

CIRRICULUM VITAE



LAST NAME: **LIOLIOS**
 FIRST NAME: **NKOLAOS**
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EDUCATION – DEGREES

- Ph.D. from the ELECTRICAL and COMPUTER SCIENCE DEPT., SCHOOL of ENGINEERING, UNIVERSITY of PATRAS. Dissertation Area: Image and Signal Processing Techniques for Pattern Recognition. (May 2001).
- MASTER OF SCIENCE IN COMPUTER SCIENCE from WESTERN MICHIGAN UNIVERSITY, KALAMAZOO MICHIGAN, USA, Emphasis: Algorithms & Parallel Computer Architectures. (July 1993).
- BACHELOR OF SCIENCE IN COMPUTER SCIENCE from WESTERN MICHIGAN UNIVERSITY, KALAMAZOO MICHIGAN, USA. (January 1985).
- BACHELOR OF SCIENCE IN INDUSTRIAL TECHNOLOGY from WESTERN MICHIGAN UNIVERSITY, KALAMAZOO MICHIGAN, USA. Specialty: Industrial Electronics (April 1982).
- BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING TECHNOLOGY from TECHNOLOGICAL EDUCATION CENTER of Larisa (T.E.I.), June 1979.

ACHIEVEMENTS

- *Ramble, Ph.D. Research Fellowship*, Wayne State University, Computer Science Dept. Detroit Michigan.,
- *Interdisciplinary Research Scholarship*, Western Michigan University, Geography Dept.

KNOWLEDGE

Operating Systems	Win7-10, Server 2008-12, Linux
Programming Languages	C, C++, C#, .Net Entity Framework, Java
Programming Environments	Visual Studio, Android Studio, Eclipse, NetBeans
Programming	Android, Windows Phone, Internet Application Development (HTML, CSS, JavaScript, .NET ASP, Joomla)
Data Bases	mySQL, MSSQL, noSQL, LINQ
Computer Hardware.	Analog and Digital Electronics, Microprocessor Programming (tiny c - Embedded Software, Parallel Processing Architectures, Digital Signal Processing Hardware, Robotics, Vehicle Fault Diagnostic Systems.

RESEARCH INTERESTS

Pattern Recognition, Image Processing, Custom Thermocamera Image Acquisition and Analysis, (Flir)

SPOKEN LANGUAGES

- Bilingual in Greek and English
- Italian - Conversational

EMPLOYMENT HISTORY

- 10/05–Now Professor, Department of Computer Engineering, Technological Education Institute of Thessaly. (Chairman and Graduate Program Director, 2006-2009)
- 04/02–10/06 Assistant Professor, the Department of Computer Engineering, Technological Education Institute of Thessaly.
- 09/00–04/02 Lecturer, Department of Computer Engineering, Technological Education Institute of Thessaly.
- 08/95 – 09/00 Lecturer, Department of Electrical Engineering, Technological Education Institute of Central Greece.
- 04/89 - 05/95 R&D Leading Software Engineer, Computer Methods Corp., Livonia Michigan.
- 11/92- 05/94 R&D Consultant, American Systems Technology Inc., Livonia Michigan.

- 08/89- 09/90 Electronics Engineer, R.D. Group., Livonia Michigan.
- 11/88 - 04/89 Programmer / Analyst, R&D Dept., Herfert Software, Detroit Michigan.
- 08/87 - 11/88 Computer Consultant, Control Electronics Inc., Farmington Hills Michigan.
- 07/85 - 07/87 Lab Supervisor – Instructor, Computer Science Dept., Western Michigan University.
- 09/84 - 05/85 Research Assistant, Geography Dept., Western Michigan University.

ARTICLES IN INTERNATIONAL JOURNALS (1st in 6)

- [1] Zarogotas, D., **Liolios, NT**, & Anastassopoulos, E. (2016). Supercooling, ice nucleation and crystal growth: a systematic study in plant samples. *Cryobiology*. IF: 1.5
- [2] **N. Liolios**, K. Anastasiou and B. Kotsos, “A New Shape Transformation Approach to Handwritten Character Recognition,” *Signal Processing and Pattern Recognition, A.M.S.E. Periodicals*, 2002.
- [3] **Lolios N.**, Liolios, N. Fakotakis and G. Kokkinakis, “Karhunen-Loeve vs. Discrete Cosine Transform Feature Extraction for Handwritten Character Recognition,” *Signal Processing and Pattern Recognition, A.M.S.E. Periodicals.*, Vol. 45, Issue 1, pp. 57-71, 2002.
- [4] **Liolios N.**, Fakotakis N. and Kokkinakis G., “An Improvement to Document Skew Detection Based on Nearest-Neighbor Cluster Extensions,” *Signal Processing and Pattern Recognition, A.M.S.E. Periodicals*, 2001, vol. 44, no 2, pp. 9-20. (ISSN: 0761-2486)
- [5] **Liolios N.**, Fakotakis N. and Kokkinakis G., “On the Generalization of the Form Identification and Skew Detection Problem,” *Pattern Recognition, Elsevier Science*, 2001, vol. 35, no 1, pp. 253-264. (ISSN: 0031-3203)
- [6] **N. Liolios**, N. Fakotakis and G. Kokkinakis, "Improved Document Skew Detection Based on Text Line Connected-Component Clustering”, *IEEE International Conference on Image Processing (ICIP)*, Thessaloniki Greece., Sep. 2001, Vol. 1, pp. 1098-1101, (ISSN #1522-1880, IEEE Cat. #01CH37205).
- [7] **Lolios N.**, E. Kavalieratou, N. Fakotakis, “Past Performance Knowledge Utilization for Improved Handwritten Character Recognition,” *Signal Processing and Pattern Recognition, A.M.S.E. Periodicals*.
- [8] D. Kountanis, K. Kokkinos and **N. Liolios**, “A Balanced Approach to the Rectilinear Steiner Problem,” *Congressus Numerantium Journal Vol 67, pp. 196 - 212 Οκτώβριος 1995*.

