaching

- Undergraduate courses taught
  - COMP 401 – Theory of Computation (Fall 2005)
  - COMP 405 – Artificial Intelligence (Spring 2006)
  - AIS 413 – Autonomous Agents (Spring 2006)
- Graduate courses taught
  - AIS 613 – Autonomous Agents (Spring 2006)
- Labs taught
  - AIS 413 – Autonomous Agents Lab (Spring 2006)
- Other courses
  - BEST Spring course “Robot Programming: Creating Intelligent Machines”
    Intensive course/lab for European BEST students (March 20-24)
  - AAAI-06 Tutorial on “Auction-Based Agent Coordination”
- Curriculum & course development
  - New courses / labs developed
    1. Autonomous agents course and lab (AIBO robots)
  - Lecture notes / slides developed
    1. Lecture slides for Theory of Computation
    2. Lecture slides for Artificial Intelligence
    3. Lecture slides for Autonomous Agents
B – Publications

- Publications in refereed journals
  - Submitted

- Publications in refereed conferences
  - Accepted
  - Published

C – Awards & Distinctions

D – Funded Projects

- Project proposals accepted

- Project proposals submitted
  - Proposal to the European Space Agency (jointly with the Microprocessor and Hardware Laboratory)
  - Proposal to the TUC Research Office, Call for basic research grants
  - Proposal to the TUC Research Office, Call for junior faculty grants

E – Professional service

- Conference Technical Program Committee service
  - Robotics: Science and Systems 2006 (RSS-2006)
  - 22nd Conference on Uncertainty in Artificial Intelligence (UAI 2006)
• Conference Organization (specify role)
  o Co-organizer, NIPS-06 Workshop on Reinforcement Learning Benchmarks and Bake-offs II, Vancouver, BC, Canada, December 2005
  o Co-organizer, AAAI-06 Workshop on Auction Mechanisms for Robot Coordination, Boston, MA, USA, July 2006

• Reviewing activities
  o Annals of Mathematics and Artificial Intelligence (AMAI)
  o International Journal of AI Tools (IJAIT)
  o IEE Proceedings on Control Theory and Applications (CTA)
  o 2006 IEEE American Control Conference (ACC-06)
  o 2006 Florida Artificial Intelligence Symposium (FLAIRS-2006)
  o Robotics: Science and Systems 2006 (RSS-2006)
  o 22nd Conference on Uncertainty in Artificial Intelligence (UAI 2006)
  o 17th European Conference on Machine Learning (ECML 2006)
  o ICML06 Workshop on Kernel Machines and Reinforcement Learning
  o International Joint Conference on Artificial Intelligence (IJCAI-07)

F – Service to the Department and the School

• Departmental responsibilities
  o Web mastering and maintenance of www.ece.tuc.gr
  o Faculty search visit coordinator (Computer Science Division)

• School-level responsibilities

G – Advising

• Graduate students
  o Ph.D. and M.Sc. theses in progress (supervisor)
    ▪ Rexakis Ioannis (Ph.D)
      Year of initial enrollment in the Ph.D. program: 2006.
    ▪ Markos Mpervanakis (M.Sc.)
      Year of initial enrollment in the M.Sc. program: 2006.

• Undergraduate students
  o Diploma theses in progress (supervisor)
    ▪ Vasileios Skourtis, “Implementation of Auction-Based Coordination Algorithms on a Team of AIBO Robots”
    ▪ Konstantinos Makantasis, “Active Face Tracking with a Mobile Robot Camera”
    ▪ Stylianos Tsigdinos, “Improving Traffic Light Control using Reinforcement Learning”
- Suzzana Volioti, “Visual Recognition of Goals in the Four-Legged RoboCup Competition”
- Nikolaos Hartampas, “Heuristic Search Techniques for a Combinatorial Scheduling Problem”
- Konstantinos Haldezos, “Interactive Robot Gaming”
- Iasonas Pazis, “Microprocessor Control of a Hexapod Robot”
- Georgios Kontes
  o Diploma theses completed (committee member)
    - Haralambos Darakis, “Implementation and Improvement of a System for Virtual Communities based on the COMISM Model”
    - Christina Boubouka, “Development of a Voice Portal for Providing Automated Watering Advise for Agriculture”
- Student team projects
  o Leader of the four-legged robot soccer team “Κουρήτες”, the first Greek team ever participating in the RoboCup competition (Bremen, June 2006). The team consists of 20 graduate and undergraduate ECE students and 4 Sony AIBO robots.
Annual Activity Report

For the period: Sep. 1, 2005 to Aug. 31, 2006

Name: Katerina Mania
Rank: Assistant Professor
Years in rank: 9 months
Full-time or part-time: Full-time
Division: Computer Science
Lab affiliation: Distributed Multimedia Information Systems and Applications (MUSIC)

A – Teaching

- Undergraduate courses taught
  - PLH 503 - Computer Graphics (Spring 2006)

- Graduate courses taught
  - PLH 610 – Computer Graphics (Spring 2006)

- Labs taught
  - PLH 503 – Computer Graphics (Spring 2006)

- Curriculum & course development
  - New courses/labs developed
    1. PLH 503, Computer Graphics, undergraduate level, labs
    2. PLH 610, Computer Graphics, graduate level, lab exercises and major project specification
  - Lecture notes / slides developed:
    1. PLH 503, Computer Graphics Lecture slides
    2. PLH 610, Computer Graphics, Lecture slides
B – Publications

- Publications in refereed journals
  - Submitted
  - Accepted
  - Published

- Publications in refereed conferences
  - Accepted: those published (see below), plus
  - Published


C – Awards & Distinctions

- Invited lectures
  - “Fidelity Metrics for Virtual Environment Simulations based on Awareness States and Memory Schemas”, invited talk at Max Planck Institute for Biological Cybernetics, Germany, September 2005.
  - “Fidelity Metrics for Immersive Simulations based on Spatial Cognition”, invited talk at INRIA Sophia Antipolis, Rendering and Virtual Environments research group, January 2006.

D – Funded Projects

- Current projects (at the University of Sussex, UK):
  - INTUITION, EU FP6, Network of Excellence on Virtual Reality and Virtual Environment Applications for Future Workspaces. PI: Dr. Martin
White. Co-PIs: Professor Paul Lister, Dr Katerina Mania, Dr Paul Newbury. 2004-2008.
  o EPOCH, EU FP6, Network of Excellence on Excellence in Processing Cultural Heritage. PI: Dr. Martin White. Co-PIs: Professor Paul Lister, Dr Katerina Mania, Dr Paul Newbury. 2004-2008.

- Project proposals submitted:
  o Submitted EU proposals SPRINTER, ACHIEVES, CLEDIN (not funded).
  o Proposal submitted to GSRT Greece related to a Graphics and Virtual Reality Network in Greece (in process).
  o Proposal submitted to the European Space Agency related to ESA Greece call for ideas (in process).
  o Proposal submitted to internal TUC basic research call for new faculty (in process).
  o Proposal submitted to internal TUC basic research call for all faculty (in process).

E – Professional service

- Associate Editor (invited June 2006)
  o Associate Editor, Presence Tele-operators and Virtual Environments, MIT Press.

