Iris Mack, PhD, EMBA earned a Harvard doctorate in Applied Mathematics and a London Business School Sloan Fellow MBA. Dr. Mack is currently a Faculty at the College of Business at Loyola University in New Orleans. Dr. Mack is a former Florida International University (FIU), Tulane Energy Institute faculty and MIT faculty member. Dr. Mack is also a former Derivatives Quant/Trader who has worked in financial institutions in the U.S., London and Asia. She has also worked on consulting projects in various countries around the world – including Singapore, London, Belgium and Switzerland.

As indicated on her Amazon Author page, Dr. Mack is the author of twelve books. Several chapters of Dr. Mack's *Energy Trading and Risk Management* (ETRM) textbook has been licensed by the 200,000+ member Global Association for Risk Professionals (GARP) for their *Energy Risk Professional* (ERP) program: https://www.garp.org/#!/erp/study-modules.

Dr. Mack lectures, consults, trades and serves as an expert witness consultant on Energy Derivatives, Trading, Risk Management, Quantitative Finance, Financial Literacy and Mathematics Literacy. She has also written a column for the International Business Times – UK Edition. A list of Dr. Mack's selected publications may be found in the Appendix to this document. In addition, Dr. Mack has also spent some of her professional career at NASA, Boeing, Enron, BNP Paribas and AT&T Bell Laboratories – where she obtained a patent for research on optical fiber and information technology.

Dr. Mack has served - on various boards: *Women's Energy Network – South Louisiana Chapter, National Academy of Sciences Transportation Research Board (Washington, D.C.), The Edwin Moses Global Institute, AlgoAnalytics Trading and Financial Analytics* (India), *MarketExpress Financial News and Research* (India)

EDUCATION

London Business School, Executive M.B.A., Sloan Fellows Program
Executive MBA Thesis - Day-Ahead Lunch-Time Electricity Demand Forecasting: Applications to Electricity and Weather Derivatives. London Business School Sloan Fellows program is a ten-month accelerated MBA Program.

Harvard University, PhD, Applied Mathematics and Scientific Computing
Doctoral Dissertation - Block Implicit One-Step Methods for Solving Smooth and Discontinuous Systems of Differential/Algebraic Equations: Applications to Transient Stability of Electrical Power Systems, Harvard University Press.

University of California, M.S., Applied Mathematics
In lieu of a written Masters thesis, I took and passed the Masters Oral Examination in Applied Mathematics, Numerical Analysis and Scientific Computing.

Vassar College, Dual B.S., Mathematics and Mathematical Physics
College Thesis - Numerical Solutions to the Many Body Problems.

ACADEMIC_EXPERIENCE

Loyola University College of Business, New Orleans
Faculty, July 2019 to present
Lectures and conducts research on Introduction to Business, Robotics and Artificial Intelligence in Business, Artificial Intelligence and the Future of Business, Energy Trading, Risk Managemen.

Loyola University Upward Bound Program, New Orleans
Math and Financial Literacy Instructor, Summer 2019
Lecturer on PreCalculus and Financial Literacy

Fitch Certificate in Quantitative Finance Programme, London, England
Energy Derivatives Faculty, 2010-2018
Lecturer on Energy Trading and Risk Management: http://cqf.com/faculty/dr-iris-mack

International High School of New Orleans, New Orleans
Math and Business Instructor, 2018-present
Lecturer on Probability and Statistics, PreCalculus, Advance Math/Business Math, IB Math 1 and IB Math 2.

Tulane Energy Institute, New Orleans
Faculty at the Freeman School of Business, July 2014 to 2016
Lectures and conducts research on *Energy Trading, Risk Management.* www.GlobalEnergyPost.com

National Academies of Sciences, Washington, D.C.
Transportation Research Advisory Board Member, 2009-2016
Evaluation of the Use of Passenger Air Travel for Capital Investment Planning and Benefit-Cost Analysis.

Embry-Riddle Aeronautical University, Daytona Beach, FL
Adjunct Assistant Professor, 2009-2011
Research and instruction in mathematics and finance with a focus on the fields of aviation and aerospace.

Florida International University, Miami
Faculty Member in the College of Business Administration, 2004-2008
Lectured and researched in the fields of Statistics, and Operations Research.

Clark Atlanta University, Atlanta
Associate Professor of Mathematics, 1995-1998
Lectured and researched in the fields of Financial Engineering and Applied Mathematics. Served on DoD Electronic Commerce/Electronic Data Interchange Advisory Board. Selected as a New York University Faculty Resource Network Scholar. Selected as a Project Kaleidoscope Faculty for the 21st Century.

University of San Francisco, McLaren School of Management, San Francisco
Adjunct Professor, 1993-1994
Lectured and researched in the fields of Statistics and Operations Research.

