

Timothy Falcon Crack

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Work Address:

Department of Accountancy and Finance, University of Otago,
PO Box 56, Dunedin 9054, NEW ZEALAND.

Citizenship: United Kingdom and New Zealand

EDUCATION/QUALIFICATIONS:

- **IMC** (Investment Management Certificate), Financial Services Authority (FSA) Version. November **2001**. Administered by The UK Society of Investment Professionals (UKSIP); now called "The CFA Society of the UK" (CFA-UK):
For details, see <https://secure.cfauk.org/qualifications/imc-exam.html/>
- **IMRO-Registered** (Investment Management Regulatory Organization) and **FSA-Approved** Person at **Barclays Global Investors** London **2001**-October **2003**.
- **PhD** (Financial Economics), **MIT**, Sloan School of Management, **1996**.
Doctoral Thesis: Three Essays on Market Microstructure.
Committee: Paul Asquith (chair), Stewart Myers, Kevin Rock, Jushan Bai.
- One semester cross-registered at **Harvard Business School**, Fall **1992** (taking **PhD class** "Finance Theory in Continuous Time 4255" with Robert C. Merton as part of two-year coursework program at MIT).
- **MCom** [two-year program of commerce courses plus thesis] (Finance), **Otago University**, NZ, **1993**.
- **PGDipCom** [two-year program of commerce courses plus written research reports] (Accounting), **Otago University**, NZ, **1990**.
- **Certificate of Proficiency** (Commerce-Accounting), **Otago University**, NZ, **1988-1989**.
- **BSc HONS 1st Class** [a four-year advanced bachelors degree] (Mathematics, with Statistics up to the third year level), **Otago University**, NZ, **1986**.

RESEARCH INTERESTS:

Empirical Capital Markets, Trading Strategies, Market Microstructure, Portfolio Theory, Derivatives, Econometrics, Fixed Income Theory.

As of July 1, 2015: With over 26,950 downloads, I appear to be the highest ranked researcher in the social sciences in New Zealand based on ranking of all time total number of downloads of my papers on the Social Sciences Research Network (SSRN). I also appear to be top when ranked on new downloads over the last 365 days.

(http://www.ssrn.com/institutes/top_authors_transfer_files/top_authors_transfer_files.html).

Compared with US Finance PhD graduates, I am highly rated (92nd percentile) for quality publications. I have 10 papers in the top 19 journals ranked by Zivney and Bertin, "Publish or Perish," J of Finance, 47(1), 1992. Table III of their paper allows me to compare myself to my peers: 19 years out from my PhD (mid-2015), only 18 out of 232 PhDs have done this placing me at the 92%ile by this measure.

PUBLICATIONS/FORTHCOMING:

Papers in Refereed Journals [incl. ABDC.edu.au journal ranking A*, A, B, C, N/A, and Aston Business School 2009 ranking 4*, 3*, 2*, 1*, N/A]:

1. [A, N/A] “Price and Earnings Momentum, Transaction Costs, and an Innovative Practitioner Technique,” Forthcoming in *International Review of Finance* (with Reza Tajaddini and Helen Roberts), **2015**.
2. [B, 1*] “Credit Cards, Excess Debt, and the Time Value of Money,” Forthcoming in *Journal of Financial Education* (with Helen Roberts). [Vol. 41 No. 1/2 (Spring/Summer) **2015**]
3. [B, 3*] “Credit Card Balances and Repayment under Competing Minimum Payment Regimes,” Forthcoming in *Review of Quantitative Finance and Accounting*, **2014**, (with Helen Roberts). <http://link.springer.com/article/10.1007/s11156-014-0455-3>
4. [A, N/A] “Characterizing Limit Order Prices,” *Physica A: Statistical Mechanics and its Applications*, **2013**, Vol. 392 No. 21, (November), pp5346–5355 (with Rasika M. Withanawasam and Peter A. Whigham). <http://dx.doi.org/10.1016/j.physa.2013.06.060>
5. [N/A, N/A] “Characterising Trader Manipulation in a Limit-Order Driven Market,” *Mathematics and Computers in Simulation* **2013** Vol. 93 (July), pp43-52 (with Rasika M. Withanawasam and Peter A. Whigham). Available online October 8, 2012 <http://dx.doi.org/10.1016/j.matcom.2012.09.012>
6. [A, 4*] “Do Momentum-Based Trading Strategies Work in Emerging Currency Markets?” *Journal of International Financial Markets, Institutions and Money* **2012**, Vol. 22 No. 3, pp521–537 (with Reza Tajaddini).
7. [C, N/A] “Growth Beats Value on the Bombay Stock Exchange” *Finance India* (June) **2012** (Vol XXVI, No 2) pp421–438 (with Satneet Sabharwal). [Note: Lead article in the journal.]
8. [A, 2*] “Price Momentum in the New Zealand Stock Market: A Proper Accounting for Transactions Costs and Risk” *Accounting and Finance* **2010**, Vol. 50 no. 4 (December), pp941–965 (with Sam Trethewey).
9. [B, 1*] “Using Central Limit Theorems for Dependent Data” *Journal of Financial Education* **2010**, vol. 36 no. 1/2 Spring/Summer, pp38–60 (with Olivier Ledoit).
10. [A, 3*] “Valuing Real Options using Implied Binomial Trees and Commodity Futures Options” *Journal of Futures Markets*, (March) **2007**, vol. 27 no. 3, pp203–226 (with Tom Arnold and Adam Schwartz).
11. [B, 1*] “Implied Binomial Trees in Excel without VBA” *The Journal of Financial Education*, (Fall) **2006**, 32(3) 37–54 (with Tom Arnold and Adam Schwartz).

