

Curriculum Vitae

Michael D. Adams

Associate Professor
Department of Electrical and Computer Engineering
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Citizenship: Canadian

Education

- ◇ **Doctor of Philosophy**, Electrical Engineering, University of British Columbia, Vancouver, BC, Canada, Sept. 2002
 - Dissertation Title: Reversible Integer-to-Integer Wavelet Transforms for Image Coding
 - Advisor: Dr. Rabab Ward (IEEE Fellow)
- ◇ **Master of Applied Science**, Electrical Engineering, University of Victoria, Victoria, BC, Canada, Jan. 1998
 - Thesis Title: Reversible Wavelet Transforms and Their Application to Embedded Image Compression
 - Advisor: Dr. Andreas Antoniou (IEEE Fellow, IEE Fellow)
- ◇ **Honours Bachelor of Applied Science**, Computer Engineering, University of Waterloo, Waterloo, ON, Canada, May 1993

Academic Awards and Distinctions

- ◇ NSERC Postgraduate Scholarship, 1998–2000 (2 years at \$19,100/year)
- ◇ selected as university (i.e., UBC) nominee for NSERC Doctoral Prize (Engineering and Computer Sciences category), 2003
- ◇ chosen as best Ph.D. student in (UBC ECE) department and nominated for Governor General's Gold Medal, 2003
- ◇ Ph.D. thesis chosen as best in (UBC ECE) department and nominated for Canadian Association of Graduate Schools (CAGS/UMI) Dissertation Award, 2003
- ◇ chosen as best Master's student in (UVic ECE) department and nominated for Lieutenant Governor's Silver Medal, 1998

Research Interests

- ◇ digital signal processing, multimedia systems, multirate systems, wavelets
- ◇ processing, coding, and transport of multimedia data (e.g., image, video, and audio); implementation techniques for multimedia codecs

Teaching Interests

- ◇ digital signal processing, multimedia systems

- ◇ computer software, algorithms, data structures, programming languages
- ◇ operating systems, real-time systems, microprocessor systems

Professional Affiliations

- ◇ member of JPEG/JBIG Working Group (i.e., ISO/IEC JTC 1/SC 29/WG 1), 1998–Present
- ◇ member of Canadian Advisory Committee for the ISO/IEC Joint Technical Committee 1, Subcommittee 29—Coding of Audio, Picture, Multimedia and Hypermedia Information (i.e., CAC/JTC 1/SC 29), Standards Council of Canada, 1998–Present
- ◇ registered as Professional Engineer with Association of Professional Engineers and Geoscientists of BC, 2006–Present
- ◇ member of IEEE (Signal Processing Society, Circuits and Systems Society, Computer Society); Senior Member 2009–Present, Member 1989–2009.

Professional Service

- ◇ Co-editor of JPEG-2000 Part-5 standard (i.e., ISO/IEC 15444-5)
- ◇ principal author of the JasPer software (an official reference implementation of the JPEG-2000 Part-1 codec) published in the JPEG-2000 Part-5 standard; **JasPer software averages approximately 5600 downloads/month** from the JasPer Project Home Page (i.e. <http://www.ece.uvic.ca/~mdadams/jasper>) with number ranging from 4600 to 7200 downloads/month for 12 month period preceding Aug. 2008; JasPer used in several well-known projects such as Ghostscript PostScript/PDF interpreter
- ◇ active participant in JPEG/JBIG Working Group (i.e., ISO/IEC JTC 1/SC 29/WG 1) activities (e.g., made technical contributions, served as Ad Hoc Group Chair)
- ◇ active voting member of Canadian delegation to ISO/IEC JTC 1/SC 29
- ◇ served as Head of Delegation for Canada at several meetings of JPEG/JBIG Working Group (i.e., ISO/IEC JTC 1/SC 29/WG 1)
- ◇ over last six years, reviewed:
 - 23 manuscripts for journals (including Proceedings of the IEEE, IEEE Transactions on Image Processing, IEEE Transactions on Signal Processing, IEEE Transactions on Circuits and Systems for Video Technology, IEEE Signal Processing Letters, Journal of Visual Communication and Image Representation)
 - 58 papers for conferences (including IEEE International Conference on Image Processing, IEEE International Symposium on Circuits and Systems, and IEEE International Conference and Multimedia Expo)
 - 7 NSERC Discovery Grant applications
- ◇ Technical Program Co-Chair for 2007 IEEE Pacific Rim Conference on Communications, Computers and Signal Processing (held in Victoria, BC, Canada, Aug. 22–24, 2007)
- ◇ Technical Program Co-Chair for 2006 IEEE International Symposium on Signal Processing and Information Technology (held in Vancouver, BC, Canada, Aug. 27–30, 2006)
- ◇ Technical Program Co-Chair for 2005 IEEE Pacific Rim Conference on Communications, Computers and Signal Processing (held in Victoria, BC, Canada, Aug. 24–26, 2005)

