

THE UNIVERSITY OF BRITISH COLUMBIA
Curriculum Vitae for Faculty Members

Date: April 16, 2021

Initials: FG

1. SURNAME: Granot FIRST NAME: Frieda
MIDDLE NAME(S):
2. DEPARTMENT/SCHOOL: Sauder School of Business
3. FACULTY: Commerce and Business Administration
4. PRESENT RANK: Professor SINCE: 1984
5. **POST-SECONDARY EDUCATION**

University or Institution	Degree	Subject Area	Dates
Dalhousie University, Halifax, Nova Scotia	Postdoc Fellow	Mathematics	May 1975.
The University of Texas at Austin, Austin, Texas	Ph.D.	Interdisciplinary, Business, Mathematics, and Computer-Science	May 1974.
Technion-Israel, Institute of Technology, Haifa, Israel	MSc	Computer-Science (with distinction)	March 1971
Technion-Israel, Institute of Technology, Haifa, Israel	BSc	Mathematics (Cum laude; first in the class)	May 1969

Special Professional Qualifications

Institute for Corporate Directors ICD.D

6. **EMPLOYMENT RECORD**

(a) *Prior to coming to UBC*

University, Company or Organization	Rank or Title	Dates
Centre for Research Mathematics, University of Montreal	Summer Research Fellow	May 1975 - Aug. 1975
Department of Mathematics, Dalhousie University	Postdoctoral Fellow	May 1974 -May 1975
Centre for Cybernetic Studies, University of Texas at Austin	Research Associate	Sept. 1972 - May 1974:
Technion-Israel Institute of Technology, Departments of Mathematics and Computer Science	Teaching Assistant	1969-1972:

(b) At UBC

Rank or Title	Dates
Advisory Council Professor of Management Science,	July 1, 1986
Professor	July 1, 1984
Associate Professor	July 1, 1978
Assistant Professor	July 1, 1976

(c) Date of granting of tenure at U.B.C.:

July 1, 1981

7. **LEAVES OF ABSENCE**

University, Company or Organization at which Leave was taken	Type of Leave	Dates
Stanford University, Visiting Professor NYU, Visiting Professor Berkeley University, Visiting Professor	Admin leave	Jan 1-2012- April 30, 2012 May1- Sep 1, 2012, Jan 25- June 1, 2013
Hebrew University, Jerusalem	Sabbatical leave	July 1, 1987 - June 30, 1988:
at Tel-Aviv University	Sabbatical leave	January 1, 1984 - July 31, 1984:
Stanford University	Sabbatical leave	September 1, 1981 - August 31, 1982:

8. **TEACHING**

(a) Areas of special interest and accomplishments

Negotiations, Network optimization, Combinatorial optimization, Game theory, Qualitative Analysis, Production Planning.

(b) Courses Taught at UBC

Taught graduate, M.B.A., and undergraduate courses in:

1. Negotiation,
2. Mathematical Programming;
3. Algorithms for Optimization;
4. Quantitative Methods;

5. Business Applications of Calculus;
6. Networks and Transportation;
7. Integer Programming;
8. Decision Analysis.

(c) *Graduate Students Supervised*

THESES SUPERVISED AND THESIS COMMITTEES

- Ph.D.**
- Vera Zeidan (Mathematics, U.B.C., on committee)
 - Nancy Jacquemin (Operations Research, Stanford University, on committee)
 - E.U. Choo (Commerce, U.B.C., on committee)
 - Art Warburton (Commerce, U.B.C., on committee)
 - Steve Wan (Operations Research, Stanford University, on committee)
 - Patrick Whalen (Management Science, U.B.C., supervisor)
 - Jadranka Skorin-Kapov (Management Science, U.B.C., supervisor)
 - Mehran Hojati (Management Science, U.B.C., on committee)
 - Darko Skorin-Kapov (Management Science, U.B.C., on committee)
 - Antoine Gautier (Management Science, U.B.C., supervisor)
 - Yao Guang Wang (Management Science, U.B.C., on committee)
 - Yun-sun Nam (Mathematics, U.B.C., on committee)
 - Weiping Zhu (Mathematics, U.B.C., co-supervisor)
 - Li Liu (Management Science, U.B.C., on committee)
 - David Williams (Management Science, U.B.C., on committee)
 - Greys Susic (Management Science, UBC, co-supervisor)
 - Shuya Yin (Sauder School of Business, U.B.C., co-supervisor)
 - Benny Mantin (Sauder School of Business, U.B.C., co-supervisor)
 - Sanjith Gopalakrishnan (Sauder School of Business, U.B.C., co-supervisor)
- MSc**
- Eldon Gunn (Mathematics, Dalhousie University, supervisor)
 - Willem Vaessen (Computer Science, U.B.C., co-supervisor)
 - Steve Hawkins (Commerce, U.B.C., supervisor)
 - Mac Ernest (Commerce, U.B.C., supervisor)

Goh Lak-Oon (Commerce, U.B.C., supervisor)
 Daniel Ghain (Management Science, U.B.C., supervisor)
 Bruce Sinclair (Management Science, U.B.C., supervisor)
 Chen, Qinlu (MMOR Co-supervisor)
 Walker Laura (MMOR Co-supervisor)
 Ziqian Zhu (MMOR Co-supervisor)
 Nina Rajabi Nasab (MMOR Co-supervisor)
 Divya Balla (MMOR Co-supervisor)
 Dipin Goyal (MMOR Co-supervisor)
 Vaishali Nirwan (MMOR Co-supervisor)