12. [N/A,N/A] “The Academic Job Market in Finance: A Rookie’s Guide” *Invited Paper* for Special Edition of *Financial Decisions*, Vol. 17, No. 2, (September) **2005** (with Alex Butler).
13. [A*,N/A] “The Information Content of Short Interest: A Natural Experiment” *Journal of Business*, Vol. 78, No. 4, (July) **2005**, pp1307-1335 (with Alex Butler, Tom Arnold, and Yan Zhang).
14. [A,4*] “Using the WACC to Value Real Options” *The Financial Analysts Journal*. (Nov/Dec) **2004**. Vol.60, No. 6; pp78–82 (with Tom Arnold).
15. [A*,N/A] “Impact: What Influences Finance Research?” *Journal of Business*, Vol. 76 No. 2, (April) **2003**, pp343-361 (with Alex Butler, Tom Arnold, and Ayca Altintig).
16. [C,N/A] “Common Misunderstandings Concerning Duration and Convexity” *Journal of Applied Finance*, Vol. 11, No. 1, (October), **2001**, pp82–92 (with Sanjay K. Nawalkha).
17. [A,4*] “Interest Rate Sensitivities of Bond Risk Measures” *The Financial Analysts Journal*, Vol. 56 No. 1, (Jan/Feb) **2000**, pp34–43 (with Sanjay K. Nawalkha).
18. [B,1*] “A Classic Case of Data Snooping for Classroom Discussion” *The Journal of Financial Education*, Vol. 25 (Fall) **1999**, pp92–97.
19. [A*,4*] “Robust Structure without Predictability: The ‘Compass Rose’ Pattern of the Stock Market” *Journal of Finance*, Vol. 51 No. 2, (June) **1996**, pp751–762 (with Olivier Ledit).

Sole-Authored Finance Books

1. *Foundations for Scientific Investing: Capital Markets Intuition and Critical Thinking Skills*, (see www.amazon.com). Revised 4th Edition, September **2015**, ISBN: 978-0-9941182-2-6 (paperback).
2. *Foundations for Scientific Investing: Multiple-Choice, Short-Answer, and Long-Answer Test Questions*, (see www.amazon.com). Revised 2nd Edition, September **2015**, ISBN: 978-0-9941182-4-0. Also available in eBook: ISBN: 978-0-9941182-6-4 (not out yet).
3. *Heard on the Street: Quantitative Questions from Wall Street Job Interviews* (MBA guide book with 50,000+ copies sold in 25+ countries). Revised 16th Edition, September **2015** ISBN: 978-0-9941182-5-7 (see www.amazon.com). *E-book version of “Heard on the Street: Quantitative Questions from Wall Street Job Interviews”* 14th Edition, (July **2013**) (www.investmentbankingjobinterviews.com).
4. *Pocket Heard on The Street: Quantitative Questions from Finance Job Interviews*, (see www.amazon.com), January **2014** ISBN: 978-0-9941038-1-9.
5. *Pocket Heard on The Street: Brain Teasers, Thinking Questions, and Non-Quantitative Questions from Finance Job Interviews*, (see www.amazon.com), January **2014** ISBN: 978-0-9941038-2-6.

6. ***Basic Black-Scholes: Option Pricing and Trading***, (see www.amazon.com). Revised 3rd Edition August **2014** ISBN: 978-0-9941038-5-7.

Book Chapters, Book Contributions, and other Contributions:

