

# IOANNIS TSAMARDINOS

## CURRICULUM VITAE

**Current Affiliation:**

Assistant Professor  
Department of Computer Science  
University of Crete

Adjunct Assistant Professor  
Department of Biomedical Informatics  
Vanderbilt University

Affiliated Researcher  
Institute of Computer Science  
Foundation for Research and Technology, Hellas

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Un. Crete: +30 (2810) 393 575  
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**Email Address:**

tsamard@ics.forth.gr  
ioannis.tsamardinos@vanderbilt.edu

**Personal** Born in Thessaloniki, Greece, 1973. Citizen of Greece. Fluent in Greek and English.

**Research Interests** Artificial Intelligence and Philosophy of AI, Artificial Intelligence in Biomedicine, Machine Learning, Causal Inference and Induction, Learning from Biomedical Data, Feature and Variable Selection for Classification, Bioinformatics, Planning, Plan Execution, Constraint-Based Temporal Reasoning, Applications of Machine Learning and Planning in Biomedical Informatics.

**Positions:** Since September 2006  
*Assistant Professor*, Department of Computer Science  
University of Crete

Since September 2006  
*Affiliated Research Scientist*, Institute of Computer Science  
Foundation for Research and Technology, Hellas

Since February 2006  
*Adjunct Assistant Professor*, Department of Biomedical Informatics,  
Vanderbilt University

Since November 2001,  
*Assistant Professor*, Department of Biomedical Informatics,  
Vanderbilt University

June-August 1997  
*Intern*, Caelum Research,  
NASA Ames Research Center, Moffett Field, CA

**Education** Aug. 2001 **Ph.D.**  
Intelligent Systems Program, University of Pittsburgh, PA, USA

Dissertation title: “*Constraint-based Temporal Reasoning Algorithms and Applications to Planning*”

July 1998      **M.Sc.**

Intelligent Systems Program, University of Pittsburgh, PA, USA

Dissertation title: “*Reformulating Temporal Plans for Efficient Execution*”

July 1995      **B.Sc.**

Computer Science Department, University of Crete, Iraklion, Greece

Dissertation title (translated from Greek): “*SM (Storage Manager): A Distributed System of Hierarchical Management of Relational Multimedia Databases*”

GPA 8.71/10.0, Graduated second in class

**Honors  
And Awards**

Jun. 2008

**First Causality Challenge Competition**

Team members: Laura E. Brown. Best performance on one out of four problems of the competition (unofficial submission due to perceived conflict of interest)

<http://www.causality.inf.ethz.ch/home.php>

Sep. 2005

**ISMB 2005 Best Poster Winner**

<https://www.iscb.org/ismb2005/posters.html>

“Using GEMS for Cancer Diagnosis and Biomarker Discovery from Microarray Gene Expression Data”, A. Statnikov, I. Tsamardinos, C. F. Aliferis, Intelligent Systems for Molecular Biology 2005.

Sep. 2004

**Gold Medal, Student Paper Competition**

as the student’s co-advisor

A. Statnikov, C. F. Aliferis, I. Tsamardinos, “Methods for Multi-Category Cancer Diagnosis from Gene Expression Data: A Comprehensive Evaluation to Inform Decision Support System Development”, Proceedings of 11th World Congress in Medical Informatics (MEDINFO ’04), 2004

Sep. 2000

**Andrew Mellon Fellow 2000-2001**

University of Pittsburgh

Apr. 2000

**Outstanding Student Paper Award**

I. Tsamardinos, M. E. Pollack, J. F. Herty, “Merging Plans with Quantitative Temporal Constraints, Temporally Extended Actions, and Conditional Branches”, Proceedings of the 5th International Conference on AI Planning and Scheduling (AIPS 2000), Breckenridge, CO, April, 2000, pp264-272

Sep. 1999

**Andrew Mellon Fellow 1999-2000**

University of Pittsburgh

Feb. 1999

**NASA Group Achievement Award**

NASA Ames, as a member of the Remote Agent group

July 1995

**Graduated 2nd** in class

University of Crete, CS, Iraklion, Crete

- July 1994      **Undergraduate Scholar Fellowship for Best Students,**  
rank 5<sup>th</sup> for year 1993-1994  
University of Crete, CS
- July 1993      **Undergraduate Scholar Fellowship for Best Students,**  
rank 2<sup>nd</sup> for year 1992-1993  
University of Crete, CS
- July 1992      **Undergraduate Scholar Fellowship for Best**  
**Students,** rank 2<sup>nd</sup> for year 1991-1992  
University of Crete, CS