- Conference Technical Program Committee service
  o Program committee member of ACM Symposium on Virtual Reality Software and Technology (VRST) 2006, Nov. 2006, Cyprus.
  o Program committee member of ACM Symposium on Virtual Reality Software and Technology (VRST) 2005, Nov. 2005, CA, USA.
  o Program committee member of Symposium on Applied Perception in Graphics and Visualisation (APGV) 2006 sponsored by ACM Siggraph, Boston, USA, July 2006.

- Conference Organization (specify role)

- Reviewing activities

F – Service to the Department and the School

G – Advising

- Active graduate students supervised
  o Ph.D. students supervised (at the University of Sussex, UK)
    ▪ Panos Petridis (Ph.D) Year of initial enrollment in Ph.D. program: 2001.
  o Post-doc fellow (at the University of Sussex, to be visiting TUC)
  o M.Sc. degrees awarded (at the University of Sussex, UK)
    Three M.Sc. degrees awarded under my supervision at the University of Sussex, UK, Sept. 2005.

- Diploma thesis completed (committee member - TUC)
  ▪ Theofanis Kanetis
  ▪ Krommydas Konstantinos
  ▪ Alatzidhs Xrhstos
- Diploma thesis in progress (supervisor - TUC)
  ▪ Kalenteri Maria
  ▪ Mpolierakis Spyros
  ▪ Mouka Theodora
Annual Activity Report

For the period: Sep. 1, 2005 to Aug. 31, 2006

Name: Euripides G.M. Petrakis
Rank: Associate Professor
Years in rank: 3+1/2
Full-time or part-time: Full-time
Division: Computer Science
Lab affiliation: Intelligent Systems Laboratory
(http://www.intelligence.tuc.gr)
Personal Web Page: http://www.intelligence.tuc.gr/~petrakis

A – Teaching

- Undergraduate courses taught
  - Multimedia Data Management (Fall 2005)
  - Computer Vision (Fall 2005)
  - Data Structures and Algorithms (Autumn 2006)

- Graduate courses taught
  - Multimedia Data Management (Fall 2005)

- Labs taught
  - Multimedia Data Management (Fall 2005)
  - Data Structures and Algorithms (Autumn 2006)

- Curriculum & course development
  - New courses - Lecture notes & slides developed
B – Publications

• Publications in refereed journals
  o Submitted
  o Accepted
  o Published

• Publications in refereed conferences
  o Submitted: those published/appeared (see below), plus
  o Accepted: those published (see below), plus
  o Published
    ▪ Epimenidis Voutsakis, Euripides G.M. Petrakis, Evangelos Milios, "IntelliSearch: Intelligent Search for Images and Text on


- Books and edited book chapters

- Patents

**C – Awards & Distinctions**

**D – Funded Projects**

- Current projects:
  - Integrated Inspection System supported by Automated Motion Detection (2006 - 2008), Funding Agency: Greek Secretariat for Research and Technology, Participants: TUC, ANKO INC, ARMAOS INC, Principal Investigator for TUC: Euripides G.M. Petrakis. Total Budget 669,000 euros, TUC’s share: 150,000 euros.
SPA, Citigroup Global Markets Limited. Project Coordinator & Principal Investigator for TUC: Euripides G.M. Petrakis. Total Budget 1,375,000 euros, TUC’s share: 224,000 euros

- Getting Cretan Businesses On-Line and Doing E-Business (April 2006 - April 2008), Funding Agency: Ministry of Development, General Secretariat for Research and Technology, Participants: University of Crete, Technical University of Crete, Technological Institute of Crete, Role: The role of this laboratory is to train consultants that will advise Cretan businesses about the benefits of getting on-line and doing e-business. Grant Holder for TUC: Euripides G.M. Petrakis, Total Budget 2,000,000 euros, TUC’s share: 320,000 euros

- MedSearch: Semantic Similarity for Knowledge Discovery in Medical Archives (2005 - 2007), Funding Agency: BIOPATTERN NoE, Fp6, Participants: Technical University of Crete (TUC), Katholieke Universiteit Leuven (KUL), Universita Di Pisa (UNIPI),. Principal Investigator for TUC: Euripides G.M. Petrakis


- HERAKLETOS program for basic doctoral research (2004-2006), Funding Agency: General Secretariat for Research and Technology (PhD, Candidate, Budget: 33,400 euros (PhD Candidate: Mrs Paraskevi Raftopoulou, PI: Euripides Petrakis).

- Project proposals submitted:
  - In addition to the above, many new project proposals have also been submitted in EU-FP6 and in the General Secretariat for Research and Technology (but not funded)

**E – Professional service**

- Associate Editor duties
• Society Technical Committee duties

• Conference Technical Program Committee service
  o Program committee member of “2nd International Symposium on VisualComputing (ISVC06)” Nov. 6-8, 2006 Lake Tahoe, Nevada, USA (http://www.isvc.net/)
  o Program committee member of “International Conference on Image Analysis and Recognition” (ICIAR 2006) September 18-20, 2006 Póvoa de Varzim, Portugal (http://www.iciar.uwaterloo.ca/iciar06)
  o Session Chair and Program committee member (session 2 on XML Data Management and Web Discovery) in the 7th ACM Intern. Workshop on Web Information and Data Management, Nov. 5, Bremen, Germany.

• Conference Organization (specify role)
  o Publications Chair, MMSP-07, 9th international workshop on multimedia signal processing, Chania, Greece from Oct 1st-3rd 2007.

• Reviewing activities

F – Service to the Department and the School

• Departmental responsibilities
  o Laboratory Director, Intelligent Systems Laborarity, Department of Electronic and Computer engineering, Technical University of Crete.

• School-level responsibilities

G – Advising

• Active graduate students supervised
  o Ph.D. and M.Sc. students supervised
    ▪ Kalliope Zervanou, Post.Doct (PhD Univ. of Manchester, UK), Natural Language Processing, Text processing, Information Extraction.
    ▪ Paraskevi Raftopoulou, P2P systems.
- Rena Peraki, Consumer Health Information Systems.
- Sotiris Batsakis, learning (focused) Web Crawlers.
- Angelos Hliaoutakis, Medical Information Systems
- Epimeneides Voutsakis, Bibliographic Information Systems.
- Giannis Varelas, Automatic Ontology Construction
- Evdoxios Baratis, Time Ontologies
  - PhD. And M.Sc. degrees awarded
    - Nikos Hourdakis, Data Clustering (Expected Oct. 2006).
- Undergraduate students supervised
  - Diploma theses in progress (supervisor)
    - Mixalhs Argyriou, Dynamic Clustering.
  - Diploma theses completed (supervisor)
    - Efthimios Drymonas, Information Extraction and Applications
Annual Activity Report

For the period: Sept 1 2005 to Aug 31 2006

Name: Vasilis Samoladas
Rank: Assistant Professor
Years in rank: 3
Full-time or part-time: Full-time
Division: Informatics
Lab affiliation: Software Technology and Network Applications (softlab)

A – Teaching

• Undergraduate courses taught
  o ΠΛΗ-301 Λειτουργικά συστήματα
  o ΠΛΗ-302 Αλγόριθμοι και πολυπλοκότητα
  o ΠΛΗ-414 Αρχές κατανεμημένων συστημάτων λογισμικού