1. The Academic Job Market in Finance: An Updated Rookie's Guide **2012** is on SSRN.com and it is the **only paper that the FMA placed a direct link to on their placement webpage**: (<http://www.fma.org/Placement/2012/OpeningPage2012.htm>). The same is true again in **2013, 2014, and 2015**: <http://www.fma.org/Placement/2015/PlacementLogin.htm>
2. Arnold, Tom, Timothy Falcon Crack, and Adam Schwartz, **2011** "Inferring Risk-Averse Probability Distributions from Options Prices Using Implied Binomial Trees." Chapter 2 (pp35-52) in: G.N. Gregoriou and R. Pascual (Eds.), ***Financial Econometrics Modeling***. Chapman-Hall-CRC/Taylor and Francis: London, UK.
3. Put your Best Foot Forward: A Pre-Submission Checklist for Journal Articles **2011** (with Robin Grieves and Marianne Lown). *Service paper: Now appearing as an unpublished resource on the home page of **Journal of Financial Economics** [A*]*. Download from this site: <http://jfe.rochester.edu/checklist.pdf>
4. Both "The Academic Job Market in Finance: A Rookie's Guide" and "The Academic Job Market in Finance: A Rookie's Guide – 2007 Supplement" (coauthored with Alex Butler) were archived at the Financial Management Association's **FMA Online** web page: in October **2007** <http://www.fma.org/FMAOnline/Archive/JobMarketGuide.pdf> and <http://www.fma.org/FMAOnline/Archive/JobMarketGuide2.pdf>, respectively).
5. I have contributed more than 10% of the questions and answers in the book ***Logic Problems for Money Minds***, published in **2006** by Harriman House in the UK. Second edition, ISBN: 1897597967.
6. Co-author with Sanjay Nawalkha of part of Chapter 2 in the book ***Interest Rate Risk Modeling: The Fixed Income Valuation Course***, April **2005**, published by Wiley and written by Sanjay K. Nawalkha, Gloria M. Soto, Natalia K. Beliaeva.
7. I have contributed Black-Scholes option pricing code for HP17B and HP19B handheld financial calculators that has been reproduced in a British computing journal: Hutchins, Tony, **2003, *Black-Scholes takes over the HP12C***, Handheld and Portable Computer Club DataFile, Vol. 22 No. 3 (June/July), pp13–21.
8. Robust Structure without Predictability: The "Compass Rose" Pattern of the Stock Market, (co-authored with Olivier Ledoit) reprinted in ***Forecasting Financial Markets (The International Library of Critical Writings in Economics, #146)***. Edited by Terence C. Mills, June **2002**, Edward Elgar, UK. A collection of 52 seminal papers from 1934 to 2000. 1248 pages, ISBN 1840644974. We appear as Chapter 26 of Volume 2.

Recent Refereed Conference Submissions:

- **[refereed, PBRF-eligible]** Quantitative active techniques to execute price and earnings momentum strategies (with Reza Tajaddini and Helen Roberts), and Credit card debt and the time value of money, with Helen Roberts. Both presented at New Zealand Finance Colloquium, February 2013 (former by co-author, latter by me). First also presented at Australian Banking and Finance Conference, Sydney, Dec 2012, by co-author.
- **[A ranked refereed, PBRF¹-eligible]** Evolving Trading Strategies for a Limit-order Book Generator, by Peter Whigham, Rasika Withanawasam, Timothy Crack and Inguruwatt Premachandra. **2010 IEEE World Conference on Computational Intelligence,**² Barcelona, Spain, July 18-23. Whigham is lead author and only author attending.
- **[refereed, PBRF-eligible]** “Valuing Real Options Using Implied Binomial Trees and Commodity Futures Options,” appearing in referred conference proceedings of 10th Annual NZ Finance Colloquium, Dunedin, New Zealand, January 26–27, **2006**. ISSN: 1175-8074.

WORK IN PROGRESS AND CURRENT INTERESTS:

Working Papers (complete or nearly so):

- Stock Manipulation in Liquid/Illiquid Stocks, 2015 (with Rasika M. Withanawasam and Peter A. Whigham). *To be resubmitted 2015*.
- Markowitz portfolio mathematics and economics (three papers with Robin Grieves). *Near complete. Two papers to be submitted 2015*.
- Dividend Discount Models, 2015, two papers with Helen Roberts. One paper to be submitted 2015.
- Markowitz and tourism research (with Robin Grieves and David Duval). *Target journal JRS: Dormant work in progress*.
- Real Option Valuation using NPV (with Tom Arnold) (*work in progress*)
- Inferring Risk-Averse Probability Distributions From Option Prices using Implied Binomial Trees (with Tom Arnold and Adam Schwartz). (*work in progress*).
- Pacific Rim FX exposure of US MNCs (with Lifan Zhang). (*Inactive project*)
- The Impact of Stock Price Discreteness on the Estimation of ARCH Models. (*Inactive project*).

Books in Progress:

- A book on capital budgeting/financial management for undergraduates. Based on teaching introductory undergraduate corporate finance. Aiming for completion Christmas 2015.

Cited Unpublished Papers:

- Tinkering with Ticks: Choosing Minimum Price Variation for US Equity Markets. *Inactive project*.

¹ **PBRF** is a New Zealand research ranking exercise. I was ranked an “A” in the 2006 PBRF exercise. An “A” rating is the highest possible and means “highly original or innovative research that ranks with the best of its kind in the world and is esteemed by the international academic community” (quote from Hattie, 2004). I was ranked a “B” in the 2012 exercise (after spending half the six-year period with a heavy administrative burden).