**Teaching  
Experience**

*Computer Science Department, University of Crete*  
Instructor  
HY577, Machine Learning, Fall 2006, Fall 2007  
HY482, Algorithms in Bioinformatics, Spring 2008  
HY150, Programming, Fall 2006, Spring 2007

*Department of Biomedical Informatics, Vanderbilt University*  
Co-Instructor  
DBMI 330, Biomedical Artificial Intelligence, Spring 2003, 2004  
DBMI 330a, Biomedical Artificial Intelligence Laboratory, Spring 2003, 2004

*Computer Science Department, University of Pittsburgh*  
Teaching Assistant - Recitations  
CS0441, Discrete Structures for Computer Science, Summer 1998  
CS0132, Programming in C and a Guide to Unix, Fall 1995

**Student  
Supervision**

Department of Biomedical Informatics, Vanderbilt University  
*Primary Advisor*  
Laura Brown, Ph.D. Candidate

Computer Science Department, University of Crete  
*Member of Ph.D. Committee*  
Theodoros Patkos

**Student  
Graduates**

Department of Biomedical Informatics, Vanderbilt University  
*Primary Advisor*  
Laura Brown, Masters, 2006  
Lawrence Fu, Masters, 2006

*Member of Masters or Ph.D. Committee*  
Yindalon Aphinyanaphongs, Masters 2005  
Yindalon Aphinyanaphongs, Ph.D. 2008  
Alexander Statnikov, Masters 2005  
Nafeh Fananapazir, MD/Ph.D Candidate, 2005

Computer Science Department, University of Crete  
*Member of Masters Committee*  
Evangelia Kassapaki, Masters 2008

Giannis Lilis, Masters 2008

**Invited Talks and Presentations** September 2007  
Consiglio Nazionale delle Ricerche, Pisa, Italy  
Title: “**Advances in Machine Learning Feature Selection and Causal Discovery**”

June 2004  
University of Macedonia, Thessaloniki, Greece  
Department of Applied Informatics  
Title: “**Advances in Bayesian Network Learning, Causal Discovery, and Variable Selection in Massive Datasets with Applications in Biomedicine**”.

June 2004  
Institute of Computer Science,  
Foundation for Research and Technology – Hellas (FORTH),  
Heraklion, Greece  
Title: “**Advances in Bayesian Network Learning, Causal Discovery, and Variable Selection in Massive Datasets with Applications in Biomedicine**”.

Sep. 2003  
As part of the Center for Computational Biology Seminar Series  
Center for Computational Biology, University of Colorado,  
Title: “**Advances in Bayesian Network Learning, Causal Discovery, and Variable Selection in Massive Datasets with Applications in Biomedicine**”.

Sep. 2002:  
As part of the DBMI seminar to Bristol-Myers Squibb employers  
Department of Biomedical Informatics, Vanderbilt University  
Title: “**Causal Discovery from Observational Data**”,

Sep 2000:  
Istituto di Psicologia, Consiglio Nazionale delle Ricerche (IP-CNR), Rome,  
Italy, <http://pst.ip.rm.cnr.it>  
Title: “**Reformulating Temporal Plans for Efficient Execution**”.

Sep. 2000:  
Istituto di Psicologia, Consiglio Nazionale delle Ricerche (IP-CNR), Rome,  
Italy, <http://pst.ip.rm.cnr.it>  
Title: “**Algorithms and Applications of New Constrained-based Temporal Reasoning Frameworks.**”

Feb. 2000:  
Symposium on Intelligent Agents in Software Engineering for Planning,  
Ghent, Belgium,  
<http://www2.kahosl.be/~ocapi/coala/foldersymp.htm>  
Title: “**On Plan Management Issues**”

**Panels** Jun. 2003  
Plan Execution Workshop, International Conference in Automated Planning and Scheduling (ICAPS), 2003