Post-Doctoral Fellows

Tal Raviv (Sauder School of Business, U.B.C., 2004-2006)
 Tali Eilam (Commerce & Applied Mathematics, U.B.C., 1997-1999)
 Harry Zheng (Commerce, U.B.C., 1993-1994)
 Michal Penn (Commerce, U.B.C., 1990-1991)

(d) Continuing Education Activities

- Directors' Financial Literacy Program, Institute of Corporate Directors – 2008
- Directors Education Program, Institute for Corporate Directors To complete May 2011

(e) Sample Visiting Lecturer (indicate university/organization and dates)

- January 26, 2013, Stanford University.
- June 4, 2012, Stanford University
- March - April 1988 - Visiting Professor, Department of Statistics, The Hebrew University, Jerusalem, Israel.
- July - August 1985 and July - August 1986 - Visiting Professor, Department of Operations Research, Stanford University.
- January - July 1984 - Visiting Professor, Department of Statistics, Tel-Aviv University.
- June - August 1983 - Visiting Scholar, Department of Operations Research, Stanford University (on an NSERC Collaboration Research Grant).
- September 1981 - August 1982 - Visiting Associate Professor, Department of Operations Research, Stanford University.
- June-August 1981 - Visiting Scholar, Department of Operations Research, Stanford University (on an NSERC Collaboration Research Grant).
- May-August 1978 and 1979 - Visiting Associate Professor, Department of Operations Research, Stanford University.
- April-May 1977 - Visiting Scholar, I.B.M., T.J. Watson Research Centre, Yorktown Heights, N.Y.
- May-June 1977 - Independent Consultant, I.B.M., T.J. Watson Research Centre, Yorktown Heights, N.Y.
- May-August 1975 – Research Fellow, Centre de Recherches Mathematiques, Montréal.

(f) *Other*

9. SCHOLARLY AND PROFESSIONAL ACTIVITIES

(a) *Areas of special interest and accomplishments*

1. Integer Programming
2. Network Flows
3. Combinatorial Optimization
4. Applications of Operations Research
5. Applications of Game Theory to Cost Allocation
6. Qualitative Analysis

(b) *Research or equivalent grants (indicate under COMP whether grants were obtained competitively (C) or non-competitively (NC))*

Past Research Grants Received PI on all

- UBC/Sauder 2019-2020, \$ 5000
- NSERC Discovery Grant 2018-2023, \$130,000
- NSERC Discovery Grant 20013-2018, \$130,000
- UBC/Sauder 2012-2013, \$ 7730
- UBC/Sauder 2012-2013, \$ 5000
- NSERC Discovery Grant 2007-2010, \$78,600
- NSERC Operating Grant, 2001-2006, \$262,000
- NSERC Operating Grant, 1996-2001, \$220,000
- BAM, Applications of International Cash Management Protocols, 1995-96, \$2,500
- U.B.C. Travel Grant, International Conference on Game Theory and Applications, 1995, \$1,700
- NSERC Operating Grant, 1992-96, \$120,000
- UBC Izak Walton Killam Memorial Senior Fellowship, 1987-88
- SSHRC Leave Fellowship, 1981-82
- NSF Co-Investigator Grant (Stanford University), 1980-86
- NSERC Collaborative Research Grant, 1981 and 1983
- NSERC (or NRC) Operating Grant, annually, since 1976
- U.B.C. HSS Grant, since 1975

(d) *Invited Presentations*

- Sample Invited Lectures and Chairperson to International Meetings
- Invitations over the years to give numerous seminars, chair sessions and present my work in universities, conferences and workshops; examples include:
- ORSIS conference in Shfaim, Israel May 12-15, 2019. (Consistent Allocation of Emission Responsibility in Fossil Fuel Supply Chains)

- The conference on Globalization and entrepreneurship May 19-23, 2019 in Jerusalem. Session chair.
- Euro conference Dublin, June 22 -June 27, 2019. (Consistent Allocation of Emission Responsibility in Fossil Fuel Supply Chains)
- INFORMS annual meeting Seattle, October 20-23, 2019. (Consistent Allocation of Emission Responsibility in Fossil Fuel Supply Chains)
- INFORMS annual meeting Seattle, October 20-23, 2019. (Bike-Sharing Systems: An Analysis of Operational Strategies)
- European Conference on Operational Research, Valencia, Spain., July 2018
- Manufacturing and Service Operations Management Conference, Dallas, United States, July 2018
- International Symposium on Mathematical Programming, Bordeaux, France, May 2018
- INFORMS Annual Conference, Phoenix, United States, November 2018.
- Co-chair sponsored clusters, and panel discussant, INFORMS International conference, Taipei, June 2018
- EURO 2015 Poznan, July 2016.
- 15th International Jerusalem Conference in Canadian Studies, June 2016
- INFORMS Annual Conference Nashville, November 2016.
- Conference in honour of Professors Abraham Neyman and Sergiu Hart, Hebrew University of Jerusalem, June 2015.
- EURO 2015 Glasgow, July 2015.
- INFORMS Annual Conference Philadelphia, November 2015.
- Jerusalem Game theory meeting June 2015
- Mathematical Programming: Amsterdam, 1991; Michigan, 1994; Lausanne, 1997; Atlanta, 2000; Copenhagen, 2003; Rio de Janeiro, 2006;
- MSOM: USC, 2003; Eindhoven, 2004; Haifa 2010
- IFORS meeting in Beijing, 1999; Buenos Aires, 2010