• Graduate courses taught
  o ΠΛΗ-602 Αρχές κατανεμημένων συστημάτων λογισμικού

• Labs taught
  o

• Curriculum & course development
  o New courses / labs developed
  o Lecture notes / slides developed
    • Σημειώσεις για το ΠΛΗ-302: Αλγόριθμοι και πολυπλοκότητα
  o Authored textbooks
    • (In progress) Βιβλίο με τίτλο «ΑΡΧΕΣ ΚΑΤΑΝΕΜΗΜΕΝΩΝ ΣΥΣΤΗΜΑΤΩΝ» στα πλαίσια του ομόνυμου μαθήματος (ΠΛΗ-414)
B – Publications

- Publications in refereed journals
  - Submitted
    - Salah Juba, Vasilis Samoladas, Nikos Boretos, Ioannis Manakos, George Karydas: IMS – A Web-based map server for spatial decision support. Submitted to Neural, Parallel and Scientific Computations (under review)

- Publications in refereed conferences
  - Submitted
  - Accepted
  - Published

- Books and edited book chapters

- Patents

C – Awards & Distinctions

D – Funded Projects

- Current projects:

- Project proposals submitted:

E – Professional service

F – Service to the Department and the School

  - Ιδρυματικός εκπρόσωπος: Μ/Κ Εταιρεία ΕΛ/ΛΑΚ (Ελεύθερου Λογισμικού/Λογισμικό Ανοιχτού Κώδικα) (υπο τον ΕΔΕΤ).

G – Advising

  - Active graduate students supervised
Ph.D. and M.Sc. students supervised
- George Hatzisymeon (PhD), 2st year
- Anni Xiruhaki (PhD), 2st year (με άδεια μητρότητας από τον Ιούνιο)
- Christos Smaragdakis (MSc), 3nd year
- Stergios Charalambakis (MSc), 1st year
- Yiannis Botsis (MSc), 1st year

PhD. And M.Sc. degrees awarded

Undergraduate students supervised
- Diploma theses in progress (supervisor)
  - George Elias
  - Christos Tsiamantas
  - Panagiotis Drakotos
  - Mihalis Argyrioy
  - George Tsatsanifos

- Diploma theses completed (supervisor)
  - Spiros Blanas
  - George Yannakaras
  - Panagiotis Paterakis

- Diploma theses in progress (committee member)
- Diploma theses completed (committee member)
Annual Activity Report

For the period: Sep. 1, 2005 to Aug. 31, 2006

Name: Stavros Christodoulakis
Rank: Professor
Years in rank: 16
Full-time or part-time: Full-time
Division: Informatics
Lab affiliation: Distributed Information Systems and Applications (MUSIC/TUC) Laboratory

A – Teaching

- Undergraduate courses taught
  - Data Bases
  - Web Application Development (graduate and undergraduate)
  - Information and Service Integration (graduate and undergraduate)

- Labs taught
  - Data bases
  - Web Applications
  - Information and Service Integration
  - Introduction to Computer Science (supervised)
  - Structured Programming (supervised)
  - Object oriented programming (supervised)

- Curriculum & course development
  - New courses / labs developed
  - Lecture notes / slides developed
  - Authored textbooks
B – Publications

- Publications in refereed journals

**Accepted**


**Published**


- Publications in refereed conferences
  **Accepted**: those published (see below), plus

Published


- Books and edited book chapters
- Patents

C – Awards & Distinctions

D – Funded Projects

- Current projects:
o **FP6 LOGOS**, Knowledge-on-Demand for Ubiquitous Learning. [260,000 €]
o **FP6 CHIRON**, New Media Knowledge Village for Innovative e-Learning Solutions [61,000 €]
o **FP6 D.B.E.**, Digital Business Ecosystems [504,000 €]
o **FP6 DELOS II**, IST Network of Excellence in Digital Libraries [250,000 €]
o **Support of Computer Science Studies / EPEAEK-II** in Department of Electronic and Computer Engineering, Technical University of Crete. [1,250,000 €]

**E – Professional service**

- **Co-Editor:**
- **Program Committee Co-chair:**
- **Conference Technical Program Committee service:**
- **Conference Organization (specify role)**
  o **Co-Chair**: WMS 2006, June 2006, Chania, Crete, Greece.
- **Conference Steering Committees**
  o European Conference on Digital Libraries, ECDL, 2005 - 2006
  o Extending Database Technology, EDBT, 2004 - 2006
- **Editorial Boards**
  o Serdica Journal of Computing, UCS.

**F – Service to the Department and the School**

- **Departmental responsibilities**
  o Laboratory Director, Distributed Information Systems and Applications Lab (MUSIC/TUC), Technical University of Crete.
  o Laboratory Director, Software Engineering Lab, Technical University of Crete

- **School-level responsibilities**
  o Member of the Board, Telecommunication Systems Institute, Technical University of Crete.
  o Department of Architecture, technical University of Crete, Member of the Department Governing Committee.
G – Advising

• Active graduate students supervised
  o Ph.D. and M.Sc. students supervised
    ▪ Tsinaraki Chrisa
    ▪ Arapi Xenia
    ▪ Poludoros Panagiotis
    ▪ Karanastasi Anastasia
    ▪ Kotopoulos Giorgos
    ▪ Kotopoulos Giannis
    ▪ Ntampitzias Giorgos
    ▪ Georgoulakis Eustratios
    ▪ Foukarakis Mixalis

• Undergraduate students supervised
  o Diploma theses in progress (supervisor)
    ▪ Kafantaris Dimitris
    ▪ Sitzanaki Athina
    ▪ Zotos Alexandros
    ▪ Milonakis Manolis
    ▪ Papaxristoudis Giannis
    ▪ Kouratoras Kostas
    ▪ Theodorakis Giorgos
    ▪ Stilianakis Giorgos
    ▪ Xristoulakis Marios

  o Diploma theses completed (supervisor)
    ▪ Vangelis Kalogeraki: "An Intelligent 3D Visualization System"
    ▪ Sarigiannis Xaralambos: "Design and implementation of a distributed questioner management system according to the IMS Global Consortium"
    ▪ Alatzidis Xristos “Design and Implementation of Graphic Interfaces for Accessing MOF Knowledge Bases”
    ▪ Kromidas Kostas “Design and Implementation of Graphic Interfaces for Accessing MOF Knowledge Bases”
Electronics and Computer Architecture Division

Faculty members:

- Costantinos Balas, Associate Professor
- Mathias Bucher, Assistant Professor
- Apostolos Dollars, Professor
- Kostas Kalaitzakis, Professor
- Ioannis Papaefstathiou, Visiting Associate Professor
- Dionisis Pnevmatikatos, Associate Professor
- Apostolos Samelis, Assistant Professor (didn’t provide annual report input)
- Georgios Stavrakakis, Professor
- Eftihios Koutroulis, Visiting Lecturer (PD 407)
Technical University of Crete
Department of Electronic & Computer Engineering

Annual Activity Report

For the period: September 1, 2005 to August 31, 2006

Name: Apostolos Dollas
Rank: Professor
Years in rank: 5
Full-time or part-time: Full Time
Division: Electronics and Computer Architecture (HRY)
Lab affiliation: Microprocessor and Hardware Laboratory (Director)

A – Teaching

- Undergraduate courses taught
  - None – on sabbatical leave at Wright State University (USA).

- Graduate courses taught
  - None – on sabbatical leave at Wright State University (USA).

- Labs taught
  - None – on sabbatical leave at Wright State University (USA).