² Click on first link here for conference ranking: <http://core.edu.au/index.php/categories/conference%20rankings/1>

EMPLOYMENT:

- **Otago University**, P.O. Box 56, Dunedin New Zealand. **Professor** (Chaired professor of finance), Department of Accountancy and Finance, April 1, 2004–present (name changed from Department of Finance and Quantitative Analysis Jan 2011). **Head of Department** (HOD) July 1, 2005–Nov 17, 2006. Acting HOD Dec 1, 2006–Feb 5, 2007, Nov 2008-Jan 2009, Nov 2009-Feb 2010 and many other short periods. On **sabbatical** for all of 2013. Full time from April 1, 2004 to August 31, 2014. 70% FTE from September 1, 2014 onwards.
- *Taught BSNS101 Intro Finance (two weeks S2 2007 456 students; two weeks S2 2008 436 students; two weeks S2 2009 454 students); BSNS108 Intro Finance (S2 2010 619 students; S2 2011 559 students; S2 2012 476 students); BUSI522 MBA Finance (one class only Sept 8, 2010: option pricing; 24 students); FINC2XX Second Year honours Finance Seminar (S2 2004, 7 students; S2 2005 7 students; S2 2006 8 students; S2 2007 3 students and class met only once), FINC305 International Financial Management, (S2 2004, 121 students), FINC302 Applied Investments, (S1 2005 147 students; S1 2006 165 students; S1 2007 121 students; S1 2008 119 students; S1 2009 107 students; S1 2010 112 students; S1 2011 115 students; S1 2012 130 students, S1 2014 116 students; S1 2015 144 students). FINC460 Real Options (3 Weeks, S1 2007 10 students).*
- **Otago University**, P.O. Box 56, Dunedin New Zealand. **Visiting Scholar**. Department of Finance and Quantitative Analysis, November 2002 to March 31, 2004 (writing my second book, performing academic research, and supervising one MBus student).
- **Barclays Global Investors Limited**, Murray House, 1 Royal Mint Court, London EC3N 4HH, England. January 29, 2001 to October 3, 2003.
 - October 2002 to October 3, 2003. Principal, Equity Research, on **Leave**.³
 - June 2001 to September 2002 inclusive. **Principal, Head of Active Equity Research (UK/Europe)**. Quantitative Active Equity Strategies for UK and Europe. Head of four-person research team.
 - January 2001 to May 2001 inclusive. **Principal, Equity Researcher**. Quantitative Active Equity Strategies for UK and Europe. Member of six-person research team.
- *Barclays Global Investors (BGI) was the largest institutional asset manager in the world. Assets under management were roughly USD750bn in early 2002. My team's research drove the UK and European long-only and long-short hedge fund products (approx USD20bn under management). The UK and European funds outperformed their index benchmarks by approx 350, and 500 bips per annum respectively during my time there. The UK Long-Short Hedge Fund product outperformed three-month LIBID by approximately 500 bips per annum.*
- *At BGI I gained experience with: quantitative active equity strategies (finding sources of alpha, testing strategies to exploit them, and implementing them in a transactions-cost-effective manner); understanding the trade-off between returns, risk, and transactions costs; optimization; cross-sectional stock selection in a market-neutral and industry-neutral context; performance attribution; managerial skills in a multinational corporation; BARRA risk models UK/Europe; Bloomberg terminals; speaking with clients and consultants; interacting with portfolio managers on a daily basis; recruitment.*

³ Leave spent writing second book and performing academic research (including a masters supervision) in London England, Exeter England, Edinburgh Scotland, Ayr Scotland, and Dunedin New Zealand.

- **Indiana University**, Bloomington, IN, USA, **Assistant Professor of Finance**, August 26, 1996–December 31, 2000. *Empirical Finance* (Doctoral course, Spring 1998, Spring 1999, Spring 2000, 3 sections); *Derivatives Pricing* (MBA course, Spring 1999, Spring 2000, 4 sections); *Derivative Securities and Corporate Risk Management*, (Undergraduate course, Fall 1996–Fall 2000, 12 sections); *Nuclear Financial Economics: Advanced Study of Derivatives Pricing, Hedging, Marketing and Risk Management*, (Undergraduate course, Fall 1997, 1 student only).
- *Indiana’s undergraduate finance program was consistently ranked in the top 10 in the US (and usually in the top five) by US News and World Report. The MBA program was consistently ranked at about #20 in the US. There are approximately 750 MBA-granting schools in the US.*
- *My teaching was ranked 5th out of 362, 5th out of 381, and 9th out of 326 for 1997, 1998 and 1999, respectively at the Kelley School of Business at Indiana University (undergraduate ratings, based on average of 8 evaluation questions).*
- **MIT**, Sloan School, Cambridge, MA, USA, **Teaching Assistant in Finance**, 1992–June 1996. *Proseminar in Financial Engineering, Proseminar in Financial Management, Harvard Case Course in Financial Management, Empirical Methods in Finance, Investments, International Financial Management.*
- **Otago University**, Dunedin NZ, **Assistant Lecturer in Finance**, 1990–August 1991. *Investment Analysis and Portfolio Management, Honours Course in Corporate Finance.*
- **Otago University**, Dunedin NZ, **Teaching Fellow in Accounting and Finance**, 1987–1989. *Principles of Corporate Finance, Financial Accounting, Management Accounting and Finance.*
- **Otago University**, Dunedin NZ, **Teaching Assistant**, 1985–1986. *Intermediate Algebra, Calculus, Mathematical Methods, Quantitative Methods, Computational Methods, and Statistics.*