**Reviewer for  
Scientific  
Publications**

Journal of Machine Learning Research, 2008  
Machine Learning Journal, 2007  
Bioinformatics, 2007  
BMC Bioinformatics, 2007  
Journal of Machine Learning Research, 2007  
Journal of Machine Learning Research, 2006  
Journal of Artificial Intelligence Research, 2006  
Decision Support Systems Journal, Feb. 2005  
Artificial Intelligence Journal, Feb. 2005  
FLAIRS 2005  
International Journal of Pattern Recognition and A.I., Sep. 2004  
Pacific Symposium in Bioinformatics, PSB 2005  
AI Communications Journal, March 2004  
American Association for Artificial Intelligence, AAAI 2004  
Third Hellenic Conference on AI, SETN 2004  
11<sup>th</sup> World Congress on Medical Informatics, MEDINFO 2004  
FLAIRS 2004  
Journal of Artificial Intelligence Research, JAIR 2003  
American Medical Informatics Associations, AMIA 2003  
International Joint Conference in Artificial Intelligence, ICJAI 2003  
Journal of Artificial Intelligence Research, JAIR, 2002  
First European Starting AI Researcher Symposium, STAIRS-2002  
Second Hellenic Conference on AI, SETN 2002  
European Conference in Planning, ECP 2001  
American Association for Artificial Intelligence, AAAI 2001

**Service**

2008  
Program Committee  
8<sup>th</sup> IEEE International Conference on Bioinformatics and Bioengineering  
(BIBE 2008)

2008  
Program Committee  
Workshop on New challenges for Feature Selection in Data Mining and  
Knowledge Discovery (FSDM08) part of ECML-PKDD

2008  
Program Committee  
20th International Conference on Tools with Artificial Intelligence, ICTAI

2008  
Program Committee  
5th Hellenic Conference on Artificial Intelligence, SETN 2008

2008  
*Computer Science Department, University of Crete*  
Undergraduate Training Program Committee Member

2007  
Hellenic Bioinformatics & Medical Informatics Meeting

Co-organizer

2007

*Computer Science Department, University of Crete*  
Graduate Admissions Committee Member

2003-2007

Editorial Board Member, *Journal of Artificial Intelligence Research*

2001-2006

*Department of Biomedical Informatics, Vanderbilt University*  
Admission Committee Member

2006-2007

*Department of Computer Science, University of Crete*  
Admission Committee Member

2006

Program Committee  
FLAIRS 2006

2004

Program Committee,  
AAAI-2004

2004

Program Committee  
3rd Hellenic Conference on Artificial Intelligence, SETN 2004

2002

Program Committee  
First European Starting AI Researcher Symposium (STAIRS-2002) (affiliated to ECAI 2002)

**Reviewed  
Publications**

**2008**

[1] Ioannis Tsamardinos, Laura E. Brown, “**Bounding the False Discovery Rate in Local Bayesian Network Learning**”, in Twenty Third AAAI Conference on Artificial Intelligence, 2008 (AAAI-2008)

[2] Constantin F. Aliferis, Alexander Statnikov, Ioannis Tsamardinos, Subramani Mani, Xenofon D. Koutsoukos, “**Local Causal and Markov Blanket Induction for Causal Discovery and Feature Selection for Classification. Part I: Algorithms and Empirical Evaluation**”, (to appear) *Journal of Machine Learning Research, Special Topic on Causality*

[3] Constantin F. Aliferis, Alexander Statnikov, Ioannis Tsamardinos, Subramani Mani, Xenofon D. Koutsoukos, “**Local Causal and Markov Blanket Induction for Causal Discovery and Feature Selection for Classification. Part II: Analysis and Extensions**”, (to appear) *Journal of Machine Learning Research, Special Topic on Causality*

## 2006

[4] Constantin F. Aliferis, Alexander Statnikov, Ioannis Tsamardinos, “**Challenges in the Analysis of Mass-Throughput Data: A Technical Commentary from the Perspective of Statistical Machine Learning**”, *Cancer Informatics*. 2006; 2: 133–162.