- Curriculum & course development
  - Lecture notes / slides developed: Continued on the development of the new HRY 401 (Embedded Microprocessor Systems) and HRY 412 class notes and slides, under the EPEAEK program.
B – Publications

- Publications in refereed journals
  - Submitted
  - Accepted
  - Published

- Publications in refereed conferences
  - Submitted
  - Accepted
  - Published (all papers fully refereed on full text)
    - E. Sotiriadis, C. Kozanitis, A. Dollas, Some Initial Results on Hardware BLAST Acceleration with a Reconfigurable Architecture, Proceedings, 8th Workshop on High Performance Computational Biology (HiCOMB), April 25, Rhodes, Greece, 2006 (on-line proceedings under the IPDPS conference). (full paper).

• Books and edited book chapters

C – Awards & Distinctions

• Fellowships, Visiting Professorships
  o Visiting Professor, Information Technology Research Institute, Wright State University, Dayton, Ohio, USA (on sabbatical at ITRI from August, 2005 until May, 2006).

• Invited Lectures
  o “FPGA Based Architecture for DNA Sequence Comparison and Match”, Virginia Tech, USA (3/20/2006).

D – Funded Projects

• Current projects:
  o GSRT “IRAKLEITOS: Research Scholarships for TUC”, Program. TUC Budget 398,778 Euros. Under it is the sub-program “Structures for Reconfigurable Computing”, (PhD Thesis support for E. Sotiriades), Apostolos Dollas, PI, 32,229 Euros (all budget is in TUC)

• Project proposals submitted:
o “Scientific Equipment for the Departments of the Technical University of Crete”, Total Proposal Budget 1,250,000 Euros. Under it is the proposal for “Acquisition of a GRID computer for the Technical University of Crete”, submitted to the Program PEP of Crete, Apostolos Dollas, PI. Total budget for the GRID computer proposal: 320,000 Euros. NOTE: this is a different proposal than the similarly entitled one which was submitted to the Greek Ministry of Education, but on the same topic.

o “An Integrated Design of Video Hiding-Compression-Encryption Based on the SCAN Methodology and the Stretch Technology for Securing Multimedia Information”, USD 99,500, proposed to the NSF.

o “Design Space Exploration of a SCAN Based reconfigurable, Reprogrammable, High Assurance Internet Protocol Encryptor”, USD 99,000, proposed to AFOSR.

E – Professional service

- Conference Technical Program Committee service
  - Program Committee Member 14th IEEE Symposium on Field Programmable Custom Computing Machines (FCCM), Napa Valley, USA, April, 2006.
  - Program Committee Member 17th IEEE International Workshop on Rapid System Prototyping (RSP), Chania, Greece, June 16-18, 2006.
  - Technical Program Committee, 19th SBCCI 2006 (SYMPOSIUM ON INTEGRATED CIRCUITS AND SYSTEMS DESIGN), Ouro Preto MG, Brazil, August 28 – September 1, 2006.
  - Program Committee Member, 5th IEEE International Conference on Field-Programmable Technology (FPT 2006), Bangkok, Thailand, December 13-16, 2006.

In all the program committees in which I participated, I contributed with reviews of papers (as many as 13 full paper reviews in a single conference), the selection process, organizational issues, and when possible, attendance of the PC meeting. Because my field is rapidly changing, international conferences reflect the state of the art much more than archival journals and I have deliberately given the weight of my reviewing and committee activity on such conferences.

- Conference Organization (specify role)
  - As Program Committee member and past Program Chairman and past General Chairman of the IEEE International Workshop on Rapid System Prototyping I succeeded in bringing the 17th IEEE RSP Workshop to Chania in 2006.

- Reviewing activities
Several international conferences, including all in which I participate in the program committee, and journals including the Journal of VLSI Signal Processing Systems, IEE Electronics Letters, and Clinical Neurophysiology (the latter involved review on microelectronic assistive devices).

F – Service to the Department and the School

- **Departmental responsibilities**
  - Chair, Vice-Chair, Lab Director, NOC director, …
    - Director, Microprocessor and Hardware Laboratory
    - Member, Undergraduate Studies Committee
  - Responsibility for Department-wide projects (e.g., EΠΕΑΕΚ, practical training, …)
    - Coordinator on behalf of the ECE Dept. of the TUC-wide GRID computer proposal, under appointment by the Departmental General Assembly.

- **School-level responsibilities**
  - Advisory Committee Member for the CRINNO-UNISTEP program for technology transfer (B. Kelesidis, PI)
  - Advisory Committee of the new proposal for the TUC Liaison Office (TUC Vice-President, Prof. N. Varotsis, PI), participated in the meetings and the proposal, was replaced by Prof. S. Christodoulakis due to sabbatical leave.
  - Faculty supervisor and host (in the MHL) of the project “Bluetooth Enabled FPGA Programming” under the CRINNO–UNISTEP program,
  - Faculty advisor, TUC Students’ Radio Station group.

G – Advising

- **Active graduate students supervised**
  - Ph.D. and M.Sc. students supervised
    - Euripides Sotiriades, started Ph.D. in 2003
    - Dionissios Efstatathiou, started MS in 2003
    - Iosif Koidis, started MS in 2004
    - George Vernardos, started MS in 2003
    - Petros Maragoudakis, (inactive), started MS in 2003

  - PhD. And M.Sc. degrees awarded (committee member)
    - Kyprianos Papademetriou, started PhD in 2003.
    - Vasilis Dimopoulos, started MS in 2004
• Undergraduate students supervised
  o Diploma theses in progress (supervisor – will be in Chania for the defense)
    ▪ Antonis Anyfantis
    ▪ Michalis Zampetakis
    ▪ Konstantinos Kouinis (inactive)

  o Diploma theses completed (supervisor)
    ▪ Konstantinos Kazakos
    ▪ Grigoris Chrysos
    ▪ Christos Kozanitis

  o Diploma theses in progress (committee member)
    ▪ Panagiotis Christou
    ▪ Konstantinos Kyriakoulakos
    ▪ Antonis Lasithiotakis

  o Diploma theses completed (committee member)
    ▪ Aggelos Arelakis
    ▪ Melpomeni Demertzi
    ▪ Sotiria Fytraki

• PhD and M.Sc. Degrees (committee member)
  ▪ Vasileios Dimopoulos (MS)
  ▪ Ioannis Ermis (MS)
  ▪ Dimitrios Giakoumis (MS)
  ▪ Ioannis Mavraganis (MS)
  ▪ Antonios Nikitakis (MS)
  ▪ Georgios Papoutsakis (MS)
  ▪ Aristeidis Petrakis (MS)
  ▪ Kyriakos Poutos (MS)
Annual Activity Report

For the period: September, 1, 2005 to August, 31, 2006

Name: Kostas Kalaitzakis
Rank: Professor
Years in rank: 4
Full-time or part-time: Full-time
Division: Electronics & Computer Architecture
Lab affiliation: Electric Circuits & Renewable Energy Sources Lab.

