

CURRICULUM VITAE

Tolga Yapıcı

GENERAL INFORMATION Birth Date : 12 February 1983
Home Address : Kazakistan Cad. No:115/5 Bahcelievler, Ankara, Turkey
Mailing Address : Department of Aerospace Engineering, Middle East Technical University,
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Foreign Languages: Turkish (Mother Language), English (fluent), German (fair), French (fair)

INTERESTS

Academic Interests

Space Physics, Magnetospheric Dynamics, Plasma Physics, Statistical Physics, Estimation Theory, Genetic Programming, Applied Mathematics, Astrophysics.

Sport Interests

Archery, Swimming, Skiing, Tennis.

Social Interests

Theatre, Cinema, Outdoors.

EDUCATION

Middle East Technical University, Ankara, Turkey

M.S. in Department of Aerospace Engineering, September 2007

- Topic: "Influences of Interplanetary Magnetic Field on the Variability of Aerospace Media"
- Advisor: Prof. Dr. Yurdanur Tulunay

Middle East Technical University, Ankara, Turkey

B.S. in Department of Physics (double major program), June 2006

Middle East Technical University, Ankara, Turkey

B.S. in Department of Aerospace Engineering, June 2005

ACADEMIC EXPERIENCES

Middle East Technical University, Ankara, Turkey

Research Assistant

January 2007 - present

Includes current Ph.D. research (Magnetospheric Dynamics and Magnetospheric Storms)
Website maintenance of Department of Aerospace Engineering
Computer maintenance at the Institute of Natural and Applied Sciences
Website design and maintenance of Department of Earthquake Studies
Responsibility for grading of the exams and homework assignments:

- AE261 Statics, Fall 2007
- AE451 Aeronautical Design, Fall 2007

EU COST Action 724: Developing the Scientific Basis for Monitoring, Modeling and Predicting Space Weather, METU, Ankara, Turkey

Project Assistant

January 2005 - November 2007

Includes current M.S. research (Interplanetary Magnetic Field, Modeling of IMF By and IMF Bz dynamics and Data-driven modelling)
Generating a Genetic Programming code - GETY
Web Site harmonization
Model running remotely by internet (via SOAP and FTP).

EU COST Action 724 Short Term Scientific Mission (STSM), Warsaw, Poland

Researcher

18-23 June 2006

Implementing METU-NN model through COST 724 Web Server
Help implementing any other models/databases to current Web Server
Attend probable Work Bench at the Polish Academy of Science Space Research Centre if such need arises

Von Karman Institute for Fluid Dynamics, Brussels, Belgium

Trainee

June 2004 - August 2004

Plasma Flows
Planet Re-Entry Simulation using experimental and numerical techniques

TUSAŞ Aerospace Industry (TAI), Ankara, Turkey

Assistant Project Engineer

September 2003 - November 2003

Creating database for airfoils and grids
Manufacturing and Research Practice

OTHER
EXPERIENCES

Student Board Representative of Department of Aerospace Engineering, METU, Ankara, Turkey

Member of COSPAR

SOME COURSES
TAKEN RELATED TO
FIELD OF STUDY

Physics

ASTR201 Astronomy I
AEE232 Thermodynamics
ASTR312 Modern Astrophysics II
PHYS334 Electromagnetic Theory
PHYS430 Statistical Thermodynamics
AEE453 Introduction to Atmospheric Sciences
AEE551 Introduction to Space Sciences
PHYS561 Magnetohydrodynamics

Mathematics, Modeling and Data Analysis

MATH253 Differential Equations
PHYS209 Mathematical Methods in Physics I
PHYS210 Mathematical Methods in Physics II
AEE306 Numerical Methods
AEE546 Computational Fluid Dynamics on Unstructured Grids
EE501 Linear System Theory I
EE557 Estimation Theory
EE553 Optimization

COMPUTER SKILLS

- Operating Systems: Unix, Linux (SuSE, Red Hat, CENTos), Windows 98/2000/XP.
- Languages: C, C++, Python, Java, LISP, Fortran, Unix shell scripts, HTML, PHP, MySQL.
- Applications: MATLAB, GNU Octave, L^AT_EX, MS Office and OpenOffice Applications.
- Algorithms: Genetic Programming, Neural Networks, Optimization Algorithms, Finite Difference Methods.
- Others: Database Management, Website Designing.