AWARDS AND HONOURS:

- Prize for **Best Paper** in Financial Literacy (Credit Cards, Excess Debt, and the Time Value of Money), Sponsored by the Financial Education and Research Centre at Massey University. New Zealand Finance Colloquium, February 2013.
- **Teaching Award** as one of the “Top Twenty Teachers at Otago University for 2007” (one of only ten in the School of Business to receive the award). Nomination by students; overseen by Otago University Students Association. October 2007. There were 1,145 full time equivalent teaching staff at Otago University in 2007 (Source: 2008 Annual Report of the University). There were approximately 150 full time teaching staff in the School of Business.
- Presented BGI-sponsored best paper awards at EFA Conference, Barcelona, August 2001.
- Southwestern Finance Association, New Orleans, Feb/March 2001 **Distinguished Paper Award** (Noise Reduction: The Case of Short Selling Against the Box).
- Doctoral Student Association PhD **Teaching Award**, Awarded April 2000.
- Nominated for Sauvain Undergraduate Teaching Award, 1999–2000.

- Nominated for University-wide Distinguished Teaching award, Fall 1999.
- Nominated for Sauvain Undergraduate Teaching Award, 1998–1999.
- Indiana University **Teaching Excellence** Recognition Award (TERA), 1998–1999.
- Indiana University Alpha Kappa Psi Professional Business Fraternity Undergraduate **Teaching Excellence** Award (Class of 1997). Awarded October 1998.
- Nominated for Sauvain Undergraduate Teaching Award 1997–1998.
- Indiana University **Teaching Excellence** Recognition Award (TERA), 1997–1998 (with highest teaching ratings in 25-member Indiana University Finance Department).
- Indiana University **Teaching Excellence** Recognition Award (TERA), Fall 1996.
- Awarded Full MIT Doctoral **Fellowship** with Stipend, 1992–1995.
- Invited to spend a “day on the floor” at the NYSE, May 24, 1994.
- Trust Bank Otago **Travelling Scholarship** in Commerce, New Zealand, 1991.
- Nominated for Commerce Division Outstanding Teaching Award, Otago University, 1991.
- Awarded/Offered Fulbright **Travel Grant** (I refused because of visa implications), 1991.
- Forsyth Barr Ltd **Prize** in Business Finance, Otago University, 1989.
- Beverly Senior **Scholarship** in Mathematics, Otago University, 1985.
- Gopi Jain Memorial **Prize** in Statistics, Otago University, 1985.
- R.J.T. Bell **Prize** in Mathematics, Otago University, 1984.
- BNZ Senior Math. Competition (Canterbury Math. Assoc.), 6th placing in New Zealand, 1982.
- Australian Mathematics Competition, Senior Division, Certificate of Distinction, 1982.
- Dux/Valedictorian, King High School (550 students), Dunedin New Zealand, 1982.

RESEARCH GRANTS

- December 2004. NZD 5,000 contestable research grant from Otago Dept. of Finance and Quantitative Analysis (jointly with David Alexander and Andreas Penckwitt) to set up parallel computer cluster.

ACADEMIC PRESENTATIONS (SELECTED):

- “Credit Cards, Excess Debt, and the Time Value of Money,” New Zealand Finance Colloquium, February 2013.
- “Portfolio Theory for Optimal Market Mix in Tourism” Otago Univ., March 16, 2009.
- “Valuing Real Options Using Implied Binomial Trees and Commodity Futures Options,” 10th Annual New Zealand Finance Colloquium, Dunedin, New Zealand, January 26–27, 2006.
- Presenter, “Fire and Forget” Research Publications seminar, Otago Univ., August 11, 2005.
- “Implied Binomial Trees” to FINC409 (Advanced Derivatives) May 5, and May 12, 2005.
- Presenter, “What I did with my Math Degree” Otago Univ. Department of Math and Stats, course MATH160 special guest presenter: May 17, 2004, July 27, 2005, July 18, 2006.
- Presenter: "A Practical Guide to GMM with Applications to Option Pricing," FMA meetings, October 26, 2000, Seattle, WA.
- Presenter: Six Lectures on the Mathematics of Advanced Financial Derivatives Pricing, Indiana University Mathematics Department Math/Finance Seminar, Oct 13, 1999–Nov 16, 1999.
- Discussant: Wayne Ferson and Cam Harvey's "Conditioning Variables and the Cross Section of Stock Returns," AFA Conference, New York, January 03, 1999.
- Co-Presenter Brown-Bag Lunch Seminar: "An Investigation of Strike Price Bias," (with Tom Arnold), Indiana University December 11, 1998.