A – Teaching

- Undergraduate courses taught
  - HRY 402 - Electronic Measurements and Sensors (7th semester)
  - HRY 212 – Analysis of Electric Circuits (4th semester)

- Graduate courses taught
  - HRY 602 – Special topics on Electronics Measurements and Sensors

- Labs taught
  - Electronic Measurements and Sensors (7th semester)
  - Electric Circuits Analysis (4th semester)

- Curriculum & course development
  - New courses / labs developed:
  - Lecture notes / slides developed:
  - Authored textbooks
B – Publications

- Publications in refereed journals
  - Submitted:
  - Accepted:
  - Published
  - Published

- Publications in refereed conferences
  - Submitted
  - Accepted
  - Published

• Books and edited book chapters

• Patents

C – Awards & Distinctions

D – Funded Projects

• Current projects:
  
  o “Smart Accelerate - Acceleration of Smart Buildings’ Technologies and Market Penetration”, funded by the EE ion the framework of SAVE (SAVE-2002-094), 2002.

• Project proposals submitted:

E – Professional service

• Associate Editor duties
• Society Technical Committee duties
• Conference Technical Program Committee service
• Conference Organization (specify role)
  o XVII International Conference on Electric Machines ICEM 2006, member of local organizing committee

• Reviewing activities:
  o IEEE Trans. on Power Electronics
  o IEEE Trans. on Circuits and Systems II
  o IEEE Trans. on Industrial Electronics
  o IEE Proceedings – Electric Power Applications
  o IEE-Electronics Letters
  o Renewable Energy
  o Energy
• Participation in National Committees (e.g., EΔΕΤ)
• Other

**F – Service to the Department and the School**

- Departmental responsibilities
  - Chair, Vice-Chair, Lab Director, NOC director, ...
  - Responsibility for Department-wide projects (e.g., ΕΠΕΑΕΚ, practical training, …)

- School-level responsibilities
  - Member of board of regents (Σύγκλητος)
  - ΕΛΚΕ
  - Institute
  - Other
    - **Head of the Technical Committee**

**G – Advising**

- Active graduate students supervised
  - Ph.D. and M.Sc. students supervised
    - Tripolitakis E., “Energy Management in Buildings”
    - V. Tzitzilonis (M.Sc.), year of initial enrollment in M.Sc. program: 2005.
    - J. Kantaris (M.Sc.), year of initial enrollment in M.Sc. program: 2005.
  - PhD. And M.Sc. degrees awarded

- Undergraduate students supervised
  - Diploma theses in progress (supervisor)
- Diploma theses completed (supervisor)
  - N. Loykas, “Development of a Microcontroller-Based System for Photovoltaic Maximum Power Point Tracking Under Partial Shadowing Conditions”.
  - N. Tsitsopoulos, “DC/AC Inverter Harmonics Minimization Using Genetic algorithms”.

- Diploma theses in progress (committee member):

- Diploma theses completed (committee member):
Annual Activity Report

For the period: Sep. 1, 2005 to Aug. 31, 2006

Name: Eftichios Koutroulis
Rank: Visiting Lecturer
Years in rank: 4
Full-time or part-time: Part-time
Division: Electronics & Computer Architecture
Lab affiliation: Electric Circuits & Renewable Energy Sources Laboratory

A – Teaching

• Undergraduate courses taught
  o HRY 402 – Electric Measurements and Sensors (Fall 2005)
  o HRY 212 – Analysis of Electric Circuits (Spring 2006)

• Graduate courses taught

• Labs taught
  o HRY 402 – Electric Measurements and Sensors (Fall 2005)
  o HRY 212 – Analysis of Electric Circuits (Spring 2006)

• Curriculum & course development
  o New courses / labs developed
  o Lecture notes / slides developed
  o Authored textbooks

B – Publications

• Publications in refereed journals
  o Submitted
  o Accepted


**Published**


**Publications in refereed conferences**

- **Submitted**


- **Accepted**

Intelligent Indoor Environment and Energy Management System for Greenhouses”, accepted at the 2006 World Congress of ENERGY, ENVIRONMENT, ECOSYSTEMS, SUSTAINABLE DEVELOPMENT (EEESD’06).

- Published

Books and edited book chapters
Patents

C – Awards & Distinctions

D – Funded Projects

E – Professional service

- Associate Editor duties
- Society Technical Committee duties
- Conference Technical Program Committee service
- Conference Organization (specify role)

- Reviewing activities
  - Reviewer for IEEE Trans. on Power Electronics (1 paper reviewed)
  - Reviewer for IEEE Trans. on Circuits and Systems II (1 paper reviewed)
  - Reviewer for IEEE Trans. on Industrial Electronics (3 papers reviewed)
  - Reviewer for IEE Proceedings – Electric Power Applications (2 papers reviewed)
  - Reviewer for IEE-Electronics Letters (2 papers reviewed)
  - Reviewer for Renewable Energy (4 papers reviewed)
  - Reviewer for Energy (1 paper reviewed)
F – Service to the Department and the School

G – Advising

- Active graduate students supervised
  - Ph.D. and M.Sc. students supervised (co-supervised with Professor K. Kalaitzakis)
    - V. Tzitzilonis (M.Sc.). Year of initial enrollment in M.Sc. program: 2005.
    - J. Kantaris (M.Sc.). Year of initial enrollment in M.Sc. program: 2005.
  - PhD. And M.Sc. degrees awarded

- Undergraduate students supervised
  - Diploma theses in progress (co-supervised with Professor K. Kalaitzakis)
  - Diploma theses in progress (co-supervised with Professor G. Stavrakakis)
    - D. Papadopoulos, “Maximizing Wind Generated Electricity with Battery Storage”.
  - Diploma theses completed (co-supervised with Professor K. Kalaitzakis)
    - N. Loykas, “Development of a Microcontroller-Based System for Photovoltaic Maximum Power Point Tracking Under Partial Shadowing Conditions”.
    - N. Tsitsopoulos, “DC/AC Inverter Harmonics Minimization Using Genetic algorithms”.
Technical University of Crete
Department of Electronic & Computer Engineering

Annual Activity Report

For the period: Sep. 1, 2005 to Aug. 31, 2006

Name: Costas Balas
Rank: Associate Professor
Years in rank: 4.5 yrs
Full-time or part-time: Full-time
Division: Electronics and Computer Architecture Division
Lab affiliation: Electronics Laboratory

A – Teaching

- Undergraduate courses taught
  - Electronics I
  - Optoelectronics

- Graduate courses taught
  - Special Topics on Optoelectronics & Biomedical Engineering

- Labs taught
  - Electronics I
  - Optoelectronics

- Curriculum & course development
  - New courses / labs developed
    - Optoelectronics course
    - Optoelectronics Lab
  - Lecture notes / slides developed
    - Electronics I: 150 pages notes, 250 slides
    - Optoelectronics: 350 slides
  - Authored textbooks
B – Publications

- Publications in refereed journals
  - Published

- Publications in refereed conferences
  - Published
    - Hyperspectral imaging: potential in non-destructive analysis of palimpsests
      Rapantzikos, K.; Balas, C.;
      International Conference on Image Processing, 2005 ICIP 2005
      Volume 2, 11-14 Sept. 2005 Page(s):II - 618-21

- Books and edited book chapters

  Chapter in Book: The Cervix Second Edition Blackwell Publishing
  Dynamic Spectral Imaging of the Cervix
  Authors: Costas Balas, E. Diakomanolis, Pat Soutter
  Edited by: Joseph Jordan, Albert Singer

C – Awards & Distinctions

D – Funded Projects

- Current projects:
  - ENTER “Development of a novel optical imaging system for quantitative measurement of skin histological parameters” GSRT, 04EP72, 10/2006-10/2008, PI, total budget € 78.000,00, PI’s budget € 78.000,00