PUBLICATIONS

T. Yapıcı, Y. Tulunay, 2007. Possible Influences of Interplanetary Magnetic Field on the Ionospheric Variability: A modeling approach, Advances in Space Research (submitted, 2007)

Y. Tulunay, E. Tulunay, E. Altuntaş, T. Yapıcı, Near Earth Space Activities: A Turkish Initiative - IHY 2, Sun and Geosphere, 1, 2006

INTERNATIONAL
CONFERENCE
PRESENTATIONS

Y. Tulunay, T. Yapıcı, E. Tulunay, Z. Kocabaş. 2007. Modeling Ionospheric and Solar Parameters using Genetic Programming Approach, IRI/COST 296 Workshop: Ionosphere - Modelling, Forcing and Telecommunications, 10-14 July 2007, Prague, Czech Republic,

Y. Tulunay, T. Yapıcı, E. Tulunay. 2006. Further Investigation of the Possible Effects of the IMF B_z and IMF B_y components on the Ionospheric f_0F_2 values, Third European Space Weather Week, 13- 17 November 2006, Brussels, Belgium.

K. Stegen, J. Lilensten, A. Glover, A. Hilgers, D. Heynderickx, J. Wera, M. Messerotti, I. Stanislavska, T. Yapıcı, P. Gilles. 2006. A New Integrated European Space Weather Portal, Third European Space Weather Week, 13- 17 November 2006, Brussels, Belgium.

T. Yapıcı, Y. Tulunay. 2006. The Probable Effects of Interplanetary Magnetic Field (on the F-layer Critical Frequency), International Symposium on Recent Observations and Simulations of the Sun-Earth System (ISROSES), 17-22 September 2006, Varna, Bulgaria.

E. Tulunay, E. M. Warrington, Y. Tulunay, Y. Bahadırlar, A. S. Türk, R. Çaputçu, T. Yapıcı, E. T. Şenalp. 2006. Propagation Related Measurements During Three Solar Eclipses in Turkey, 10th International Conference on Ionospheric Radio Systems & Techniques, 18-21 July 2006, London.

E. Tulunay, M. Warrington, Y. Tulunay, Y. Bahadırlar, A. S. Türk, T. Yapıcı, E. T. Şenalp, E. Altuntaş, Ö. Sarı, O. Büyükpapaşcu. 2006. COST296 WG2.2 Activity Report : Radio Propagation Measurements During the 29 March 2006 Total Eclipse Week, 4th COST 296 MCM and WG meetings, 27-29 April 2006, Neustrelitz, Germany.

Y. Tulunay, T. Yapıcı. 2006. The effects of IMF B_z on the F-layer Critical Frequency, 8th COST 724 MCM and WG meetings, 27-30 March 2006, Antalya, Turkey.

Y. Tulunay, M. Messerotti, E. T. Şenalp, E. Tulunay, M. Molinaro, Y. I. Özkök, T. Yapıcı, E. Altuntaş, N. Çavuş. 2005. Neural Network Modeling in Forecasting the Near Earth Space Parameters: the Near Earth Space Parameters: Forecasting of the Solar Radio Fluxes Forecasting of the Solar Radio Fluxes, COST 724 MCM, 10-13 Oct. 2005, Athens, Greece.

NATIONAL
CONFERENCE
PRESENTATIONS

T. Yapıcı, Y. Tulunay. 2006. Gezegenlerarası Manyetik Alanın Kritik Frekans Üzerine Etkisi, I. Ulusal Havacılık ve Uzay Konferansı, 21-23 September 2006, METU, Ankara, Turkey.

Yurdanur Tulunay, Tolga Yapıcı. 2006. Gezegenlerarası Manyetik Alan ve Yer'e Yakın Uzay'daki Olası Etkileri, Kayseri VI. Havacılık Sempozyumu, 12-14 May 2006, Nevşehir, Turkey.