- Presenter: "Why Use Barrier Options?" Indiana University Mathematics Department Math/Finance Seminar, November 11, 1998.
- Co-Presenter Brown-Bag Lunch Seminar: "Does Peakedness Matter?" (with Tom Arnold), Indiana University September 04, 1998.
- Special guest speaker at panel discussion on "Publishing as a Doctoral Student" at Indiana University—October 1997.
- Discussant: Oliver Hansch's "Cross-listing Effects: Evidence from the Time Series Behavior of Dealer Inventories" at Indiana University's fifth biennial symposium (Implications of Market Microstructure for Investors, Firms, and Markets)—August 1997.
- Presenter: "The Impact of Stock Price Discreteness on the Estimation of ARCH Models," MIT, Dartmouth, Indiana University, University of Washington (Seattle), The Ohio State University, University of Illinois (Urbana-Champaign)—all from Jan to Mar 1996.
- *Coauthor* Tom Arnold presented Generalized Option Pricing Paper (Now called Pricing Real Options in the Real World) at University of Georgia (Feb 2000) and SWFA San Antonio TX March 17, 2000.

SELECTED MEMBERSHIPS, CONFERENCE AND OTHER ACTIVITIES:

- Member: AFA, AFAANZ
- Attended NBER seminars in Cambridge MA, 1992–1996
- Attended AFA Conference, Boston, January 1994
- Attended AFA Conference, San Francisco, January 1996
- Attended Indiana University's fifth biennial symposium (Implications of Market Microstructure for Investors, Firms, and Markets) Bloomington, August 1997.
- Attended FMA Conference, Chicago, October 1998.
- Constructed multiple sessions and chose chair and discussants for October 1998 FMA meetings.
- Attended AFA Conference, New York, January 1999.
- Attended AFA Conference, Boston, January 2000.
- Attended FMA Conference, Seattle, October 2000.
- Attended EFA Conference, Barcelona, Spain, August 22-25, 2001.
- Attended SIRIF Behavioral Finance Conference, Edinburgh, Scotland, Sept 3-4, 2001.
- Attended 10th Annual New Zealand Finance Colloquium, Dunedin, New Zealand, January 26–27, 2006.
- Attended Finance Seminar at UC Davis (Davis California) April 2006 (Expecting to be Surprised: An Analysis of Price Responses to Earnings Announcements by Ellis and Gebhardt).
- Attended 17th Annual New Zealand Finance Colloquium, Dunedin, New Zealand, February 7–8, 2013.

COMMITTEES AND OTHER SERVICE:

- Chair of Research Committee, Dept Accountancy and Finance, Otago University, Jan 1, 2015-
- Member of School of Business Research Committee, Otago University, Jan 1, 2015-

- Presented or co-presented an introductory talk on Finance at the Tertiary Open Day at Otago Museum, April 7, 2007, May 6, 2008, May 3, 2010, May 4, 2011, April 30, 2012, May 12, 2014. Approximately 80–250 high school students in attendance.
- Interviewed Deutsche Bank Financial Markets Scholarship candidates alongside Deutsche Bank Investment Banking representatives each year 2004–2014. Interviewed independently in 2015.
- Served as an external referee on a promotion case (to associate professor) at another NZ University, July 2014.
- Served as an external referee on a tenure/promotion case (assistant to associate professor) at a good US school. September 2007.
- Head of Department, Otago Univ. Dept Finance and Quant. Analysis, July 1, 2005–Nov 17, 2006. Acting HOD S2, 2004, S1, 2005, Dec 1, 2006–Feb 5, 2007, and at other times also (totaling over three years service as HOD).
- Director of Student Research, Otago Univ. Dept Finance and Quant. Analysis (now Department of Accountancy and Finance), July 1, 2005–Present.
- Head of Policy Committee, Otago Univ. Dept Finance and Quant. Analysis, Semester 2 2005
- Ex-Officio Member of Senate, Otago University, July 1, 2005–Dec 31, 2009.
- Member of School of Business Divisional Postgraduate Advisors Committee, Semester 1 2005, Semester 2, 2005.
- Sponsoring (with my research funds) part of the cost of the Finance and Quantitative Analysis “Research Cluster” (a new parallel computing cluster being established at Otago). My current role is limited to financial support and common sense advice. I will be a user once it is operational.
- Recruitment and Admissions Committee, Otago Univ. Dept Finance and Quant. Analysis, Semester 2 2004, Semester 1 2005, Semester 2 2005.
- Acting HOD, Otago Univ. Dept Finance and Quant. Analysis, on occasion during Semester 2 2004 and Semester 1, 2005.
- Kelley School of Business Undergraduate Policy Committee—Fall 1999, Spring 2000, Fall 2000.
- Kelley School of Business Undergraduate Policy Committee Career Education Subcommittee Spring 2000.
- Indiana University Finance Undergraduate Committee—Fall 1996, Spring 1997, Fall 1998, Spring 1999, Fall 1999, Spring 2000, Fall 2000.
- Indiana University Finance Doctoral Committee—Fall 1997, Spring 1997, Spring 1998, Fall 1998, Spring 1999, Fall 1999, Spring 2000, Fall 2000.
- Met with Recruiters at IU Spring 1999, Fall 1999.
- Interviewed prospective Finance Department hires at AFA conference, New York January 1999.
- Interviewed prospective undergraduate Investment Banking students, December 1998.
- Interviewed prospective Finance Department hires at FMA conference, Chicago October 1998.
- Interviewed prospective Finance PhD students—Spring 1998.
- Volunteered to create and teach "Nuclear Financial Economics: Advanced Study of Derivatives Pricing, Hedging, Marketing and Risk Management" for Individualized Major Students with math/finance degrees—Fall 1997.
- Member of Finance Dept Subcommittee to evaluate feasibility of a Math-Finance program at Indiana University (Fall 1999).
- Active participant in Math Department Math-Finance seminar series, Spring 1998, Fall 1999.