[5] Ioannis Tsamardinos, Alexander Statnikov, Laura E. Brown, Constantin F. Aliferis, “**Generating Realistic Large Bayesian Networks by Tiling**”, the 19<sup>th</sup> *International FLAIRS conference (FLAIRS)*, 2006

[6] I. Tsamardinos, L.E. Brown, C.F. Aliferis. "The Max-Min Hill-Climbing Bayesian Network Structure Learning Algorithm", *Machine Learning Journal*; 65: 31-78

## 2005

[7] Laura E. Brown, Ioannis Tsamardinos, Constantin F. Aliferis, “**A Comparison of Novel and State-of-the-Art Polynomial Bayesian Network Learning Algorithms**”, in the *Proceedings of the Twentieth National Conference on Artificial Intelligence (AAAI)*, pp. 739-745, 2005

[8] Alexander Statnikov, Ioannis Tsamardinos, Yerbolat Dosbayev, Constantin F. Aliferis, “**GEMS: A System for Automated Cancer Diagnosis and Biomarker Discovery from Microarray Gene Expression Data**”, *International Journal of Medical Informatics*, 74(7-8):491-503, 2005

[9] Yindalon Aphinyanaphongs, Ioannis Tsamardinos, Alexander Statnikov, Douglas Hardin, Constantin F. Aliferis, “**Text Categorization Models for High Quality Article Retrieval in Internal Medicine**”, *Journal of American Medical Informatics Association* 12(2):207-216, 2005

[10] Alexander Statnikov, Constantin F. Aliferis, Ioannis Tsamardinos, Douglas Hardin, Shawn Levy, “**A Comprehensive Evaluation of Multicategory Classification Methods for Microarray Gene Expression Cancer Diagnosis**”, in *Bioinformatics* 21(5):631-643, 2005

## 2004

[11] Douglas Hardin, Ioannis Tsamardinos, Constantin F. Aliferis, “**A Theoretical Characterization of Linear SVM-Based Feature Selection**”, in *The Twenty-First International Conference on Machine Learning (ICML 2004)*, 2004

[12] Martha E. Pollack, Ioannis Tsamardinos, “**Efficiently Dispatching Plans Encoded as Simple Temporal Problems**”, in *Intelligent Techniques for Planning*, Idea Group Publishing, Editors: Ioannis Vlahavas and Dimitris Vrakas, 2004

[13] Laura E. Brown, Ioannis Tsamardinos, Constantin F. Aliferis, “**A Novel Algorithm for Scalable and Accurate Bayesian Network Learning**”, in *Proceedings of 11th World Congress in Medical Informatics (MEDINFO '04)*, 2004.

[14] Alexander Statnikov, Constantin F. Aliferis, Ioannis Tsamardinos, “**Methods for Multi-Category Cancer Diagnosis from Gene Expression Data: A Comprehensive Evaluation to Inform Decision Support System Development**”, *Proceedings of 11th World Congress in Medical Informatics (MEDINFO '04)*, 2004, Gold Medal in the Student Paper Competition

### **2003**

[15] Lewis Frey, Douglas Fisher, Ioannis Tsamardinos, Constantin F. Aliferis, Alexander Statnikov, “**Identifying Markov Blankets with Decision Tree Induction**”, in *The Third IEEE International Conference on Data Mining (ICDM'03)*, pp. 59-66.

[16] C. F. Aliferis, I. Tsamardinos, A. Statnikov. “**HITON, A Novel Markov Blanket Algorithm for Optimal Variable Selection**”, in the *American Medical Informatics Association meeting 2003 (AMIA 2003)*

[17] I. Tsamardinos, C.F. Aliferis, A. Statnikov. “**Time and Sample Efficient Discovery of Markov Blankets and Direct Causal Relations**”, in *The Ninth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD 2003)*, p. 673-678

[18] I. Tsamardinos, M. E. Pollack, S. Ramakrishnan, “**Assessing the Probability of Legal Execution of Plans with Temporal Uncertainty**”, in *ICAPS03 Workshop on Planning under Uncertainty and Incomplete Information*, 2003, p. 110-118.

[19] M. E. Pollack, L. Brown, D. Colbry, C. E. McCarthy, C. Orosz, B. Peintner, S. Ramakrishnan, and I. Tsamardinos, “**Autominder: An Intelligent Cognitive Orthotic System for People with Memory Impairment,**” *Robotics and Autonomous Systems*, 44(3-4):273-282, 2003.

[20] Ioannis Tsamardinos and Martha E. Pollack, “**Efficient Solution Techniques for Disjunctive Temporal Reasoning Problems,**” in *Artificial Intelligence*, 151(1-2), pp 43-89, 2003

[21] Ioannis Tsamardinos, Thierry Vidal, Martha E. Pollack, “**CTP: A New Constraint-Based Formalism for Conditional, Temporal Planning**”, in *Special Issue on Planning of Constraints Journal*, 8:4 October 2003, p. 365-388.