- INFORMS meeting in New Orleans, 1995; Seattle, 1998; Miami, 2001; San Jose, 2002; Atlanta, 2003; Denver, 2004; San Francisco, 2005
- International Conference on Game Theory, Bilboa, Spain, 2000
- International Conference on Game Theory, Valencia, Spain, June 1996
- Summer Institute in Game Theory, Stony Brook, N.Y., July 1994
- IFIP - System Modelling and Optimization, Prague, July 1995
- International Conference on Game Theory and Application, Jerusalem, Israel, June 1995
- Summer Institute in Game Theory, Stony Brook, N.Y. July 1994
- Workshop on Combinatorial Optimization, May 1994, Giens, France
- NETFLOW - Pisa, October 1993
- IPCO3 - Integer Programming and Combinatorial Optimization; ERICE - Sicily, May 1993
- ARIDOSA - Applied Research Institute of Discrete Optimization and Systems Analysis, Rutgers University, June 1992
- IPCO2 - Integer Programming and Combinatorial Optimization, Carnegie Mellon University, May 1992
- International Conference on Game Theory, Stony Brook, July 1992
- ARIDOSA - Applied Research Institute of Discrete Optimization and Systems Analysis, Rutgers University, June 1991
- TIMS XXX Joint International Meeting, Rio de Janeiro, July 1991
- XIV System Engineering, Santiago, Chile - July 1991
- ORSA/TIMS, Anaheim, November 1991

(e) *Other Presentations*

- Moderator: Leadership Lessons, Influential Women in Business, November 23, 2011, Organized by Business in Vancouver.
- Get on Board June 2013-2015, October. Organizes by WXN

(f) *Other*

WXN Leadership Form, December 1, 2011 Toronto

Top 100 Summit and Award Lunch, Vancouver Feb 1, 2012

Board Diversity: The New Face of the Boardroom, October 15,

2012 YWCA Women of Distinction Kickoff Event, November 12,
2012.

Panel Discussant, WXN Women on Board training program : Get on Board,, 2013

(g) *Conference Participation (Organizer, Keynote Speaker, etc.)*

Sample Organizing Committee

- Co-chair, invited sponsored clusters, INFORMS International meeting, Taipei, June 2018
- Cluster Program Co-Chair, INFORMS meeting, Seattle, November 2007
- Chair, Universitas 21 meeting of Deans of Graduate Schools, Vancouver, October 2005
- On the organizing committee of IPCO (an international conference on Integer Programming/Combinatorial Optimization), U.B.C., June 1996
- Program Co-Chair, CORS/ORSA/TIMS international meeting held in Vancouver, May 1989 (about 2000 participants)
- On the organizing committee of NATO International Conference in Discrete Mathematics, DO 77 held at U.B.C., Summer 1977

10. SERVICE TO THE UNIVERSITY

(a) *Memberships on committees, including offices held and dates*

Selected Faculty of Commerce Responsibilities (prior to appointment as Dean)

- APT Full Professor Committee, 2012- 2016
- Chair, Faculty of Commerce Research Prize Committee, 1996
- Faculty of Commerce Long-Range Planning Committee, 1996
- Chair, Faculty of Commerce Committee on Research Development, 1995-96
- Commerce Core M.B.A. 2000 Committee, 1994
- Dean's Advisory Committee on research, 1978-1980; 1986-1987
- Faculty Ph.D. Committee, 1978-1980, 1982-1984
- Dean's Advisory Committee, 1980-1981
- Commerce Planning and Review Committee, 1982-1983
- Chairperson of the Management Science Graduate Student Committee, 1980, 1982-1984
- Faculty M.B.A. Committee, 1978

Selected University Services

- UBC's internal research award programs

- UBC Senate 2013-2016
- Senate Agenda Committee 2013-2016
- Senate Tribute Committee 2013-2016
- Reviewer for MITAC Proposals
- Scholarly Communications Steering Committee Meeting/ Under VPA 2010-2016
- Faculty International Advisors meeting / under VPR 2008-2016
- Chair, Killam Advanced Studies Committee, 1996-2006.
- University Senate, 1996-2006
- Senate Tributes Committee, 2002- 2006
- UBC Senate Awards Committee, 1994-2001
- UBC Senate Policy Committee, 1996-98, 2005-2006
- Chair, UBC Graduate Council, 1996-2006
- Chair, Faculty of Graduate Studies Teaching Prize Committee, 1996-2006
- Faculty of Graduate Studies Strategic Planning Committee, 1996
- New Faculty Mentoring, 1994 - 1996
- Scholarships Committee, 1994 - 1996
- IODE (Imperial Order for the Daughter of the Empire) War Memorial Committee, 1994 – 1996
- Campus Advisory Board on Computing and Communication, 1993-1996
- University's Appeal Board, 1988-1989, 1990-91
- University's Senior Appointments Committee, 1984-1987 and 1996-98

(b) *Other service, including dates*

Senior Associate Dean, Strategic Development and External Relations Sauder School of Business, 2006 – 2011

In July 2006, I accepted the position of Senior Associate Dean for Strategic Development and External Relations in the Sauder School of Business. In this capacity, I oversee the portfolios of Development, Alumni Relations, and International Relations, and I am charged with developing an international strategy for the Sauder School of Business, including identifying ways to increase the School's profile internationally, and determining the School's fundraising priorities.

Over the 2006-2007 fiscal years, the Development team has secured over \$12 million, \$8,776,330 of which was in support of the revitalization of the learning environment at the Sauder School of Business.