- Participated in the Meeting on Trading Room Technology – Indiana University May 1998.
- Substantial advising of undergraduate students seeking Investment Banking Jobs at Indiana.
- Organized meeting between undergraduate Investment banking students and investment bankers from HLHZ (Sept 22, 1999; Sept 27, 2000). Met with recruiter from Bear Sterns (Oct 17, 1999; Oct 16, 2000). Met recruiters from Lehman Brothers (November, 1999).

THESIS ADVISING/EXAMINING:

- **2015:** PhD thesis co-supervisor for PhD student Hamed Peyhani at Otago University. Tentative thesis topic: Stock Market Manipulation. Primary supervisor is Peter Whigham (60%); I am co-supervisor (40%).
- **2015:** PhD thesis co-supervisor for PhD student Fang (Livvy) Zhen. Topic: Forecasting moments of stock returns.
- **2015:** Internal Examiner for one MCom thesis.
- **2014:** Internal Examiner for two MBus and one MCom theses.
- **2010-2013:** PhD thesis co-supervisor for PhD student Rasika Withanawasam at Otago University. Thesis topic: Market Microstructure and Stock Market Manipulation. Primary supervisor is Peter Whigham (60%); I was co-supervisor (40%). Student completed May 2013.
- **2010-2013:** PhD thesis primary supervisor for PhD student Reza Tajaddini at Otago University (80%). Helen Roberts is co-supervising (20%). Thesis topic: Technical Analysis and FX Currency Trading (and related topics). Student submitted June 28 2013.
- **2013:** External examiner for one PhD thesis from Lincoln University in New Zealand.
- **2012:** Internal examiner on one MBus thesis from Otago.
- **2012/2013:** Co-Supervised MBus student Daniel Bode with Helen Roberts (and Hai Lin). Topic is momentum trading strategies in NZ.
- **2010-2013:** Supervised MCom student: Worik Stanton (Technical Analysis and Data Snooping).
- **2011:** Co-Supervised MBus student Kerry Newnham with Helen Roberts. Topic: Liquidity premium in NZ stock returns.
- **2011:** Internal examiner for three MBus theses.
- **2010:** Supervised MCom of Yi Zhang (Real Option Theory for Project Evaluation under Uncertainty). Took over from David Alexander who left Otago.
- Internal Thesis Examiner: Mengjia Mo's Otago MCom Thesis on Arithmetic Brownian Motion and Option Pricing. Mid-**2007**.
- Internal Thesis examiner: Helen Roberts' Otago PhD Thesis on Executive Compensation and Corporate Governance. Early **2007**.
- Master's thesis advisor for MBus student Chris Croft, Late **2007**. Thesis topic: Feasibility of Domestic and Cross-Border Portable Alpha Strategies in NZ.
- Master's thesis advisor for MBus student Kelvin McKeown, Late **2006**. Thesis topic: Dividend Policy in the US versus NZ.
- Master's thesis advisor for MBus student Satneet Sabharwal at Otago University. Thesis topic: Value and Growth strategies in India. Late 2004-Jan 31, **2005**.
- Master's thesis advisor for MBus student Lifan Zhang at Otago University. Thesis topic: Pacific Rim FX exposure of US MNCs. September 2003-May, **2004**.
- Sponsor and thesis advisor for IU Individualized Major Program (IMP) undergraduate student Devesh Shah in his "Financial Mathematics" degree, Spring **1997**. Thesis title: Overview of Specialness in the US Government Bond Repurchase Market.

