

## **Nicholas Kondakis, Ph.D.**

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### **EDUCATION**

Ph.D., High Energy Physics, Columbia University, New York, NY, 1989

M.Phil., Physics, Columbia University, New York, NY, 1988

M.A., Physics, Columbia University, New York, NY, 1984

B.S., Physics, University of Athens, Athens, Greece, 1982

### **PRIVATE SECTOR**

#### ***NGSQ International Ltd, New York, NY, 2005 - present***

##### *President & CEO*

NGSQ is a consulting firm designing and deploying state-of-the-art quantitative algorithmic strategies for High as well as Medium Frequency high capacity diversified Investments in global financial markets.

Director of two multi-million dollar hedge funds

#### ***Kepler Asset Management, LLC, Setauket, NY, 2005 – 2010***

##### *President, CEO and Managing Director, Head of Research and Development*

Kepler is a state-of-the-art quantitative hedge fund manager employing a highly specialized team in developing quantitative algorithmic strategies.

Management of a multi-million dollar hedge fund.

#### ***Trinity Management, LLC, New York, NY, 1998 – 2005***

##### *CEO and Managing Director*

Management of a multi-million dollar hedge fund using specialized statistical arbitrage algorithms and fully automated computer-to-computer trading

#### ***Kapa International Ltd, New York, NY 1991 – 2004***

##### *Executive VP, Head of Research and Development*

Design, implementation and trading of statistical arbitrage models in the global financial markets, including the US equity and treasury markets and stock index, credit and foreign exchange derivative markets.

### **ACADEMIC APPOINTMENTS**

#### ***State University of New York, Stony Brook NY, USA, 2005 - present***

##### *Adjunct Full Professor*

Director of Research, Institute for Sustainable Development

Development of Eco-Efficiency models

#### ***University of the Aegean, Chios, Greece, 2005 - present***

##### *Invited Professor and Scientific Consultant, Department of Financial and Management Engineering*

Teaching the course “Dynamics of the Financial Markets” on the Graduate Financial Engineering Program of FME

Development of Socio-Eco-Efficiency Program including region-specific applications, programming methods and seminars through the ENTER GGET program.  
Development and design of artificial intelligence algorithms for the financial markets.

**Princeton University, Princeton, NJ, 1989 – 1991**

*Research Associate / Assistant Professor, Department of Physics*

Director of the beam group for experiment E791 at Fermilab, Batavia, IL

**Columbia University, Nevis Laboratories, Irvington, NY, 1988 – 1989**

*Research Associate, Physics Department*

Neutrino beam design for the Brookhaven National Laboratory new AGS wide band beam neutrino event analysis for experiment E776.

**Columbia University, Nevis Laboratories, Irvington, NY, 1984 – 1988**

*Research Assistant, Physics Department*

Design of Brookhaven Laboratory's AGS New Narrow Band neutrino beam, design, construction and operation of the neutrino detector and data analysis of the results for the Brookhaven E776 neutrino oscillation experiment.

**Columbia University, 1982 – 1984**

*Teaching Assistant, Physics Department*

**CERN (European Organization for Nuclear Research), Geneva, Switzerland, 1982**

*Summer Student*

Development of tracking and event analysis software for pi-meson events in the Omega detector

**PAST AND PRESENT RESEARCH INTERESTS**

- Algorithmic Trading in the financial markets
- Applying physics and nature-inspired methods in modeling the dynamics and microstructure of financial markets
- Statistical arbitrage strategies for trading in the financial markets
- Artificial intelligence algorithms for trading in the financial markets
- Automated trading systems
- Creation and maintenance of financial market information databases
- Research in experimental high energy physics

**PUBLICATIONS**

- **DETECTING STATISTICAL ARBITRAGE OPPORTUNITIES USING A COMBINED NEURAL NETWORK - GARCH MODEL** (January 12, 2012). Thomaidis, Nikos S. and Kondakis, Nick, Available at SSRN: <http://ssrn.com/abstract=1984252>
- **OPTIMAL PORTFOLIO ALLOCATION STRATEGIES WITH DYNAMIC FACTOR MODELS** (July 1, 2009). Thomaidis, Nikos S. , Roumpis, Efthymios and Kondakis, Nick, Available at SSRN: <http://ssrn.com/abstract=1475722>
- **INTRA-DAY RETURNS TRANSMISSIONS BETWEEN US AND EUROPEAN EQUITY MARKETS** (February 1, 2008). Journal of Financial Decision Making, Vol. 5, No. 2, 2009.