Dean, Faculty of Graduate Studies, 1996-2006

The Dean of Graduate Studies has a dual mandate: to maintain the academic integrity of all graduate programs and to support and promote interdisciplinary research and teaching activities in the University. The mandate for graduate education involves both the provision of services to graduate students and to departments and faculties across the University, and the review and maintenance of standards on behalf of Senate. There are currently over 8,000 graduate students in 220 Master's and PhD graduate programs at UBC. The second mandate

for interdisciplinarity involves the management and support of over 30 interdisciplinary schools, institutes, centres, residential colleges, and graduate programs covering the humanities and the social, environmental, and health sciences. Interdisciplinary activities encompass collaborative arrangements and joint appointments with faculty members and departments in all disciplines across the University. There are currently close to 100 faculty members fully or jointly appointed in our interdisciplinary units. The budget that I oversaw for the Faculty of Graduate Studies was over \$164 million.

Highlighted below are some of the achievements during my tenure as Dean. They are grouped into four categories: Funding, Graduate Education, Interdisciplinarity, and Government and Community Outreach.

FUNDING

Fundraising: During my first nine years as Dean, the Faculty raised over \$70 million in philanthropic funds for both graduate education and our interdisciplinary units. In every year, the amount we brought in exceeded that of the previous year. In the eight years between 1996/97, when we raised \$920,000, and this past fiscal year 2004/05, when we brought in \$16,983,000, we show an eighteen-fold increase. The last few years have been particularly successful, making us the No. 1 Faculty at UBC in fundraising – quite an extraordinary feat for this small Faculty.

Research Funding: During these same nine year, the interdisciplinary units of this Faculty have been attracting increasing numbers and sizes of research grants, from \$6.8 million in 1998/99 to \$29.2 million in 2003/04 – a four-fold increase over five years. In the process, our researchers have moved this Faculty from sixth position at UBC to fourth in terms of total research funding – with only the very large research-intensive Faculties of Medicine, Science, and Applied Science ranking higher. This is a particularly impressive record for a Faculty with its 2005 count of 50 full-time equivalent faculty members. We also secured four Canada Foundation for Innovation project funds, for new infrastructure. The most notable ones are the new \$17 million Aquatic Ecosystem Research Laboratory (AERL) and the \$23.5 million Centre for Interactive Research on Sustainability (CIRS).

GRADUATE EDUCATION

Providing excellent service to students as well as to UBC faculty and staff has been the primary motivator for my staff and me. The following highlights some of our achievements.

Services to Graduate Students

- We developed an on-line admissions system specific to graduate students, which is today recognized as one of the best systems in North America. We also implemented an on-line international credential service manual and a strategic graduate enrolment management report that shares best practices.
- We established the first-ever orientation sessions for new graduate students. What began with only 25 students grew this year to 1,000. Students receive information about financial support, university procedures, and other valuable information, as well as a warm welcome to graduate work at UBC.
- We raised additional funds for scholarships through donations – most notably a

\$4 million donation, matched by the University, thus creating an \$8 million endowment to support scholarships targeted at underrepresented students.

- We developed an on-line University Graduate Fellowship application, and totally restructured the adjudication of UBC and tri-council awards, reducing four internal competitions to one. We also developed a top-up grant supplement award for national award winners as well as a global payment system that was applauded by the granting agencies as an example of an exceptionally good system. In a strategy to support the recruitment of top graduate students, we reallocated part of the University Graduate Fellowship to University Entrance Scholarships.
- We developed a Professional Development unit providing workshop modules on such topics as entrepreneurship, writing research grants, negotiation, ethics, etc. for all graduate students

Services to UBC Faculty and Staff

- We completely restructured the Dean's Office around decentralized activities to deliver much more effective services to departments, while at the same time enhancing employee skills and rejuvenating staff members.
- **Publications:** Since my arrival as Dean, we developed and published several valuable and well-received publications and are working on several more, e.g., *Intellectual Property Guide*, *Guide to Graduate Supervision*, *The Grad Guide*, the first separate *UBC Graduate Calendar*, and a *View Book* for recruiting graduate students, as well as a *Graduate Student Recruitment* brochure and a *Graduate Awards* pamphlet. In an effort to provide accurate and complete information to potential faculty members to assist our units in their recruitment efforts, we developed a well-received *Guide for New Faculty Members*.
- **Policy Development:** We updated graduate policies to mirror changes in University goals and priorities, and reviewed, revised, and received Senate approval for a broad range of policies and procedures governing graduate education at UBC.
- **GEAR:** We created GEAR, a new unit that provides Graduate Education Analysis and Research on statistics and trends in graduate education and research, and aides in the development of new policies regarding strategic enrolment, recruitment, and funding.
- **Communication:** We developed a new identity for the Faculty, and an interactive web site that provides comprehensive information to faculty, students, and staff regarding awards, new programs, changes to immigration regulations, etc.

INTERDISCIPLINARITY

As well as continuing to support existing interdisciplinary research units, the following new initiatives in thematic areas were established during my term.

- **Institute for European Studies (IES):** This unit, established during my first year as Dean, has given campus-wide European activities a focal home and builds successful thematic collaborations with several Faculties on such diverse subjects as

film, illegal drugs, and the environment.