[22] Constantin F. Aliferis, Ioannis Tsamardinos, Alexander Statnikov, Laura E. Brown. “**Causal Explorer: A Causal Probabilistic Network Learning Toolkit for Biomedical Discovery**”, *International Conference on Mathematics and Engineering Techniques in Medicine and Biological Sciences (METMBS '03)*, p. 371-376.

[23] C. F. Aliferis, I. Tsamardinos, P. Massion, A. Statnikov, D. Hardin. “**Why Classification Models Using Array Gene Expression Data Perform So Well: A Preliminary Investigation Of Explanatory Factors**”, *International Conference on Mathematics and Engineering Techniques in Medicine and Biological Sciences (METMBS '03)*, 47-53.

[24] Ioannis Tsamardinos, Constantin F. Aliferis, Alexander Statnikov, “**Algorithms for Large Scale Markov Blanket Discovery**”, *The 16th International FLAIRS Conference, St. Augustine, Florida, USA, May 2003*, p. 376-381.

[25] Constantin F. Aliferis, Ioannis Tsamardinos, Pierre Mansion, Alexander Statnikov, Douglas Hardin, “**Machine Learning Models For Classification Of Lung Cancer and Selection of Genomic Markers Using Array Gene Expression Data**”, *The 16th International FLAIRS Conference, St. Augustine, Florida, USA, May 2003*, p. 67-71



[26] Ioannis Tsamardinos, Constantin F. Aliferis, “**Towards Principled Feature Selection: Relevancy, Filters, and Wrappers**”, *Ninth International Workshop on Artificial Intelligence and Statistics, Key West, Florida, USA, January, 2003* (AI&Stats 2003).

## 2002

[27] Ioannis Tsamardinos, “**A Probabilistic Approach to Robust Execution of Temporal Plans with Uncertainty**”, *Proceedings of the 2<sup>nd</sup> Greek National Conference on Artificial Intelligence, Thessaloniki, Greece, April 2002*, p. 97-108.

[28] Martha E. Pollack, Colleen E. McCarthy, Sailesh Ramakrishnan, Ioannis Tsamardinos, “**Execution Time Plan Management for a Cognitive Orthotic System**”, eds. M. Beetz and J. Hertzberg, *Plan-Based Control of Robotic Agents, 2002*.

[29] M. E. Pollack, C. E. McCarthy, S. Ramakrishnan, I. Tsamardinos, L. Brown, S. Carrión, D. Colbry, C. Orosz, and B. Peintner, “**Autominder: A Planning, Monitoring, and Reminding Assistive Agent,**” *Proceedings of the 7th International Conference on Intelligent Autonomous Systems (IAS), March, 2002*.

[30] Alan Berfield, Panos K. Chrysanthis, Ioannis Tsamardinos, Martha E. Pollack, Sujata Banerjee “**A Scheme for Integrating e-Services in Establishing Virtual Enterprises**”, *12th International Workshop on Research Issues on Data Engineering (RIDE-02)*.

## 2001

[31] I. Tsamardinos, M. Pollack, P. Ganchev, “**Flexible Dispatch of Disjunctive Temporal Plans**”, in *Proceedings of Sixth European Conference on Planning 2001 (ECP-01), Toledo, Spain, pp. 417–422*.

[32] I. Tsamardinos, “**Temporal Constraints and Uncertainty**”, Workshop on *Constraints and Uncertainty* as part of the *Seventh International Conference on Principles and Practice of Constraint Programming (CP2001)*, Paphos, Cyprus.

## 2000

[33] I. Tsamardinos, M. E. Pollack, J. F. Horty, “**Merging Plans with Quantitative Temporal Constraints, Temporally Extended Actions, and Conditional Branches**”, *Proceedings of the 5th International Conference on AI Planning and Scheduling (AIPS 2000), Breckenridge, CO, April, 2000, pp264-272. Winner of the Outstanding Student Paper Award*.

## 1999 and Before

[34] M. E. Pollack, I. Tsamardinos and J. F. Horty, “**Adjustable Autonomy for a Plan Management Agent**” *1999 AAAI Spring Symposium on Adjustable Autonomy, Stanford, CA, March, 1999*.