Massachusetts Institute of Technology, Cambridge
Lecturer, MIT Sloan School of Management, 1988-1991.
Lecturer, Researcher and Consultant in the fields of Applied Mathematics, Financial Engineering, Statistics and Operations Research. Participant in MIT's Industrial Liaison Program. Received Motorola Research Grant for Real Options Valuation and Strategic Investments. Served on Taylor Electronic, Ltd.'s Advisory Board. Developed a new university course entitled "Financial Engineering: Mathematical Modeling in Finance"
Visiting Assistant Professor, MIT Mathematics Department, 1986-1988.
Lecturer, Researcher and Consultant in the fields of Applied Mathematics and Financial Engineering. Developed a new university course entitled "Pricing of Contingent Corporate Securities"

National Science Foundation, Washington, D.C.
Advisory Board Member, 1990
Reviewed "Instructional Materials Development" Research Grant Proposals.

BUSINESS EXPERIENCE

Phat Math, Inc., Zurich, Miami Beach and New Orleans
Founder and C.I.O., 2002-present
R&D, consulting and publishing: STEM, Big Data, Artificial Intelligence, Robotics, Automation, Machine-learning, Energy Trading and Risk Management. www.PhatMath.us and https://www.amazon.com/Dr.-Iris-Marie-Mack-PhD/e/B00OWKVMYC/ref=ntt_dp_epwbk_0.

International Business Times – UK Edition, London, England
Finance and Business Columnist, 2017-2019
Writes column on the energy and financial markets: http://www.ibtimes.co.uk/reporters/iris-mack

Fitch 7city Learning, Singapore
Corporate and Finance Division, 2012-2015
Energy Derivatives and Quantitative Finance Consultant http://www.7city.co.uk/corporate-and-finance-division

The Terrapinn Group, London and Singapore
Derivatives, Quantitative Finance Investment and High Frequency Trading Lecturer, 2011-2015
3-Day M.B.A. in Quantitative Investment www.thembatrainingcompany.com/our-faculty.aspx

Enron Corporation, Houston and London
Financial Engineer and Energy Trader, January to December 2001
Financial Engineer and Energy Trader on Power Options Desk. Documented findings in white papers - listed in the Appendix.

Investment Banque BNP Paribas, New York and London
Executive in Derivatives Structured Product Group, July 1999 to August 2000

Worked on various derivatives products: insurance, fund of funds, energy, weather and real options valuations applied to the aircraft industry. Obtained FSA Derivatives Securities License and FSA General Securities Regulations Licenses. Documented findings in white paper - listed in the Appendix.

Boeing Corporation, Seattle, 1996-1997
A. D. Welliver Faculty Fellow One of ten Professors selected nationwide to work with top Boeing senior executives in various business divisions at the former headquarters in Seattle. Worked on a year-long fellowship in Engineering, R&D, and Finance divisions. Co-Authored journal article with other Welliver Fellows: *Engineering Education and Practice in the Era of Global Competition*, Journal of ASEE, 1997.
Applied Mathematics Faculty Research Associate Worked in a Seattle-based research group on Real Options Valuation of Aircraft Investments. Documented findings in a white paper - listed in the Appendix. Held a security clearance for these Boeing positions.

Associated Technologists, Inc., San Francisco and Atlanta
CEO, 1991-2001 SBA 8(a) certified High Technology Consulting Firm. Select clients listed above.

NASA Johnson Space Center, Houston
Semifinalist for NASA Astronaut Program, 1989

AT&T Bell Labs, Holmdel and Crawford Hill, New Jersey, 1978-1986
Optical Fibers Patent Coupled Modes with Random Propagation Constants, by Iris Mack and Harrison Rowe, Radio *Science Journal*, 16(4), 485-493, July-August 1981.
AT&T Graduate Research Fellow One of six AT&T Fellows selected annually nationwide for full financial support to complete doctoral studies. Worked at AT&T Bell Labs while completing my Masters degree at the University of California and my doctoral studies at Harvard University.

CONSULTING AND RESEARCH ENGAGEMENTS

Select clients in applied mathematics, science and engineering segments:

Downtown Miami Charter School (Miami, Florida), Coach for Mathematics Instructors.

Hillel Academy (Miami, Florida), Coach and Instructor in Calculus, Statistics, Finance.

Lockheed Martin Energy Systems (Oak Ridge National Labs), Technology Transfer for Epileptic Seizure/Alertness Detection Devices. Documented findings in a white paper - listed in the Appendix.

Sandia National Labs (Livermore, CA), Harvard Graduate Research Fellow. Held security clearance for this position.

Woodshole Oceanographic Research Institute (Rota, Spain and Woodshole, MA) Developed computer models of Atlantic Ocean topography.

NASA - Jet Propulsion Labs (Pasadena, CA), Mars Viking program. Michoud Operations (New Orleans), Summer Engineering Internship. Held security clearance for these positions.

IBM (Poughkeepsie, NY), Computer programming for automated testing of silicone wafers.

Select clients in derivatives, financial engineering and insurance segments:

Bank Indonesia, Conducted training programs in Risk Management and Trading Simulations.

Virginia Department of Education, Subject Matter Expert for an online Financial Literacy Program.

Krisken Management (Geneva, Switzerland), Derivatives Consulting.

Nercha Corporation (Nassau, Bahamas), Derivatives Proprietary Trading Consulting.