- **Institute of Asian Research:** We opened an award-winning building for IAR to house many new faculty members jointly appointed with UBC departments, as well as created a highly successful and rapidly growing Master of Asia Pacific Policy Studies program to contribute to the internationalization mission of the University.
- **Liu Institute for Global Issues:** The recently established Liu Institute brought Dr. Lloyd Axworthy to UBC where he became a catalyst for attracting other talented and distinguished community members. The unit is home not only to academic researchers but also scholars who bridge theory and practice between the academy and practitioners in developing policies for our world community.
- **St. John's College:** We were encouraged by the enthusiastic reception from faculty and students to our establishment of Green College, with its focus on interdisciplinarity and establishment of a living community on campus, to establish a second graduate residence, St. John's College, with its focus on internationalization. Beginning with only 30 students, St. John's is home today to 170 students, post-docs, and visiting scholars.
- **Institute of Resources, Environment, and Sustainability:** To gain economies of scale and new synergies, we merged two of our interdisciplinary institutes – the Sustainable Development Research Institute and the very successful graduate and research program in the Institute for Resources and Environment. Together, they form the new Institute of Resources, Environment, and Sustainability.
- **Human Early Learning Partnership:** Our newest centre, the Human Early Learning Partnership, brings together faculty members from five Faculties to investigate the socio-economic impact of early child brain development. In only four years, HELP has secured \$12.5 million in government funding. They have been actively recruiting new researchers and faculty members in joint appointments with UBC departments and research hospitals. There are currently over 150 researchers in HELP, and close to 100 community partnerships. Recently, a \$6 million endowment was established for a BC Leadership Chair in Child Development.
- **New and Joint Appointments:** We have been working closely with other Faculties to hire new recruits. To build new bridges and advance UBC's goals for theme-based research clusters, we made numerous new joint appointments with Faculties such as Medicine, Arts, Law, and the Sauder School of Business. Many of these outstanding new joint appointees are women who help us balance the male/female ratio in our Faculty.

GOVERNMENT AND COMMUNITY OUTREACH

Collaboration among governments, academia, and private sector partners is in the best interest of all citizens, not just the campus community, but also the wider communities in the region, the country, and the world. Open communication and good management are equally critical in achieving these goals.

- **Relationships with Governments:** We have engaged several Ministries within Provincial and Federal Governments, and formed warm and productive relationships with High Commissions, Embassies, and Consulates overseas.

- **Relationships with Communities:** I established an advisory council to which I invited individuals from senior levels of government, industry, education, justice, finance, and the arts – a group of influential and enthusiastic individuals who, with their network of connections across the nation and the world, have been enormously supportive of and helpful in advancing the interdisciplinary research vision and the strategic goals of the Faculty and the University.

Associate Dean, Faculty of Graduate Studies, July 1, 1991-June, 1996

11. SERVICE TO THE COMMUNITY

(a) Memberships on scholarly societies, including offices held and dates

- Member Institute for Operations Research and Management Sciences
- Member MSOM
- Member Mathematical Programming Society
- Member WORMS (Women in Operations Research and Management Sciences)

(b) Memberships on other societies, including offices held and dates

Member Institute for Corporate
Directors Member Women Executive
Network

(c) Memberships on scholarly committees, including offices held and dates

Member INFORMS FELLOWS Selection Committee 2010-2013. Committee Chair
2013 School of Reviews Canada Research Chairs, 2000-2006
Member, NSERC Adjudication Committee for Industrial Engineering, 1997-
2000 Member, INFORMS Lanchester Prize Committee, 1995 and 1996

(d) Memberships on other committees, including offices held and dates

(e) Editorships (list journal and dates)

- Associate Editor, Naval Research Logistics, 1985–2006

(f) Reviewer (journal, agency, etc. including dates)

Discrete Mathematics; Mathematical Programming; Management Science; Mathematics of Operations Research; Linear Algebra and its Applications; Operations Research; Discrete Applied Mathematics; Annals of Operations Research; Algorithmica; Naval Research Logistics; INFORMS; NSF; NSERC.

(g) *External examiner (indicate universities and dates)*

(h) *Consultant (indicate organization and dates)*

University of Ottawa, Teller School of Business Reviewed the viability of establishing a PhD program. 2014

(i) *Other service to the community*

- Working with the Aga Khan Development Network to help develop unique learning opportunities in Eastern Africa and Southeast Asia.
- Working with the Louis Brier Home and Hospital Foundation.
- Co-Chair of the Sauder Women's Leadership Council and advisor to the Young Women in Business Network. Past President of the Jewish Business and Professional Women Association.

12. **AWARDS AND DISTINCTIONS**

(a) *Awards for Teaching (indicate name of award, awarding organizations, date)*

(b) *Awards for Scholarship (indicate name of award, awarding organizations, date)*

- Fellow of The Institute for Operations Research and the Management Sciences (INFORMS), 2008
- Faculty of Commerce and Business Administration Academic Research Excellence Award, 1999
- B.C., Izak Walton Killam Memorial Faculty Research Fellowship, 1987-88
- Social Sciences and Humanities Research Council Leave Fellowship 1984

Academic Awards Prior to Final Degree

- 1975 Postdoctoral Fellowship (Mathematics, Dalhousie University)
- 1972-74: Doctorate Scholarship (University of Texas at Austin)
- 1969-72: Graduate Student Award (Department of Mathematics and Department of Computer Science - Technion, I.I.T., Israel)
- 1966-69: Distinguished Student Scholarships (Technion, I.I.T., Israel)