Thomaidis, Nikos S. , Kondakis, Nick and Vassiliadis, Vassileios, Available at SSRN:  
<http://ssrn.com/abstract=1089465>

- **AN INTELLIGENT STATISTICAL ARBITRAGE TRADING SYSTEM (November 8, 2011). 'ADVANCES IN ARTIFICIAL INTELLIGENCE', LECTURE NOTES IN ARTIFICIAL INTELLIGENCE**, p. 3955, Grigoris Antoniou et al., ed., 2006. Thomaidis, Nikos S. and Kondakis, Nick, Available at SSRN: <http://ssrn.com/abstract=890234>
- **FINANCIAL STATISTICAL MODELLING WITH A NEW NATURE-INSPIRED TECHNIQUE.** Presented in the 1st European Symposium on Nature-Inspired Smart-Information Systems (NISIS), Albufeira, Portugal, 2005. Thomaidis, Nikos S. , Dounias, George D. and Kondakis, Nick, Available at SSRN: <http://ssrn.com/abstract=890247>
- **MANAGING RISK: A PRACTICAL APPROACH**  
Prepared for the “Seminar on Risk Assessment & Analysis in Financial Markets - Obtaining Unbiased Results” Centre for Business Research & Development, Faculty of Business Administration, National University of Singapore, Singapore March 2000
- **SPECIFIC IMPLEMENTATION TECHNIQUES IN STATISTICAL ARBITRAGE**  
Prepared for the “Workshop on Exploring the Important Dimensions of the Finance Space” Centre for Business Research & Development, Faculty of Business Administration, National University of Singapore, Singapore March 2000
- **MASS SPLITTING AND PRODUCTION OF SIGMA(C)0 AND SIGMA(C)++ MEASURED IN 500-GEV PI- N INTERACTIONS.**  
By E791 Collaboration (E.M. Aitala et al.). FERMILAB-PUB-96-076-E, Mar 1996. 15pp.  
Published in Phys.Lett.B379:292-298,1996  
e-Print Archive: hep-ex/9604007
- **ASYMMETRIES BETWEEN THE PRODUCTION OF D+ AND D- MESONS FROM 500-GEV/C PI- - NUCLEON INTERACTIONS AS A FUNCTION OF XF AND P(T)\*\*2.**  
By E791 Collaboration (E.M. Aitala et al.). FERMILAB-PUB-96-001-E, Jan 1996. 15pp.  
Published in Phys.Lett.B371:157-162,1996  
e-Print Archive: hep-ex/9601001
- **SEARCH FOR THE FLAVOR CHANGING NEUTRAL CURRENT DECAYS D+ ---> PI+ MU+ MU- AND D+ ---> PI+ E+ E-.**  
By E791 Collaboration (E.M. Aitala et al.). FERMILAB-PUB-95-142-E, KSU-HEP-95-01, Jun 1995. 9pp.  
Published in Phys.Rev.Lett.76:364-367,1996  
e-Print Archive: hep-ex/9507003
- **D0 - ANTI-D0 MIXING AND DOUBLY CABIBBO SUPPRESSED DECAYS OF THE D+.**  
By E791 Collaboration (M.V. Purohit et al.). FERMILAB-CONF-94-186-E, Jul 1994. 11pp.  
Contributed to 27th International Conference on High Energy Physics (ICHEP), Glasgow, Scotland, 20-27 Jul 1994.
- **SEARCH FOR D+ ---> PI+ MU+ MU-.**  
By E791 Collaboration (A. Nguyen et al.). FERMILAB-CONF-94-187-E, Jul 1994. 4pp.  
Contributed to 27th International Conference on High Energy Physics (ICHEP), Glasgow, Scotland, 20-27 Jul 1994.