[35] I. Tsamardinos, N. Muscettola, and P. Morris, “**Fast Transformation of Temporal Plans for Efficient Execution**”, in *Proceedings of the 15<sup>th</sup> National Conference on Artificial Intelligence (AAAI’98), pp254-261*.

[36] N. Muscettola, P. Morris, and I. Tsamardinos, “**Reformulation of Temporal Plans for Efficient Execution**”, in *Proceedings of the 6<sup>th</sup> Conference Principles of Knowledge Representation and Reasoning (KR) 1998, pp444-452*.

[37] C. Bicchieri, M. Pollack, C. Rovelli, and I. Tsamardinos, “**The Potential for the Evolution of Cooperation among Web Agents**”, in *International Journal of Computer-Human Systems*, 48(1): 9-29, 1998.

[38] S. Orphanoudakis, M. Tsiknakis, C. Chronaki, S. Kostomanolakis, M. Zikos, and Y. Tsamardinos. “**Development of an Integrated Image Management and Communication System on Crete**”, *Proceedings of Computed Aided Radiology '95*. Berlin, June 21-24, pp481-487, Springer 1995.

#### Other

**Publications** Ioannis Tsamardinos, “**Causal Data Mining in Bioinformatics**”, *ERCIM News 69, Special Theme: The Digital Patient*

Franco Chiarugi, Dimitra Emmanouilidou, Ioannis Tsamardinos, Ioannis G. Tollis, “**Morphological Classification of Heartbeats Using Similarity Features and a Two-Phase Decision Tree**”, *Computers in Cardiology 2008*

I. Tsamardinos, “**Temporal Constraints and Uncertainty**”, Workshop on *Constraints and Uncertainty* as part of the *Seventh International Conference on Principles and Practice of Constraint Programming (CP2001)*, Paphos, Cyprus.

#### Tutorials

[1] Nicola Muscettola, Ioannis Tsamardinos, Luke Hunsberger, “**Temporal Reasoning for Planning, Scheduling and Execution in Autonomous Agents**”, in the Fourth International Joint Conference Autonomous Agents and Multiagent Systems (AAMAS), 2005

[2] C. F. Aliferis, I. Tsamardinos, “**Machine Learning Methods for Data Modeling, Decision Support, and Discovery**”, in *11th World Congress in Medical Informatics (MEDINFO '04)*

[3] C. F. Aliferis, I. Tsamardinos, “**Machine Learning Methods for Data Modeling, Decision Support, and Discovery**”, in *American Medical Informatics Association meeting 2003 (AMIA 2003)*

#### System Demos

[1] Alexander Statnikov, Ioannis Tsamardinos, Constantin F. Aliferis, “**Using GEMS for Cancer Diagnosis and Biomarker Discovery from Microarray Gene Expression Data**”, to the Proceedings of the Twentieth National Conference on Artificial Intelligence (AAAI), 2005

[2] Alexander Statnikov, Ioannis Tsamardinos, Constantin F. Aliferis, “**Using GEMS for Cancer Diagnosis and Biomarker Discovery from Microarray Gene Expression Data**”, ISMB 2005

#### Poster Presentations

[1] Alexander Statnikov, Ioannis Tsamardinos, Constantin F. Aliferis, “**Using GEMS for Cancer Diagnosis and Biomarker Discovery from Microarray Gene Expression Data**”, ISMB 2005

#### Completed Support

NLM Grant, LM-7948-01, “**Principled Methods for Very Large-Scale Causal Discovery**”, P.I. C.F. Aliferis, Co-P.I. I. Tsamardinos, Effort 30%, 30%, 20% for the first, second, and third years respectively. Duration 7/1/2003-6/30/2006

NLM 1R01 LM007995-01 “**TIME: (Tools for Inpatient Monitoring Using Evidence)**”, P.I. R. Miller, Co-Investigator, I. Tsamardinos, Effort 10%, Duration, 02/01/04-01/31/07

NIH/NLM LM 007613-01, “**Biomedical Information Science and Technology Initiative (BISTI)**”, P.I. W. Stead, Co-Investigator I. Tsamardinos, Effort 15%. Duration 7/1/2002-6/30/2004

**Patents** Patent Number: 7117185, Methods, system, and apparatus for causal discovery and variable selection for classification, Issue Date: 10/3/2006, Mail Code: CCE84101

**Consulting** Jan. 2004, Prediction Sciences, <http://www.predict.net/>

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