- Sponsor and thesis advisor for IU IMP undergraduate student Reed Schwandt in his "Financial Mathematics" degree, Fall **1997**, Spring **1998**. Thesis title: Program Trading and Derivative Strategies in the Equity Markets
- Senior Thesis Adviser for IU undergraduate finance major Joshua Leavitt. Thesis topic: Initial Public Offerings: A Brief Study of Performance—Fall **1997**/Spring **1998**
- Senior Thesis Adviser for IU undergraduate finance major Matthew Tuchband. Thesis topic: The Effects of the Transition to the EURO on International Organizations and their Foreign Currency Risk Management Strategies—Fall **1997**/Spring **1998**.
- Supervised IU PhD Finance Student Miikka Tauren. Thesis Title: The Pricing of Credit Risk: Theory and Evidence (committee member). **1999**.
- Supervised IU PhD Finance Student Craig Wisen. Thesis Title: The Bias Associated with New Mutual Fund Returns, Spring **2002** (co-supervisor).
- Supervised IU PhD Economics Student Jeff Gerlach. Thesis: Derivatives and Emerging Market Debt/Information, Institutions and Asset Returns, October **2001** (committee member).
- Constituent Member, Andrew Waisburd's IU PhD committee, March **2000**. Essays in Financial Market Automation.

REFEREE WORK:

- *The Journal of Finance*.
- *The Journal of Business*.
- *Journal of Futures Markets*.
- *Financial Analysts Journal*
- *Quantitative Finance*
- *Pacific-Basin Finance Journal*.
- *Accounting and Finance*
- *Modern Physics Letters B*
- *International Journal of Theoretical and Applied Finance*.
- *Studies in Nonlinear Dynamics & Econometrics*.
- Indiana University's fifth biennial symposium (Implications of Market Microstructure for Investors, Firms, and Markets)—August 1997.
- FMA conference—Chicago, October 1998.
- Indiana University's sixth biennial symposium (Crisis Events in Financial Intermediation and Securities Markets)—February 2000.

CONSULTING:

- Independent consultant to New York Stock Exchange, Summer (May–July) 1994
- Ex gratia consulting at request of New Zealand Commerce Commission investigator twice during 2011.

OTHER ACTIVITIES:

- Internet-Based Small Business. Book author and publisher. 1995–present. Sold over 60,000 copies of sole-authored finance books. Also authored a health science book and a children's book.
- Graphic artist: supplied an illustration for "Investments: A Global Perspective," co-authored by Jack Clark Francis and Roger Ibbotson, Prentice-Hall, 2002, ISBN 0138907404 (see page 459 for acknowledgement to my contribution).
- Some formulae from my Basic-Black Scholes book appear in Espen Gaarder Haug's "Option Pricing Formulas" (2007).

- Edited draft copy of half of Chi-fu Huang's book “Theory of Financial Markets”— MIT May 1993.

COMPUTING & TECHNICAL SKILLS:

Rated on a scale of 1 (very rusty), 3 (regular user), 5 (expert);

- UNIX (2), DOS (2), WINDOWS (3).
- Excel (4), Word (4), LATEX/TEX (4), PPT (3), Outlook (3), HTML source code (3).
- SAS (2), MATLAB (4), FORTRAN (2), C (1), MATLAB MEX Files (2).
- Adobe PageMaker (2), Adobe Photo Shop (2), Adobe Acrobat (incl. Adobe Distiller and Adobe Exchange) (4).
- BLOOMBERG (3), FACTSET (1), BARRA Risk Models (1-2), IBES (1), CRSP (2).
- Hewlett Packard HP17B/HP19B Equation Solver Code (4).
- E-book creation using MikTex (4), Adobe software (3)
- BlackBoard (3).
- **Training Courses:**
 - Workshop on HODs managing people, HEDC, NZ, August 28, 2006.
 - Leadership Development Program with Dr. John Adams six hours September, 2005, NZ.
 - Introduction to “BlackBoard” (for electronic communication of university courses), NZ, April 19, 2004.
 - SAS Macros Course, Marlow, UK. March 1-2, 2001.
 - UKSIP, Current Developments in UK Financial Reporting, London, UK. May 22, 2001.
 - BARRA Risk Model decomposition. London, UK. August 7, 2002.
- Occasional small trader in US equity, US equity options, US equity index ETFs and commodity ETFs markets.

FOREIGN EXPERIENCE:

- New Zealand, to August 1991, and again from November 2002.
- United States, August 1991-December 2000, plus multiple other trips there.
- United Kingdom, December 2000-November 2002, plus multiple other trips there (e.g., 2013, twice in 2014).
- Plus: multiple trips to France (total of three months in mid 1990s; once in 2014), two months living in Scotland, short trip to Spain.

END