- Project proposals submitted:

E – Professional service

- Associate Editor duties
- Society Technical Committee duties
- Conference Technical Program Committee service:
- Conference Organization (specify role)
- Reviewing activities: IEEE-Transactions on Biomedical Engineering, Journal of Applied Optics-Optical Society of America
- Participation in National Committees (e.g., ΕΔΕΤ)
- Other

**F – Service to the Department and the School**

- Departmental responsibilities
  - Member of ECE Dept. premises committee

- School-level responsibilities

**G – Advising**

Active Graduate Students Supervised

**Ph.D. Students Supervised**

- Tsapras Thanasis, 2006

**M Sc. Students Supervised**

- Terzakis Manos, 2004
- Papoutsoglou George, 2005

**M Sc Degrees Awarded**

- Papadakis Manolis, 2005
- Potirakis Antonis
- Tsapras Thanasis

**Undergraduate Students Supervised**

**Diploma Thesis Supervised**

- Adamos Thanasis
- Georgiou Nikolaos
- Sgouros Antonis

**Diploma Thesis Completed** (supervisor)

- Tsolaki Evaggelia
### Diploma Thesis Completed (committee member)

<table>
<thead>
<tr>
<th>Name</th>
<th>Thesis Title</th>
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<tbody>
<tr>
<td>Ροζάκης Γεώργιος</td>
<td>«Δη- Γραμμική Ανάλυση Ασθενούς Σήματος Διπολικών Τρανζίστορ με την Μέθοδο των Σειρών Volterra»</td>
</tr>
<tr>
<td>Βασσάλος Γεράσιμος</td>
<td>«Systems Biology»</td>
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<tr>
<td>Τσεγγελίδης Σάββας</td>
<td>«Αλγεβρική Μοντελοποίηση Μετασχηματιστών από Bayer σε RGB εικόνες»</td>
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<tr>
<td>Καλπάκας Αθανάσιος</td>
<td>«Ανίχνευση Διαμεμβρανικών Τμημάτων Πρωτεϊνών με Νευρονικά Δικτυα»</td>
</tr>
<tr>
<td>Κουρκουτά Άννα-Μαρία</td>
<td>«Survival Analysis on ocular melanoma using non-parametric and additive regression models»</td>
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<tr>
<td>Αγραφιώτη Φωτεινή</td>
<td>«Survival Analysis on ocular melanoma patients using sew-parametric regression models and neural networks»</td>
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<tr>
<td>Σουνάπογλου Θωμάς</td>
<td>«Σύντηξη Αλγορίθμων για την Επιλογή Χαρακτηριστικών Δεικτών από Μεγάλες Βάσεις Γονιδιακών Δεδομένων»</td>
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<tr>
<td>Μακρής Νικόλαος</td>
<td>«Σχεδίαση και Μοντελοποίηση Ολοκληρωμένων Πηνίων για RF Εφαρμογές»</td>
</tr>
<tr>
<td>Δαφνόπουλος Σωτήριος</td>
<td>«Συγκριτική Ανάλυση Μεθόδων Κατηγοριοποίησης σε Δεδομένα Μεγάλων Διαστάσεων και Εφαρμογές σε Γονιδιακή Ανάλυση»</td>
</tr>
<tr>
<td>Χατζημαρκάκης Εμμανουήλ</td>
<td>«Μέθοδοι Κατάταξης χωρίς Επίβλεψη για Γονιδιακή Ανάλυση»</td>
</tr>
<tr>
<td>Γιαννάτος Γεώργιος</td>
<td>«Επεξεργασία Εικόνας Μικροσκοπίου για τον Χαρακτηρισμό και Ανάλυση της Δομής Κολλαγόνου»</td>
</tr>
<tr>
<td>Μαργαρίτη Βανέσσα – Βαϊά</td>
<td>«Συγκριτική Μελέτη Ταξινομητών και Συνδυασμός αυτών (fusion) για Διάγνωση Καρκίνου της Μήτρας»</td>
</tr>
</tbody>
</table>
Annual Activity Report

For the period: 1/9/2005 to 31/8/2006

Name: Matthias Bucher
Rank: Assistant Professor
Years in rank: 2.5
Full-time or part-time: Full
Division: Electronics & Computer Architecture
Lab affiliation: Electronics Laboratory

A – Teaching

- Undergraduate courses taught
  - ECE 111, Digital Design, 2nd semester (Spring 2006)
  - ECE 506, Analog CMOS IC Design & MOSFET Physics, 9th semester (Fall 2005)

- Graduate courses taught
  - ECE 604, Special Themes of Analog CMOS IC Design (Fall 2005)

- Labs taught
  - ECE 111, Digital Design, 2nd semester (Spring 2006)

- Curriculum & course development
  - New courses / labs developed
  - Lecture notes / slides developed
    1. ECE 506, Analog CMOS IC Design & MOSFET Physics, 9th semester (Spring 2006) – continued development of lecture notes/slides
  - Authored textbooks
B – Publications

- Publications in refereed journals
  - (submitted)
  - (submitted)

- Publications in refereed conferences
  - (submitted—accepted)
  - (submitted—accepted—published)

- Books and edited book chapters
  - (submitted—accepted—published)

- Invited Talks & Tutorials – Workshop presentations:
  - **M. Bucher**, “EKV3.0 – A Design-Oriented Compact MOST Model for Advanced CMOS”, European Solid-State Circuit/Device Research
C – Awards & Distinctions

- Paper awards
- Technical Achievement awards
- Professional service awards
- Elevation to senior membership grades in Professional Societies (e.g., IEEE, ACM, …)
- Fellowships, Visiting Professorships
- Invited Plenary Lectures
- Other
  - Compact Model Council (CMC), Government Electronics Information Technology Association (GEIA), Arlington, Virginia, USA – Award of the sum of 10’000 $ in the form of a research grant, for the participation in the “Next Generation MOSFET Compact Model” contest, December, 2005 (7’974 €.).

D – Funded Projects

- Current projects:
- Project proposals submitted:
  - Participated in the preparation of project proposals to be submitted within European Commission FP7.
Participated in project proposal to GSRT “AKMON” (accepted), led by Prof. V. Digalakis. Duration Sept. 2006 – Mar. 2008. Total budget is 164’500 €, M. Bucher’s share is (est.) 41’900 €.