SPECIAL EDITIONS (1^o in 1)

- [9] Joseph Stoltman and **Nikolaos T. Liolios**, "School Geography and Computer Assisted Learning in the United States, from Simulations to Databases", *Annual Proceedings of the University of London*, London UK., 1985, pp165-183. (ISBN: 0-85473-258-6)
- [10] **Nikolaos T. Liolios** et al, "Optimizing Communications Routing in Parallel Computer Architectures," *University of Michigan Microfilms Inc.*, Ann Arbor MI., July 1993. (Order #1355519)

ARTICLES IN INTERNATIONAL CONFERENCES (1st in 6)

- [1] Elias Anastassopoulos, Dimitris Zaragotas and **Nikolaos T. Liolios (2013)** Screening plant genotypes, based on ice nucleation activity, by infrared image analysis. Pre-breeding – Fishing in the gene pool. European Plant Genetic Resources Conference 2013. 10-13 June 2013, Malmo Sweden. Book of abstracts Pg166.
- [2] Dimitris Zaragotas., **Nikolaos T. Liolios** and Elias Anastassopoulos (**2014**). Ice nucleation in grapes. 10th International Plant Cold Hardiness Seminar - Stress recognition triggers plant adaptation. Institute of Dendrology Polish Academy of Sciences Kórnik, Faculty of Biology, Adam Mickiewicz University, 17 – 21 August 2014, Kórnik - Poznań, Poland Pg.41-42.
- [3] Dimitris Zaragotas., **Nikolaos T. Liolios** and Elias Anastassopoulos (**2015**). Detailed Analysis of Multiple Freezing Processes of Biological Samples. The 24th IIR International Congress of Refrigeration. Improving Quality of Life, Preserving the Earth. August 16 – 22, 2015 Yokohama, Japan. Topic: C1 : Cryobiology, cryomedicine (*Submitted*).
- [4] Dimitris Zaragotas, **Nicholaos T. Liolios**, Elias Anastassopoulos (**2015**). Infrared Differential Thermal Analysis (IDTA) of Multiple Freezing Processes. The 24th IIR International Congress of Refrigeration. IRC 2015. Improving Quality of Life, Preserving the Earth August 16 – 22, 2015 Yokohama, Japan.
- [5] **N. Liolios**, N. Fakotakis and G. Kokkinakis, "*Printed Form Identification from Moment Invariants*", IAPR, ICDAR'01, 6th International Conference on Document Analysis and Recognition, Seattle, Washington, USA, Sept. 10-13, 2001.
- [6] **N. Liolios**, N. Fakotakis and G. Kokkinakis, "*Improved Document Skew Detection based on Text Line Connected-Component Clustering*" ICIP'01, IEEE International Conference on Image Processing, 2001.
- [7] E. Kavallieratou, **N. Liolios**, E. Koutsogeorgos, N. Fakotakis, G. Kokkinakis: "The GRUHD Database of Greek Unconstrained Handwriting" , IAPR, ICDAR'01, 6th International Conference on Document Analysis and Recognition, pp. 561-565, Seattle, Washington, USA, Sept. 10-13, 2001.
- [8] Kavallieratou E., **Liolios N.**, Koutsogiorgos E., Fakotakis N., Kokkinakis G., "The GRUHD database of Modern Greek Unconstrained Handwriting," *2nd International Conference on*

Language Resources and Evaluation, Athens, vol.3, pp.1755-1759, 1999. (ISBN #0-7695-0750-6) (Αναφορές 14.1)