Publications

- ◇ See attached publication list.

Academic Work Experience

- ◇ **University of Victoria**, Department of Electrical and Computer Engineering, Victoria, BC, Canada. *Associate Professor*. July 2009–Present. *Assistant Professor*. Jan. 2003–June 2009.

Invited Presentations

- ◇ “JPEG 2000: A New International Standard for Image Compression,” **Macdonald Dettwiler**, Richmond, BC, Canada, Nov. 5, 2002. (Technical talk on the JPEG-2000 standard and JasPer software.)
- ◇ “JPEG 2000: The Next Generation Still Image Compression Standard,” **Microsoft Research**, Redmond, WA, USA, Jan. 24, 2000. (Detailed technical talk on the JPEG-2000 standard.)
- ◇ “JPEG 2000,” **Real Networks**, Seattle, WA, USA, Jan. 25, 2000. (Technical seminar on the JPEG-2000 standard.)

Industry Work Experience

- ◇ **Bell-Northern Research (now Nortel Networks)**, SONET Transport Systems Group, Ottawa, ON, Canada. *Software Designer*. May 1993–Aug. 1995.
 - key architect in design of OAM software for new OC-3 product
 - designed and implemented Flash file system; wrote STREAMS drivers and modules for data communications; developed network OAM applications; code written in C/C++ for pSOS real-time kernel
- ◇ **MPR Teltech Limited**, Advanced Technology Division, Burnaby, BC, Canada. *Communications Software Engineer*. Sept.–Dec. 1992.
 - developed communications software for video conferencing system
 - code written in C to run under UNIX and small real-time kernel
- ◇ **Bell-Northern Research (now Nortel Networks)**, OSI Data Communications Group, Ottawa, ON, Canada. *OSI Data Communications Specialist*. Jan.–May 1992.
 - analyzed performance of BNR’s FiberWorld SOS/PROTEL OSI protocol stack
 - implemented changes to improve protocol stack performance
- ◇ **Bell-Northern Research (now Nortel Networks)**, CAD Systems Group, Nepean, ON, Canada. *Software Engineer*. May–Aug. 1991.
 - designed and developed software for distribution and installation of BNR’s CAD tools (e.g. CBDS, PCPEMSIM)
 - code written in C to run under AIX, SunOS, Domain/OS
- ◇ **Northern Telecom Canada Limited (now Nortel Networks)**, Mississauga, ON, Canada. *LAN/WAN Support Specialist*. Sept.–Dec. 1990.
 - designed and developed e-mail directory service for use with existing e-mail software
 - code written in C and 8086 Assembly Language for networked MS-DOS environment
- ◇ **Control Data Canada Limited**, Mississauga, ON, Canada. *Software Developer*. Jan.–Mar. 1989.
 - responsible for preliminary development of a UNIX-based hardware validation system
 - code written in C and Cyber 180 Assembly Language