- **PRODUCTION ASYMMETRIES IN X(F) AND P2(T) FOR D+- MESONS.**  
 By E791 Collaboration (T. Carter et al.). FERMILAB-CONF-94-185-E, Jul 1994. 8pp.  
 Contributed to 27th International Conference on High Energy Physics (ICHEP), Glasgow,  
 Scotland, 20-27 Jul 1994.
- **RESULTS ON D0 ANTI-D0 MIXING AND DOUBLY CABIBBO-SUPPRESSED DECAYS FROM FERMILAB E791.**  
 E.M. Aitala et al.. May 1994.  
 Prepared for 5th Conference on the Intersections of Particle and Nuclear Physics, St.  
 Petersburg, Florida, 31 May - 6 Jun 1994.  
 Published in AIP Conf.Proc.338:243-248,1995
- **SEARCH FOR MUON-NEUTRINO OSCILLATIONS MUON-NEUTRINO ---> ELECTRON-NEUTRINO (ANTI-MUON-NEUTRINO ---> ANTI-ELECTRON-NEUTRINO IN A WIDE BAND NEUTRINO BEAM.**  
 L. Borodovsky et al.. 1992.  
 Published in Phys.Rev.Lett.68:274-277,1992
- **A SEARCH FOR MUON NEUTRINO OSCILLATIONS AT BNL.**  
 B. Blumenfeld et al.. May 1991.  
 Prepared for 4th Conference on the Intersections between Particle and Nuclear Physics,  
 Tucson, Arizona, 24-29 May 1991.  
 Published in AIP Conf.Proc.243:1113-1115,1992 Also in \*Tucson 1991, Intersections  
 between particle and nuclear physics\* 1113-1115
- **A LARGE SYSTEM OF FLASH ADCS FOR A NEUTRINO DETECTOR.**  
 M. Atiya et al.. 1991.  
 Published in Nucl.Instrum.Meth.A300:542-551,1991
- **SEARCH FOR MUON-NEUTRINO ---> ELECTRON-NEUTRINO OSCILLATIONS.**  
 B. Blumenfeld et al.. 1989.  
 Published in Phys.Rev.Lett.62:2237-2240,1989
- **SEGMENTED IONIZATION CHAMBERS FOR HIGH INTENSITY BEAM MEASUREMENTS.**  
 C. Chi et al.. 1989.  
 Published in Nucl.Instrum.Meth.A281:448-452,1989
- **A MUON-NEUTRINO ---> ELECTRON-NEUTRINO OSCILLATION SEARCH IN THE AGS NEW NARROW BAND BEAM**  
 Nicholas Kondakis (Nevis Laboratories, Columbia University) submitted as a requirement for  
 the PhD degree under NSF grant PHY 86-10898 (R-1428, CU-377, Nevis-271), 1989.
- **A SEARCH FOR MUON-NEUTRINO ---> ELECTRON-NEUTRINO OSCILLATIONS AT THE AGS**  
 W. Lyle et al. Prepared for the Spring Meeting of the APS, Baltimore, MD, 1 – 4 May 1989.  
 Bulletin of the American Physical Society Vol. 34, No. 4, 1091-1336, p. 1190
- **A SEARCH FOR ANTI MUON-NEUTRINO ---> ANTI ELECTRON-NEUTRINO OSCILLATIONS AT THE AGS**