(c) *Awards for Service (indicate name of award, awarding organizations, date)*

(d) *Other Awards*

AWARDS AND DISTINCTIONS

- Board Diversity 50 winner, 2012
- Queen's Diamond Jubilee Medal, 2012
- Canada's Most Powerful Women: Top 100 Award from the Women's Executive Network (Trailblazers and Trendsetters category), 2011
- Honoured by the Professional Women's Network (PWN), 2011
- Fellow of INFORMS (The Institute for Operations Research and the Management Sciences), 2008
- Member of the Order of Canada, 2007
- YWCA Woman of Distinction Award (Education, Training, and Development category), 2006
- Queen's Golden Jubilee Medal, 2002
- Faculty of Commerce and Business Administration Academic Research Excellence Award, 1999

13. OTHER RELEVANT INFORMATION (Maximum One Page)

BOARD ACTIVITIES

- Spinal Cord Injury BC Board member 2014- 2018
- Member, Board of Governors of the International Development Research Centre (IDRC), 2008-2012
- Advisory Board member, Centre for CEO Leadership at the Sauder School of Business, 2008- 2012
- Member, Board of Directors, KCTS 9 Television, 2008-2010
- Vice-Chair of the Board of the Council for Early Child Development, 2007- 2011.
- Board member, Business Families Centre at the Sauder School of Business, UBC, 2006-2011.
- National Board member, Canadian Technion Society, 2005-2013
- Board member, Louis Brier Home and Hospital Foundation, 2005- 2010
- Board member, Halbert Foundation, 2000-
- Service Committee of the Graduate Record Examinations Board, 2002 – 2005
- Board member, Louis Brier Home and Hospital, 2002-2006
- Board member, The Pacific Institute in Mathematical Sciences, 1995 – 1996

RESEARCH, PROFESSIONAL, SCHOLARLY & CREATIVE ACTIVITIES

On committee INFORMS Fellow Selection 2010-2013. Committee chair 2013.

Publications Record

SURNAME: Granot

FIRST NAME: Frieda
MIDDLE NAME(S):

Initials: FG
Date: 10/04/ 2012

1. REFEREED PUBLICATIONS

(a) *Journals*

F. Granot and P.L. Hammer, "On the Use of Boolean Functions in 0-1 Programming", *Methods of Operations Research*, XII, (July 1971), pp.154-184.

F. Granot and P.L. Hammer, "On the Role of Generalized Covering Problems", *Cahiers du Centre d'Etudes de Recherche Operationelle*, 17, (1975), pp. 277-289.

A. Charnes and **F. Granot**, "Existence and Representation of Integer and Mixed Integer Solutions to Linear Equations and Inequalities", *Discrete Mathematics*, 11, (1975), pp. 233-248.

A. Charnes, D. Granot and **F. Granot**, "On Improving Bounds for Variables in Linear Integer Programs by Surrogate Constraints", *Canadian Journal of Operations Research and Information Processing*, 13, 3, (1975), pp. 260-269.

D. Granot, **F. Granot** and A. Lemoine, "Approximations for a Service System with Non-Independent Inter-Arrival Times", *Operations Research*, 23, (1975), pp. 162-165.

A. Charnes, D. Granot and F. Granot, "A Note on Explicit Solution in Linear Fractional Programming", *Naval Research Logistics Quarterly*, 23, 1, (1976), pp. 161-167.

A. Charnes, D. Granot and **F. Granot**, "An Algorithm for Solving General Fractional Interval Programming Problems", *Naval Research Logistics Quarterly*, 23, 1, (1976), pp. 53-65.

A. Charnes and **F. Granot**, "A Modified Algorithm for Solving Interval Linear Programming Problems", *Cahiers du Centre d'Etudes de Recherche Operationelle*, 18, 3, (1976), pp. 323-335

D. Granot and **F. Granot**, "On Solving (0,1) Fractional Programs by Implicit Enumeration", *INFOR*, 14, (1976), pp. 241-249.

A. Charnes, D. Granot and **F. Granot**, "A Primal Algorithm for Interval Linear Programming Problems", *Linear Algebra and Its Applications*, 17, (1977), pp. 65-78.

A. Charnes, F. Granot and F. Phillips, "An Algorithm for Solving Interval Linear Programming Problems", *Operations Research*, 1, (1977), pp. 688-695.

A. Charnes, D. Granot and **F. Granot**, "On Intersection Cuts in Interval Integer Linear Programming", *Operations Research*, 25, 2, (1977), pp. 352-355.

D. Granot and **F. Granot**, "On Solving Integer and Mixed Integer Fractional Programming Problems", *Annals of Discrete Mathematics*, 1, (1977), pp. 221-231.

A. Charnes, D. Granot and **F. Granot**, "On Solving Linear Fractional Interval Programming Problems", *Cahiers du Centre d'Etudes du Recherche Operationelle* (1978), pp. 45-57.

A. Hoffman and **F. Granot**, "Polyhedral aspects of discrete optimization" , *Ann. Discrete Math.* 4, 183-190 (1979).

D. Granot, **F. Granot** and J. Kallberg, "Covering Relaxation for Positive 0-1 Polynomial Programs", *Management Science*, 25, (1979), pp. 264-273.

D. Granot and **F. Granot**, "Generalized Covering Relaxation for (0,1) Programming", *Operations Research*, 28, 6, (1980), pp. 1442-1450.

F. Granot, "Efficient Heuristic Algorithms for Positive 0-1 Polynomial Programming Problems", *Management Science*, 2, 8, (1982), pp. 829-836.

D. Granot, **F. Granot** and E.L. Johnson, "Duality and Pricing in Multiple Right-Hand Choice Linear Programming Problems", *Mathematics of Operations Research*, 7, (1982), pp. 545-556.

D. Granot, **F. Granot** and W. Vaessen, "An Accelerated Algorithm for Solving Positive Polynomial 0-1 Programming Problems", *Mathematical Programming*, 22, 3, (1982), pp. 350-357.