E – Professional service

- Associate Editor duties
- Society Technical Committee duties
- Conference Technical Program Committee service
- Conference Organization (specify role)
- Reviewing activities
  - IEEE Trans. Electron Devices
  - Solid-State Electronics
  - IEICE Trans. Electronics
  - J. Analog Integrated Circuits and Signal Processing

- Participation in National Committees (e.g., EΔΕΤ)
- Other

F – Service to the Department and the School

G – Advising

- Active graduate students supervised
  - Ph.D. and M.Sc. students supervised
  - PhD. And M.Sc. degrees awarded
- Undergraduate students supervised
  - Diploma theses in progress (supervisor)
    - Diamantakos Dimitrios, Automated MOS transistor model parameter determination
    - Karefylakis Michael, High-Voltage MOSFET modeling
    - Lathourakis Kyriakos, Study of matching in sub-micron CMOS
    - Petsios Alexandros
    - Kyriakos Alexandros, CAD tool for EKV3 based on Java and Matlab
- Stefanakis Dionysios, Development of a CMOS imaging sensor
- Smaragdos George

- Diploma theses completed (supervisor)
  - Mavredakis Nikolaos (13/7/2006), „Design of an RF Low Noise Amplifier at 5.5 GHz in 0.12um CMOS Technology“

- Diploma theses in progress (committee member)
- Diploma theses completed (committee member)
  - Karagiannakis Dimitrios (7/2006)
  - Andreou Charalambos (7/2006)
  - Moraitis Anastasios (7/2006)
  - Mylonas George (7/2006)
  - Antonopoulos Angelos (10/2005)
Annual Activity Report

For the period: Sep. 1, 2005 to Aug. 31, 2006

Name: Ioannis Papaefstathiou
Rank: Assistant Professor (elected not yet formally appointed)
Years in rank: 1 (as Visiting Faculty, PD 407)
Full-time or part-time: Full-time
Division: Computer Architecture
Lab affiliation: Microprocessor and Hardware laboratory

A – Teaching

• Undergraduate courses taught
  o HRY 201 - Digital Computers(Fall 2005)
  o HRY 312 – Computer Organization (Spring 2006)
  o HRY 401 - Real time Systems (Spring 2006)

• Graduate courses taught

• Labs taught
  o HRY 201 - Digital Computers(Fall 2005)
  o HRY 312 – Computer Organization (Spring 2006)
  o HRY 401 - Real time Systems (Spring 2006)

• Curriculum & course development
  o New courses / labs developed
  o Lecture notes / slides developed
    1. HRY 401 - Real time Systems (Spring 2006)
  o Authored textbooks

B – Publications
• Publications in refereed journals
  o Submitted
  o Accepted
  o Published

• Publications in refereed conferences
  o Submitted: those published/appeared (see below), plus
  o Accepted: those published (see below), plus
  o Published

• Books and edited book chapters
• Patents

C – Awards & Distinctions

D – Funded Projects

• Current projects:

• Project proposals submitted:
  o Organizer of “SELINE” FP6-STREP proposal, grade 22/30
  o Co-Organizer, in “FASTEST”, FP6-STREP proposal, grade 25/30 (ranked 18th, 15 Proposals were funded)
  o Participated in “ARCHON”, FP6-STREP proposal, grade 26/30 (ranked 16th, 15 Proposals were funded)
  o Participated in “SEARCH”, FP6-STREP proposal, grade 21/30
  o Participated in “ON-FLY”, FP6-STREP proposal, grade 22/30
  o Organizer of “VPlanet” proposal to GSRT, ranked 5th, will be funded
  o Organizer of “GRID-APP” proposal to GSRT, grade 85/100, ranked 9th/42

E – Professional service

• Associate Editor duties

• Society Technical Committee duties.

• Conference Technical Program Committee service
  o IEEE RSP 2006

• Conference Organization (specify role)
  o Finance Chair, RSP 2006, Chania, Crete, Greece.

• Reviewing activities

F – Service to the Department and the School

G – Advising

• Active graduate students supervised
  o Ph.D. and M.Sc. students co-supervised
    ▪ Dimitris Meintanis (Ph.D), year of initial enrollment in Ph.D. program: 2005.
    ▪ Iakovos Mavroidis (Ph.D), year of initial enrollment in Ph.D. program: 2005.
    ▪ Ioannis Mavroidis (Ph.D), year of initial enrollment in Ph.D. program: 2005.
• George Kornaros (Ph.D), year of initial enrollment in Ph.D. program: 2005.
• Antonis Nikitakis (M.Sc.), year of initial enrollment in program: 2004.
  ○ PhD. And M.Sc. degrees awarded

• Undergraduate students supervised
  ○ Diploma theses in progress (co-supervisor)
    ▪ M. Platsis
    ▪ K. Klatsias
    ▪ N. Kassis.
    ▪ N. Spanos
    ▪ K. Papadopoulos
    ▪ G. Mplemenos
  ○ Diploma theses completed (supervisor)
    ▪ C. Yannakou, “Implementation of a 5-stage pipeline RISC CPU).
    ▪ D. Mprachos, “Implementation of a DSP Unit based on OpenRisc 1200 CPU, using SystemC”
Annual Activity Report

For the period: Sep. 1, 2005 to August 31, 2006

Name: Dionisis Pnevmatikatos
Rank: Associate Professor
Years in rank: 4
Full-time or part-time: Full-time
Division: Electronic & Computer Architecture
Lab affiliation: Microprocessor & Hardware Laboratory

A – Teaching

- Undergraduate courses taught
  - Computer Architecture
  - Advanced Logic Design
  - High-Performance Computer Architecture

- Graduate courses taught
  - Αρχιτεκτονική Επεξεργαστών Επικοινωνιών και Δικτύων (Network Processor Architecture)

- Labs taught
  - Computer Architecture
  - Advanced Logic Design

- Curriculum & course development
  - Development of new course High-Performance Computer Architecture

B – Publications

- Publications in refereed journals
• Publications in refereed conferences

• Books and edited book chapters.

C – Awards & Distinctions

D – Funded Projects
  - ΠΑΒΕΤ-ΝΕ: ΕΡΜΗΣ: Σχεδίαση και ανάπτυξη ενός καινοτόμου και σύνθετου ολοκληρωμένου για ενσωματωμένα δικτυακά συστήματα παροχής μπουκέτων υπηρεσιών στο χρήστη, 01/01/05-31/12/06, Συνολικός Προϋπολογισμός 574.980€, Προϋπολογισμός Π.Κ. 53000€
  - Πρόταση 98 Τηλε-εκπαίδευση, Ιδρυματικός Υπεύθυνος
  - Πρακτική Άσκηση Φοιτητών Π.Κ., Τμηματικός Υπεύθυνος

E – Professional service

• Διοργάνωση συνεδρίου 17th IEEE International Workshop on Rapid System Prototyping (RSP) 2006 στα Χανιά

• RSP2006 (Program Committee)
• DATE 2006 (Program Committee)
• ISSPIT 2006 (Program Committee)
• ICS 2006 (Program Committee)
• SAMOS 2006 (Program Committee)

• Reviewer:
  - Conferences: ISCA, ANCS’06, HPCA’06, HiPEAC 2006, FPL’06, ISCAS’06
F – Service to the Department and the School

- Departmental responsibilities
  - Undergraduate Program Committee
  - Responsible for the Department-wide practical training project

- School-level responsibilities
  - NOC director
  - Επιτροπή Μηχανογραφικού και Δικτύων
  - Επιτροπή Συγγραμμάτων Π. Κ.
  - Ιδρυματικός Υπεύθυνος, Πρόταση 98 Τηλε-εκπαίδευση.

