

ANTHONY M. FLOYD

CURRICULUM VITAE

updated 9 July 2003

PRESENT POSITION

PhD Candidate

Composites Group,
Department of Civil Engineering,
The University of British Columbia
Supervisor: Dr. Reza Vaziri

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PERSONAL CONTACT INFORMATION

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EDUCATION

May 1998 – Present

Doctor of Philosophy (Civil Engineering)

Composites Group

Departments of Civil Engineering and Metals and Materials Engineering

The University of British Columbia

Vancouver, British Columbia, Canada

Thesis title: "An Engineering Approach to the Simulation of Gross Damage Development in Fibre Reinforced Plastic Laminates"

- Expected completion date: Fall 2003
- University Graduate Fellowship 2001-2003
(reduced to 1 year duration due to eligibility restrictions)
- NSERC Post Graduate Scholarship B 1999-2001

June 1997 – May 1998

Master of Applied Science (Civil Engineering)

Composites Group

Departments of Civil Engineering and Metals and Materials Engineering

The University of British Columbia

Vancouver, British Columbia, Canada

- After 1 year, promoted to PhD program (MASc incomplete)
- NSERC Post Graduate Scholarship A 1997-1999

September 1994 – May 1997

Bachelor of Engineering (Civil Engineering, Co-op)

Department of Civil Engineering

The Technical University of Nova Scotia

(now part of Dalhousie University)

Halifax, Nova Scotia, Canada

- Graduated with Distinction, top student in a class of 45
- TUNS Entrance scholarship
- David F. Fanning Scholarship
- Mobil Oil Scholarship
- Sexton Scholar (honour roll) every semester

EDUCATION (CONTINUED)

September 1991 – May 1994

**Bachelor of Science (Physics)
Diploma in Engineering**

Dalhousie University
Halifax, Nova Scotia, Canada

- Overall GPA of 4.0 on 4.3
- Dalhousie entrance scholarship
- Dalhousie in-course scholarship
- Burgess McKittrick prize in Physics
- Dean's List every semester

PROFESSIONAL DEVELOPMENT

September 1999

LS-DYNA User Material Modelling Course

Livermore Software Technology Corporation

- A three-day course on developing user material models in the LS-DYNA finite element analysis package.

April 1998

Introduction to LS-DYNA Course

Livermore Software Technology Corporation

- A three-day course on using the LS-DYNA finite element analysis package.

September 1997

Instructional Skills Workshop

The Centre for Teaching and Academic Growth

The University of British Columbia

- A three-day workshop designed to help graduate students develop and enhance their communication and instructional skills.

EMPLOYMENT HISTORY

September 1997 – Present

Research Assistant

Composites Group,
The University of British Columbia

- Worked on a number of contracts related to my thesis research, in industries including defence, aerospace, and recreation.
- Research included numerical simulation of various composite materials in a number of applications.
- Many reports and presentations were made in association with this work.

January 2003 – April 2003

Sessional Instructor

Department of Metals and Materials Engineering
The University of British Columbia

- Taught MMAT 494: Composite Materials I, a fourth year undergraduate introduction to composite materials. Enrolment was 20 undergraduate students, 10 graduate students.
- Responsibilities included preparing and presenting class notes, assignments, quizzes, laboratories, and the final exam.

September 1997 – May 2001

Teacher's Assistant

Department of Civil Engineering
The University of British Columbia

- Various appointments assisting professors with graduate and undergraduate courses.
- Courses included:
 - CIVL 220: Civil Engineering Materials (1999)
 - CIVL 225: Computer Applications in Civil Engineering (2000, 2001)
 - CIVL 230: Solid Mechanics (1997)
 - CIVL 537: Computational Mechanics I (1998, 1999, 2000)
 - CIVL 538: Computational Mechanics II (2000)

EMPLOYMENT HISTORY (CONTINUED)

September 1996 – December 1996

Technician

Advanced Materials Engineering Centre
Halifax, Nova Scotia

- Performed mechanical testing with Instron universal machine, performed thermal analyses including TGA, TMA, performed image analyses using a SEM.
- Performed basic research in composites.
- Provided general laboratory and computer support.

January 1996 – April 1996

Mine Backfill and Artificial Support Systems Technician

Natural Resources Canada - CANMET
Sudbury, Ontario

- Performed particle size analyses, cement content test, uniaxial compression tests, sampling, backfill casting, and related tasks.
- Provided general laboratory and computer support.

May 1995 - September 1995

Structural Engineer's Assistant

MacMillan Bloedel Building Materials
Dartmouth, Nova Scotia

- Designed floor and roof framing layouts for residential and light commercial construction using Engineered Lumber Products.
- Provided general computer support.

May 1994 - September 1994

Research Assistant

Department of Physics, Dalhousie University
Halifax, Nova Scotia

- Designed, built, and tested a prototype magnetic field scanner.
- Wrote and presented detailed reports on the scanning device.
- Provided laboratory support for other researchers.

VOLUNTEER EXPERIENCE

September 1999 - June 2000

- Volunteered in the UBC "Let's Talk Science" outreach program, which provided school teachers with access to graduate students for use as additional resources.

July 1998 - May 2000

- Volunteered as manager of the Structural/Materials Group for the UBC Human Powered Helicopter (HPH) Competition entry.

September 1995 - December 1995

- Volunteered as coordinator of TUNS Curling Club.

November 1994 - August 1996

- Volunteered as a member of TUNS Enviro Committee, which was involved in revamping paper recycling at TUNS.