D. Granot and **F. Granot**, "Minimal Covers, Minimal Sets and Canonical Facets of the Polynomial Knapsack Polytope", *Discrete Applied Mathematics*, 9, (1984), pp. 171-185.

F. Granot and A.F. Veinott, Jr., "Substitutes, Complements and Ripples in Network Flows", *Mathematics of Operations Research*, 10, (1985), pp.471-497.

F. Granot and R. Hassin, "Multi-Terminal Maximum Flows in Node-Capacitated Networks", *Discrete Applied Mathematics*, 13, (1986), pp.157-163.

F. Granot and J. Skorin-Kapov, "Nonlinear Integer Programming: Sensitivity Analysis for Branch and Bound", *Operations Research Letters*, Vol. 6, (1988), pp. 269-274.

F. Granot and J. Skorin-Kapov, "Simultaneous Approximation in Quadratic Integer Programming", *Operations Research Letters*, Vol. 8, 5, (1989), pp. 251-255.

F. Granot and J. Skorin-Kapov, "Towards A Strongly Polynomial Algorithm for Strictly Convex Quadratic Programs: An Extension of Tardos' Algorithm", *Mathematical Programming*, 46, (1990), pp. 225-236.

F. Granot and J. Skorin-Kapov, "Some Proximity and Sensitivity Results in Quadratic Integer Programming", *Mathematical Programming*, 47, (1990), pp. 259-268.

F. Granot and M. Penn, "On the Integral Plane Two-Commodity Flow Problem", *Operations Research Letters*, Vol. II #3, (1992), pp. 135-139.

D. Granot and **F. Granot**, "On Some Network Flow Games", *Mathematics of Operations Research*, Vol. 17, #4, (1992), pp. 792-841.

A. Gautier and **F. Granot**, "A Parametric Analysis of a Nonlinear Cash-Flow Asset Allocation Model", *Operations Research Letters*, 11, #5, (1992), pp. 273-279.

D. Granot and **F. Granot**, "Computational Complexity of a Cost Allocation Approach to a Fixed Cost Spanning Forest Problem", *Mathematics of Operations Research*, Vol. 17, #4, (1992), pp. 765-780.

F. Granot and J. Skorin-Kapov, "On Polynomial Solvability of the High Multiplicity Total Weighted Tardiness Problem", *Discrete Applied Mathematics*, 41, (1993), pp. 139-146.

A. Gautier and **F. Granot**, "On the Equivalence of Constrained and Unconstrained Flows",

Discrete Applied Mathematics, 55, (1994), pp. 113-132.

A. Gautier and **F. Granot**, "Ripples, Complements and Substitutes in Singly-Constrained Monotropic Parametric Network Flow Problems", *Networks*, 24, (1994), pp. 285-296.

A. Gautier and **F. Granot**, "A Parametric Analysis of a Constrained Nonlinear Inventory-Production Model", *Management Science*, Vol. 40, #11 (1994), pp. 1500-1513.

F. Granot and M. Penn, "On the Integral 4-Packing of T-Cuts", *Discrete Mathematics*, Vol. 142, (1995), pp. 65-75.

A. Gautier and **F. Granot**, "Forest Management: A Multicommodity Flow Formulation and Sensitivity Analysis", *Management Science*, 41, (1995), pp. 1654-1668.

A. Gautier and **F. Granot**, "Ripples, Complements and Substitutes in Generalized Networks", *Naval Research Logistics*, 43, (1996), pp. 1-21.

F. Granot, M. Penn and M. Queyranne, "Disconnecting Sets in Single and Two-Terminal-Pair Networks", *Networks*, Vol. 27, (1996) pp. 117-123.

F. Granot and M. Penn, "Polynomial Algorithms for (Integral) Maximum Two-Flow in Vertex/Edge Capacitated Planar Graphs", *Discrete Applied Mathematics*, Vol. 70 (1996), pp. 267-283.

F. Granot, J. Skorin-Kapov and A. Tamir, "Using Quadratic Programming to Solve High Multiplicity Scheduling Problems on Parallel Machines", *Algorithmica*, Vol. 17 (1997), pp. 100-110.

D. Granot, **F. Granot** and W.R. Zhu, "The Reactive Bargaining Set of Some Flow Games and of Superadditive Simple Games", *International Journal of Game Theory*, Vol. 26 (1997), pp. 207-214.

A. Gautier, **F. Granot** and H. Zheng, "Qualitative Sensitivity Analysis in Monotropic Programming", *Mathematics of Operations Research*, Vol. 3, No. 3, (1998), pp. 695-707.

D. Granot, **F. Granot** and W.R. Zhu, "On Characterization Sets for the Nucleolus", *International Journal of Game Theory*, Vol. 27 (1998), pp. 359-374.

D. Granot, **F. Granot** and W.R. Zhu, "Naturally Submodular Digraphs and Forbidden Digraph Configurations", *Discrete Applied Mathematics*, Vol. 100 (2000), pp. 67-84.

T. Eilam-Tzoref, D. Granot, **F. Granot** and G. Sošić, "The Vehicle Routing Problem with Pickups and Deliveries on Some Special Graphs", *Discrete Applied Mathematics*, Vol. 116 (2002), pp. 193-229.

A. Gautier, **F. Granot** and M. Levi, "Alternative Foreign Exchange Management Protocols: An Application of Sensitivity Analysis", *Journal of Multinational Financial Management*, Vol. 12 (2002), pp. 1- 19.