- [9] **N. Liolios**, N. Fakotakis and G. Kokkinakis, "Form Identification and Skew Detection from Projections", *IX European Signal Processing Conference Proceedings*, Rhodes Greece. Sep. 1998, Vol. 11, pp. 609-612.
- [10] **Nikolaos T. Liolios** and Joseph Stoltman, "The World Database: Computer Assisted Learning", *Annual Meeting of American Geographers*, Minneapolis MN., May 4-7, 1986.
- [11] **Nikolaos T. Liolios** and Dionysios Kountanis, "Minimization of Steiner Nodes and Trees on a Hypercube Architecture", *International Society of Mini and Micro Computers, 1st. International Conference on Computers and Communications*, San Diego CA., May 1993, pp.284-288. (ISBN: 0-880843-01-3)
- [12] **Nikolaos T. Liolios** and Dionysios Kountanis, "Minimization Of Steiner Nodes and Trees on a Hypercube Architecture", *Society of Industrial and Applied Mathematics, 4th SIAM Conference on Computer Optimization*, Chicago IL, 1992.
- [13] **Nikolaos T. Liolios** and Dionysios Kountanis, "Two Approximation algorithms for the Routing Problem", *Society of Industrial and Applied Mathematics, 4th SIAM Conference on Computer Optimization*, Chicago IL, 1992.

CONFERENCES WITH ABSTRACT EVALUATION (1st in 1)

- [14] Joseph Stoltman and **Nikolaos T. Liolios**, "The World Database: Its Design and Development", *Annual Meeting of the Michigan Academy of Science, Arts and Letters*, Central Michigan University, Lansing MI., March 14-15, 1986.
- [15] P. Kapsis, **N. Liolios** and Vasilios Kotsos, "Low Cost PLC", *Proc. 2nd Conf. On Technology and Automation*, TEI of Thessaloniki, Greece. Oct. 1998, pp. 23-29.
- [16] **N. T. Liolios**, N.D. Asimakis, B.A. Kotsos and A.B. Kontogeorgos, "Switching Activity of Static CMOS Gates", *Proc. 2nd Conf. On Technology and Automation*, TEI of Thessaloniki, Greece. Oct. 1998, pp. 323-327.
- [17] B.A. Kotsos, **N. T. Liolios**, N.D. Asimakis, and A.D. Tziolas, "CMOS Buffer Sizing", *Proc. 2nd Conf. On Technology and Automation*, TEI of Thessaloniki, Greece. Oct. 1998, pp. 258-261.

DOCTORAL THESIS

- [18] **Nikolaos T. Liolios**, "Design and Implementation of an Automated Document Identification System with Automatic Extraction and Recognition of Handwritten Text Fields," *EKTE, Doctoral Thesis*, – University of Patras., Patras, May 2001.

BOOKS

- [19] Peter Wilkens, Folkert Jang, **Nikos Liolios**, "Διοικητικές Εφαρμογές Πληροφορικής," *Ευρωπαϊκές Τεχνολογικές Εκδόσεις, Όμιλος ΙΩΝ*, 2001, ISBN: 960-331-312-2.

INDICATIVE CITATIONS (Total 175):

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***"On the Generalization of the Form Identification and Skew Detection Problem",
Pattern Recognition Journal, 2002.***

1. Y. Lu, C.L. Tan, "A Nearest-Neighbor Chain Based approach to skew Estimation in Document Images", *Pattern Recognition Letters*, Vol. 24(14), pp. 2315-2323, Oct. 2003.
2. Kavallieratou E., Balcan D.C., Popa M.F., Fakotakis N., "Handwritten Text Localization in Form-Type Documents," *IEEE International Conference on Image Processing (ICIP)*, Thessaloniki Greece., Sep. 2001, Vol. 1, pp. 1101-1105.
3. Knowlwdge A.E., "ΟΡΑΣΙΣ: Αυτόματη Αναγνώριση Χειρόγραφων Εγγράφων – Ερωτηματολογίων", Υπουργείο Ανάπτυξης, Γ.Γ.Ε.Τ, Πρόγραμμα Ανάπτυξης Βιομηχανικής Έρευνας και Τεχνολογίας (ΠΑΒΕΤ 2000).

"Improved Document Skew Detection based on Text Line Connected-Component Clustering" ICIP'01, IEEE International Conference on Image Processing, 2001.

1. Y. Lu, C. L. Tan, "Improved Nearest Neighbor Based Approach to Accurate Document Skew Estimation", *ICDAR'03 7th International Conference on Document Analysis and Recognition*, Vol. I, pp. 503-507, Edinburgh, Scotland, Aug. 3-6, 2003.
2. E. Kalcheva, G. Gluhchev, "Segmentations and Analysis of Handwritten Scripts from patients with neurological diseases", *CompSysTech'03, International Conference on Computer Systems and Technologies*, 2003.

Joseph Stoltman and Nikolaos T. Liolios, "The World Database: Its Design and Development", *Annual Meeting of the Michigan Academy of Science, Arts and Letters, Central Michigan University, Lansing MI., March 14-15, 1986.*

1. Yuill R. S. "The animated ATLAS", *Annual Meeting of the Michigan Academy of Science, Arts and Letters*, Central Michigan University, Lansing MI., March 14-15, 1986.