Finance Concepts (New York, Paris) http://www.finance-concepts.com/images/fc/catalogue2010.pdf

Salomon Brothers, Inc. (New York), Faculty Research Associate - Derivatives Research.

Charles Schwab, Inc. (San Francisco), Options Trading Consultant.

Harvard Management Company (Boston), Financial Engineer – Derivatives Trading.

Dealcomposer.com (Seoul, South Korea and Silicon Valley), Derivatives products development.

Motorola Corporation (Schaumberg, IL), Grant for Real Options Applied to Technology Investments.

State Farm Insurance Company (Bloomington, IN), Actuarial ratemaking and applied forecasting.

PUBLICATIONS FOR DR. IRIS MACK

Amazon Author Pages

https://www.amazon.com/Dr.-Iris-Marie-Mack-PhD/e/B00OWKVMYC/ref=ntt_dp_epwbk_0
https://www.amazon.co.uk/Dr.-Iris-Marie-Mack-PhD/e/B00OWKVMYC/ref=ntt_dp_epwbk_0

Licensing Agreement with the *Global Association of Risk Professionals* (GARP)

Chapters of Dr. Mack's *Energy Trading and Risk Management* (ETRM) textbook has been licensed by GARP for their *Energy Risk Professional* (ERP) program: https://www.garp.org/#!/erp/study-modules

Part I contains Chapter 3 from Dr. Mack's ETRM book
Part II contains Chapters 4, 6 and 9 from Dr. Mack's ETRM book

Book Publications, Patents and Licensing Agreements

Energy Trading and Risk Management: A Practical Approach to Hedging, Trading and Portfolio Diversification, Wiley Finance Book, ISBN 978-1118339336 http://amzn.to/1IMQdS0

The Credit Card Time Bomb: Deadly Plastic Weapons of Mass Destruction in the USA, UK, Australia and China, Createspace, ISBN-10: 9781720703372, https://amzn.to/2EVftzk

U. S. Debt: $800,000+ per Family? Trillions? Quadrillions?, Createspace, ISBN-10: 1973722216 https://amzn.to/2OsOVbC

Stock Markets The Big Easy Way: How the Federal Reserve Bank "Creates" Money, KDP Amazon, ASIN B07LD53X3B, https://amzn.to/2ExtBOa

Wall Street Options Strategy: Everyone can learn Covered Calls (Chinese Edition), Createspace, ISBN-10: 1981214690, http://amzn.to/2jH0pHx

RESCATE DE WALL STREET PARA MAiN STREET: La Estrategia Blindada Que Será Bien Pagada (Spanish Edition), Createspace, ISBN-10: 1546875808, http://amzn.to/2zYKDCG

A Wall Street Bailout for Main Street: This Bulletproof Trade Will Help You Get Paid, Createspace, ISBN-10: 1541024613 http://amzn.to/2kxfwXk

College Cash Magnet: How Darrin Francois Mastered the U.S. College Admission Process, Got Accepted Into 91 Colleges and Won Millions of Dollars in Scholarships and Financial Aid, Createspace, ISBN-10: 9781724685353, https://amzn.to/2ELXStf

Mama says, "Money Doesn't Grow on Trees!", http://amzn.to/1XL6m6P

Mama says, "Money Doesn't Grow on Trees!": World of Dr. Mackamatix Mathematics Edutainment Book, http://amzn.to/1ONtwBP

AT&T Bell Labs Patent

Mack, Iris and Harrison Rowe. 1981. "Coupled Modes with Random Propagation Constants." Radio Science Journal, 16(4), 485-493, July-August 1981. (Research conducted for an AT&T Bell Labs Patent) http://bit.ly/1SGigrX

Thesis Publications

London Business School Masters Thesis - *Day-Ahead Lunch-Time Electricity Demand Forecasting: Applications to Electricity and Weather Derivatives*

Harvard University Doctoral Dissertation - *Block Implicit One-Step Methods for Solving Smooth and Discontinuous Systems of Differential/Algebraic Equations: Applications to Transient Stability of Electrical Power Systems*, Harvard University Press.

Vassar College Mathematical Physics College Thesis - *Numerical Solutions to the Many Body Problems.*

White Papers

Wind Energy and Negative Pricing Research Project – Amsterdam, Netherlands (Chapter 9 in book ISBN 978-1118339336 and to be submitted for journal publication.) http://amzn.to/1IMQdS0

Hydro Energy and Behavioral Finance Research Project – Tacoma, Washington (Chapter 10 in book ISBN 978-1118339336 and to be submitted for journal publication.) http://amzn.to/1IMQdS0

Convergence analysis of block implicit one-step methods for solving differential/algebraic equations, ISBN 978-1175753960 (MIT white paper) http://amzn.to/1HOajk6

Generalized Picard-Lindelof theory, ISBN 978-1178750638 (MIT white paper) http://amzn.to/1QnRBAX

Publications in the *International Business Times*, UK Edition

International Business Times – UK Edition, Finance and Business Articles, http://bit.ly/2rIgWRu