J. Krizmanic et al. Prepared for the Spring Meeting of the APS, Baltimore, MD, 1 – 4 May 1989.

Bulletin of the American Physical Society Vol. 34, No. 4, 1091-1336, p. 1190

- **BNL E776: A SEARCH FOR NEUTRINO OSCILLATIONS.**  
Prepared for the 3rd Conference on the Intersections between Particle and Nuclear Physics, Rockport, ME, 14-19 May 1988. In Rockport, Proceedings, Intersections between particle and nuclear physics, 957-963, 1988. In Batavia, Proceedings, New directions in neutrino physics at Fermilab, 291-299, 1988.
- **NEUTRINO FLUXES IN THE NEW BROOKHAVEN NARROW BAND BEAM**  
N. Kondakis et al. Prepared for the Spring Meeting of the APS, Baltimore, MD, 18 – 21 April 1988.  
Bulletin of the American Physical Society Vol. 33, No. 4, 867-1152, p. 1057
- **ANALYSIS OF NEUTRINO FLAVOR CANDIDATES IN THE BNL NEUTRINO OSCILLATION DETECTOR**  
B. Rubin et al. Prepared for the Spring Meeting of the APS, Baltimore, MD, 18 – 21 April 1988.  
Bulletin of the American Physical Society Vol. 33, No. 4, 867-1152, p. 1057
- **MASSIVE NEUTRINOS**  
Review of Particle Physics: C. Caso et Al. (Particle Data Group), European Physical Journal C3,1 (1988), p. 51, citation
- **SEARCH FOR NEUTRINO OSCILLATIONS AT THE AGS WITH THE NARROW BAND BEAM.**  
C. Chi et al.. Print-87-0521 (ILLINOIS), Feb 1987. 20pp.  
Presented at BNL Neutrino Workshop, Upton, N.Y., Feb 5-7, 1987.  
Published in BNL Neutrino Workshop 1987:39 (QCD175:B2:1987) (\*Tzanakos author in proceedings\*)
- **NEUTRINO FLUX CALCULATIONS FOR THE AGS NARROW BAND BEAM.**  
C. Chi et al.. Print-87-0520 (ILLINOIS), Feb 1987. 9pp.  
Presented at BNL Neutrino Workshop, Upton, N.Y., Feb 5-7, 1987.  
Published in BNL Neutrino Workshop 1987:151 (QCD175:B2:1987) (\*Kondakis author in proceedings\*)
- **LARGE ACCEPTANCE MAGNETIC FOCUSING HORNS FOR PRODUCTION OF A HIGH INTENSITY NARROW BAND NEUTRINO BEAM AT THE AGS.**  
A. Carroll et al.. 1985.  
Published in IEEE Trans.Nucl.Sci.32:3054-3056,1985

## INVITED TALKS

- **Keynote Speaker, 9<sup>th</sup> International Conference on Applied Financial Economics, Samos 2012**  
*Topic: Fasten your seatbelts: Predictive Strategy Design for Turbulent Markets*
- **Keynote Speaker, 8<sup>th</sup> International Conference on Applied Financial Economics, Samos 2011**  
*Topic: Short Wavelength Finance: What, Who and Why*

- **Keynote Speaker, 7<sup>th</sup> International Conference on Applied Financial Economics, Samos 2010**  
*Topic: Under the threat of the "Greek Crisis": Preparing for heavy weather*
- **Keynote Speaker, 6<sup>th</sup> International Conference on Applied Financial Economics, Samos 2009**  
*Topic: In the Eye of the Storm: Survival and Opportunity in the Global Financial Crisis*
- **Keynote Speaker, 5<sup>th</sup> International Conference on Applied Financial Economics, Samos 2008**  
*Topic: From idea to profit: The challenge of prediction in today's financial markets*
- **Research topics and practical applications in the modern financial markets**  
*Department of Financial and Management Engineering, University of Aegean, Chios, December 2004*
- **Managing Risk: a practical approach**  
*Centre for Business Research & Development, Faculty of Business Administration, National University of Singapore, Singapore March 2000*
- **Specific Implementation techniques in statistical arbitrage**  
*Centre for Business Research & Development, Faculty of Business Administration, National University of Singapore, Singapore March 2000*
- **Neutrino Flux Calculations for the AGS Narrow Band Beam**  
*Brookhaven National Laboratory, Upton, NY, February 1987*

## **PROFESSIONAL ASSOCIATIONS**

American Physical Society, Member