D. Granot, **Granot, F.**, Raviv, T., "On competitive location in a network with decreasing demand intensity", *European Journal of Operational Research*, 205, (2010), pp.301-312.

B. Mantin, D. Granot, **F. Granot**, "Dynamic Pricing Under First Order Markovian Competition", *Naval Research Logistics* 58, 2011, pp. 608-617.

D. Granot and **F. Granot**, "On Graphs Which Can or Cannot Induce Chinese Postman Games with a Non-Empty Core". *Discrete Applied Mathematics*, 160, 2012, pp. 2054-2059.

F. Granot, S. T. McCormick, M. Queyranne and F. Tardella, "Structural Algorithmic Properties for Parametric Minimum Cuts". *Mathematical Programming*, 135, 2012, pp. 337-367.

D. Granot, **F. Granot** and Harshavardhan Ravichandran, "The k-Centrum Chinese Postman Problem and a Related Cost Allocation Game", *Discrete Applied Mathematics*, 179, (2014), 100-108.

I. Ciuera-Infosino, **F. Granot** and A. F. Veinott Jr., "Substitutes, Complements and Ripples in Multi-commodity Flows on Suspension Graphs". *NETWORKS*, Volume 64, Issue 2, September 2014, pages 65–75,

I. Ciuera-Infosino, D. Granot, **F. Granot** and A. F. Veinott, "Multi-Commodity Production Planning: Quantitative Analysis and Applications". *MSOM*, Vol 17, Issue 4, 2015, pp. 589-607.

B. Mehmet, F. Richard, D. Granot, **F. Granot**, C. Hall, B. Kluczny, A. Czerny, "Evaluation of a Centralized Transportation Assistance System for Passengers with Special Needs at a Canadian Airport", *Int. J. of Shipping and Transport Logistics*, 10, 2018, pp. 355-376.

Ciuera-Infosino, I., D. Granot, **F. Granot**, "Monotonicity and conformality in multicommodity network-Flow problems", *Networks*, Vol 74, issue 3 October, 2019.

Sanjith Gopalakrishnan, Daniel Granot, **F. Granot**, Greys Susic, Hailong Cui, "Incentives and Emission Responsibility Allocation in Supply Chains", *Management Science*, Accepted for Publication, May 2020, Published Online, October 2020.

Sanjith Gopalakrishnan, Daniel Granot, **Frieda Granot**, "Consistent Allocation of Emission Responsibility in Fossil Fuel Supply Chains", *Management Science*, Accepted for Publication October, October, 2020. Published Online, February 2021.

(b) *Conference Proceedings*

D. Granot and **F. Granot**, "On Cost and Revenue Allocation Problems Arising in Mathematical Programming Models", *Proceedings of the 6th Mathematical Programming Symposium*, Japan, (1985), pp. 121-146.

F. Granot and J. Skorin-Kapov, "A Strongly Polynomial Algorithm for a Toxic Waste Disposal Problem", 2nd Conference of the *Croatian Operations Research* (1992), pp. 95-105.

F. Granot and M. Penn, "An Algorithm for Computing a Maximum Two Flow in Vertex and Edge Capacitated Planar Graphs", *Proceedings of the third IPCO Conference*, (1993), pp. 235-249.

A. Gautier, **F. Granot** and M. Levi, "A Parametric Analysis of a Nonlinear Currency Management Model", *Proceedings of the NETFLOW 93 Meeting*, San Miniato Oct. 3 - 7, (1993), pp. 86-91.

(c) *Papers submitted for publication*

2. **NON-REFEREED PUBLICATIONS**

(a) *Journals*

(b) *Conference Proceedings*

(c) *Other*

TECHNICAL REPORTS

D. Granot and **F. Granot**, "Optimal Scheduling for an Outpatient Clinic", Report No. CS 137, Centre for Cybernetic Studies, University of Texas at Austin, April 1973.

A. Ben-Israel and **F. Granot**, "Some Results on the Van der Waerden Conjecture", Technical note No. CS 141, Centre for Cybernetic Studies, University of Texas (Austin), Aug. 1973.

A. Charnes and **F. Granot**, "An Algorithm for Solving Integer Interval Linear Programming Problems: A New Method for Mixed Integer Programming", Report No. CS 142, Centre for Cybernetic Studies, University of Texas at Austin, May 1975.

F. Granot and A.F. Veinott, Jr., "Infinite Linear Duals of Mixed-Integer Programs", 1987.

3. **BOOKS**

(a) *Authored*

F. Granot, co-edited with D. Klingman, "Some Recent Advances in the Theory, Computation, and Applications of Network Flow Models", a special volume for *INFOR*, November 1982, and a book by Toronto Press, October 1983.

(b) *Edited*

(b) *Chapters*

D. Granot and **F. Granot**, "A Survey on Cost and Revenue Allocation Problems" in *Systems and Management Science by Extremal Methods*, edited by Fred Phillips and John Rousseau, (1992), pp. 427- 459.

A. Gautier, D. Granot, **F. Granot**, "Qualitative Sensitivity Analysis" in *Recent Advances in Sensitivity Analysis and Parametric Programming*, co-edited by Tomas Gal and Harvey Greenberg, Kluwer Academic Publisher, 1996.

4. **WORK IN PROGRESS** (including degree of completion)

D. Granot, **F. Granot** and G. Susic, "Allowance Trading in Cap-and-Trade Programs",

S. Gopalakrishnan and F. Granot, "Bike Sharing Systems – The Economic and Environmental Impact of Operational Strategies".