May 1994 - September 1994

- Coached a minor baseball team at the Midget level (16-18yrs). The team won their division championships.

June 1994 - September 1994, June 1992 - September 1992

- Volunteered as a member of the Shinerama Blitz Committee, which organized the Cystic Fibrosis fundraising at Dalhousie University. Shinerama 1992 and 1994 each raised over \$22 000. Volunteered to be a Freshman Orientation Leader.

September 1992 - April 1994

- Club manager of the Dalhousie Curling Club, with duties including the placement of players on teams, scheduling games and events, and ensuring smooth day to day operation of the Club.

June 1993 - September 1993

- Coached a minor baseball team at the Mosquito level (10-12 yrs).

VOLUNTEER EXPERIENCE (CONTINUED)

June 1993 - September 1993

- Director of Physical Operations for Dalhousie Shinerama 1993, which entailed coordinating 700 student volunteers. This task included the planning and placement of the volunteers as well as coordinating Blitz Committee events over the summer. Shinerama 1993 raised over \$24 000 for Cystic Fibrosis, the most raised to that point.

PUBLICATIONS

Conference Proceedings (* indicates presenter)

1. Floyd, A.* , Vaziri, R., Poursartip, A. (2003), "A Numerically Objective Continuum Damage Model to Accurately Simulate Damage Growth in Composites" , 4th Canadian International Composites Conference (CANCOM 2003), August 19-22, 2003, Ottawa, ON.
2. Floyd, A.* , Vaziri, R., Poursartip, A., (2003), "Modelling Specimen Size Effect in Laminated Composites" , 14th International Conference on Composite Materials (ICCM-14), July 14-18, 2003, San Diego, CA.
3. Floyd, A.* , (2002), "Strain Softening Approach to Damage Growth Prediction in Composite Laminates", Canada-Japan Workshop on Composites, 19-21 September 2002, Vancouver, BC.
4. Floyd, A., Vaziri, R., Poursartip, A., Williams, K., Nandlall, D., (2002), "A Continuum Damage Mechanics Approach to Simulating Ballistic Impact Events", 20th International Ballistics Symposium, September 2002, Orlando, FL.
5. Floyd, A.* , Vaziri, R., Poursartip, A. (2002), "Non-Penetrating Impact Simulation of Stitched Resin Film Infused Composites", 7th International LS-DYNA Users Conference, May 19-21, 2002, Dearborn, MI.
6. Mitchell, J., Floyd, A., Starratt, D., Vaziri, R., Poursartip, A.* (2001), "Strain-Softening of Stitched RFI Composites", 33rd International SAMPE Technical Conference, 5-8 November 2001, Seattle, WA.
7. Floyd, A.* , Vaziri, R, Poursartip, A. (2001) "Composite Material Models in LS-DYNA and Damage Development: An Evaluation Based on the OCT Geometry", 3rd Canadian International Composites Conference CANCOM 2001, 21-24 August 2001, Quebec City, PQ
8. Floyd, A., Mitchell, J., Vaziri, R., Poursartip, A.* (2001), "Modelling Damage Development in Carbon/Epoxy Overheight Compact Tension (OCT) Specimens", 13th International Conference on Composite Materials, 25-29 June 2001, Beijing, China.
9. Floyd, A.* (2001) "Continuum Damage Mechanics in the Numerical Modelling of Fibre-Reinforced Plastics", MMAT JSC Conference, 16-17 January 2001, Vancouver, BC.

PUBLICATIONS (CONTINUED)

10. Floyd, A., Vaziri, R.*, (2000), "Damage Modelling of Composite Laminates at UBC", FAA Composite Structural Development Workshop, 6-8 December 2000, Renton, WA. A/V presentation only.
11. Floyd, A., (2000), "Finite Element Analysis of Composite Structures Under In-Service Loads", SAMPE 2000, 21-25 May 2000, Long Beach, CA
12. Floyd, A., Williams, K., Vaziri, R., Kanji, K., Poursartip, A., (1999), "Through-Thickness Strain-Softening Damage Modelling of Composite Laminates", 18th International Symposium on Ballistics, 15-19 November 1999, San Antonio, TX
13. Williams, K.*, Floyd, A., Vaziri, Poursartip, A. (1999), "A Strain Softening Approach to Modelling Damage Progression in Composite Laminates", 12th International Conference on Composite Materials, 5-9 July 1999, Paris, France
14. Williams, K., Vaziri, R.*, Floyd, A., Poursartip, A. (1998), "Simulation of Damage Progression in Laminated Composite Plates Using LS-DYNA", 5th International LS-DYNA Users Conference, 5-9 July 1998, Southfield, MI

Major Technical (Contract) Reports

1. Floyd, A., Cronin, D., Plumtree, A., Poursartip, A., Vaziri, R., Worswick, M., (2001) "Three-Dimensional Numerical Simulation of the Ballistic Response of Laminated Composite Plates: Final Report", contractual report prepared for Defence Research Establishment Valcartier
2. Starratt, D., Floyd, A., Bouihoui, H., Vaziri, R., Poursartip, A. (1999), "Strain-Softening of Stitched/RFI Composites Final Report", contractual report prepared for The Boeing Company
3. Floyd, A., Vaziri, R., (1999) "Three-Dimensional and Axisymmetric Formulations of UBC-CODAM and Their Implementation in LS-DYNA and VECDYNA", contractual report prepared for Defence Research Establishment Valcartier
4. Floyd, A., Williams, K., Vaziri, R., (1998) "UBC-CODAM2Da Theoretical Manual", contractual report prepared for Defence Research Establishment Valcartier