G – Advising

- Active graduate students supervised
  - Ph.D.
    - Κορνάρος Γιώργος
    - Μαυροειδής Ιωάννης
    - Μαυροειδής Ιάκωβος (co-supervise)
    - Μεϊντάνης Δημήτρης (co-supervise)
  - M.Sc. students supervised
    - Γιακουμής Δημήτρης
    - Νικητάκης Αντώνης
    - Δημόπουλος Βασίλης
    - Ερμής Ιωάννης
  - M.Sc. degrees awarded
    - Θεοδωρόπουλος Δημήτρης

- Undergraduate students supervised
  - Diploma theses completed (supervisor)
    - Δεμερτζή Μελίνα
    - Φυτράκη Σωτηρία
    - Αρελάκης Αγγελος
    - Μπούρας Ευστάθιος
    - Χαραλάμπους Χαράλαμπος
  - Diploma theses completed (co-supervisor)
    - Γιαννακού Χριστόδουλος
    - Μπράχος Δημήτριος

- Diploma theses in progress (supervisor)
  - Σίσκος Αλέξανδρος
  - Ανδρονικίδης Γεώργιος
  - Χρήστο Παναγιώτης
  - Κυριακούλακος Κωνσταντίνος

- Diploma theses in progress (committee member)
- Diploma theses completed (committee member)
Χρυσός Γρηγόριος
Κοζάνητης Χρήστος
Annual Activity Report

For the period: 1-9-2005 to 31-8-2006

Name: George Stavrakakis
Rank: Professor
Years in rank: 11
Full-time or part-time: Full-time
Division: Electronic and Computer Architecture
Lab affiliation: Electric Circuits and Renewable Energy Sources

A – Teaching

- Undergraduate courses taught
  - Basic Circuit Theory (HRY 202)
  - Renewable Energy Sources (HRY 416)

- Graduate courses taught
  - Advanced topics in Optimal Control (SYS 603)

- Labs taught
  - Basic Circuit Theory (HRY 202)
  - Renewable Energy Sources (HRY 416)

- Curriculum & course development
  - New courses / labs developed: Renewable Energy Sources (HRY 416)
  - Lecture notes / slides developed: Renewable Energy Sources (HRY 416)
  - Authored textbooks: None

B – Publications
• Publications in refereed journals
  o Submitted : 5
  o Accepted  : 4
  o Published : 3 (see below)

  ▪ J. Kaldellis, K.A. Kavadias, D.E. Papantonis and G.S. Stavrakakis
    “Maximising wind generated electricity with hydro storage: case study Crete”

  ▪ G. Saridakis, K. Dalamagidis, D. Kolokotsa, G.S. Stavrakakis et al.
    “Development of a Greenhouse Model with an Intelligent Indoor Environment
    and Energy Management System for Greenhouses”

  ▪ Kafetzis G., Patelis P., Tripolitakis E.J., Stavrakakis G.S., Kolokotsa D., Kalaitzakis K.,
    “PID Controller Tuning and Implementation Aspects for Building Thermal Control”

  ▪ D. Kolokotsa G.A. Saridakis, A. Pouliezos, G.S. Stavrakakis, Design and
    installation of an advanced EIB™ fuzzy indoor comfort controller using
    Matlab™, Accepted in Energy and Buildings.

• Publications in refereed conferences
  o Submitted : 1
  o Accepted  : 1
  o Published : 1 (see below)

  ▪ D. Kolokotsa, A. Pouliezos, G. Stavrakakis “Sensor fault detection in building
    energy management systems” 5th International Conference on Technology and

• Books and edited book chapters : none

• Patents : one in the national level (see below)
C – Awards & Distinctions

- Paper awards: none
- Technical Achievement awards: none
- Professional service awards: none
- Elevation to senior membership grades in Professional Societies (e.g., IEEE, ACM, …): none
- Fellowships, Visiting Professorships: none
- Invited Plenary Lectures: one

Other

D – Funded Projects

- Current projects:

- Project proposals submitted: none

E – Professional service

- Associate Editor duties: none
- Society Technical Committee duties: one (International Committee of Electrical Machines- ICEM)
- Conference Technical Program Committee service: none
• Conference Organization (specify role) : none
• Reviewing activities : In three international Journals
  ▪ Permanent invited Reviewer of “Zentralblatt für Mathematik und ihre Grenzgebiete” (Mathematics Abstracts) edited by Springer-Verlag International publ.
  ▪ Permanent invited Reviewer of the Journal of Intelligent and Robotic Systems.
  ▪ Permanent invited Reviewer of the IEEE Transactions on Energy Conversion.

• Participation in National Committees (e.g., ΕΔΕΤ) : one
  ▪ Permanent Committee of the Prefecture of Crete for the Energy Problem of Crete

• Other

F – Service to the Department and the School

• Departmental responsibilities : none

• School-level responsibilities
  o Member of the Technical Council of TUC

G – Advising

• Active graduate students supervised
  o Ph.D students supervised
    1. Tripolitakis Evagelos
    2. Nikolaou Triantafylia
    3. Sergaki Eleftheria

  M.Sc Students supervised

  1. Afentakis Nikolaos
  2. Kafetzis Georgios
  3. Patelis Petros
  4. Tabitsikas Charalabos

  o M.Sc. degrees awarded (none)
• Undergraduate students supervised
  o Diploma theses in progress (supervisor): 9
  o Diploma theses completed (supervisor): 4
  o Diploma theses in progress (committee member): 6
  o Diploma theses completed (committee member): 2
Systems Division

Faculty members:

- Petros Stavroulakis, Professor (on leave)
- Manolis Christodoulou, Professor
Annual Activity Report

For the period: Sep. 1, 2005 to Aug. 31, 2006

Name: Manolis A. Christodoulou
Rank: Professor
Years in rank: 14
Full-time or part-time: Full-time
Division: Systems
Lab affiliation: Automation

A – Teaching

Undergraduate courses taught
  o Neural Networks
  o Linear Systems

  • Graduate courses taught
    o Adaptive Control
    o Special Topics in Control

  • Labs taught
    o Neural networks
    o Linear Systems
  • Curriculum & course development
    o New labs in Neural Networks
    o Electronic web slides developed for Linear Systems

B – Publications

  • Publications in refereed journals
    o Submitted

- Publications in refereed conferences
  - Submitted: those published/appeared (see below), plus
  - Accepted: those published (see below), plus
  - Published
    - Y.S. Boutalis, T.L.Kottas, B.G. Mertzios and M.A.Christodoulou A Fuzzy Rule Based Approach for Storing the Knowledge Acquired from Dynamical FCMs, Proceedings of the 5th International Conference on Technology and Automation ICTA’05, October 15-16, 2005, Thessaloniki, Greece.


- Books and edited book chapters

- Patents

C – Awards & Distinctions

D – Funded Projects

E – Professional service

- Associate Editor duties
- Society Technical Committee duties
- Mediterranean Control Association, Member of the Board of Governors
- Conference Technical Program Committee service
- International Program Committee, Member “5th International Conference on Technology and Automation ICTA’05” Thessaloniki, Greece, October 15-16, 2005.
- International Program Committee, Member 14th Mediterranean Conference on Control and Automation, Ancona, Italy, June 28-30, 2006.
- International Program Committee, Member International Conference on Intelligent Systems and Computing: Theory And Applications, Ayia Napa, Cyprus, July 5-7, 2006.
- Conference Organization (specify role)
- Reviewing activities
  - Reviewer for various *IEEE Transactions*
F – Service to the Department and the School

G – Advising

- Active graduate students supervised
  - Ph.D. and M.Sc. students supervised
    - Iosif Kodaxakis
    - Panagiotis Voulgarellis
    - Vouros Efstratios
    - Thanassios Iliopoulos
  - PhD. And M.Sc. degrees awarded

- Undergraduate students supervised
  Several diploma theses are in process and completed.