Other Work Experience

- ◇ **University of British Columbia**, Department of Electrical and Computer Engineering, Vancouver, BC, Canada. *Research Assistant*. Jan. 1998–Nov. 2002.
 - research assistant in Image Processing Group and Signal Processing and Multimedia Group
- ◇ **University of Victoria**, Department of Electrical and Computer Engineering, Victoria, BC, Canada. *Teaching/Research Assistant*. Sept. 1995–Dec. 1997.
 - served as lab instructor for real-time software and microprocessor systems courses
 - instructed students on how to use lab equipment, marked lab reports, and evaluated student lab performance
- ◇ **University of Waterloo**, Department of Mechanical Engineering, Waterloo, ON, Canada. *System Administrator/Consultant/Programmer*. Jan.–Apr. 1990 (part-time), Sept.–Dec. 1988 (part-time), June–Sept. 1988 (full-time).
 - system administrator for Sun-based UNIX installation with approximately 100 users
 - consultant for system users; developed system software
- ◇ **University of Victoria**, Adaptive Robotic Telesystems Lab, Department of Mechanical Engineering, Victoria, BC, Canada. *Research Assistant*. Sept.–Dec. 1989.
 - designed and implemented force sensing subsystem for Reis robot arm
 - developed software (in C, 68000 Assembly Language) on Sun workstations for execution on multiprocessor system; developed simulation applications in C++ (to run under UNIX)
- ◇ **University of Waterloo**, Department of Mechanical Engineering, Waterloo, ON, Canada. *Research Assistant*. Sept. 1987–May 1988 (part-time), July–Aug. 1987 (full-time).
 - programmer in robotics research group
 - designed and implemented graphical user interface to robot test simulator
 - maintained UNIX development system
- ◇ **Waterloo County Board of Education**, Department of Computer Learning Resources, Kitchener, ON, Canada. *Student Programmer*. June 1987 (full-time), Dec. 1986–May 1987 (part-time).
 - developed database manager targeted for educational system

Special Skills

- ◇ strong background in digital signal processing (especially multirate systems, filter banks, wavelets, and image coding)
- ◇ excellent data communication and computer networking background
- ◇ over 20 years of programming experience in C, Assembly Language (68000, 8086); over ten years of experience with C++
- ◇ extensive real-time programming experience
- ◇ solid UNIX background having worked with wide range of UNIX variants (e.g., SunOS, BSD, System V, Linux, AIX, HP-UX); knowledge of UNIX internals; experience in operating system design
- ◇ fast learner with proven problem solving skills
- ◇ able to function effectively as independent worker or as member of team

Outside Interests and Hobbies

- ◇ enjoy inline skating, running, camping, music, playing guitar

References

- ◇ Available upon request.

List of Publications

Refereed Journal Publications

1. M. D. Adams and D. Xu, "Optimal Design of High-Performance Separable Wavelet Filter Banks for Image Coding," *Signal Processing*, DOI: 10.1016/j.sigpro.2009.06.008, 17 pages, 2009.
2. M. D. Adams, "An Efficient Progressive Coding Method for Arbitrarily-Sampled Image Data," *IEEE Signal Processing Letters*, vol. 15, pp. 629–632, 2008, DOI: 10.1109/LSP.2008.2004516.
3. D. Xu and M. D. Adams, "An Improved Normal-Mesh-Based Image Coder," *IEEE Canadian Journal of Electrical and Computer Engineering*, vol. 33, no. 1, pp. 5–14, Winter 2008, DOI: 10.1109/CJECE.2008.4621789.
4. Y. Chen, M. D. Adams, and W.-S. Lu, "Design of Optimal Quincunx Filter Banks for Image Coding," *EURASIP Journal on Advances in Signal Processing*, vol. 2007, article ID 83858, 18 pages, 2007, DOI: 10.1155/2007/83858.
5. M. D. Adams and R. K. Ward, "Symmetric-Extension-Compatible Reversible Integer-to-Integer Wavelet Transforms," *IEEE Transactions on Signal Processing*, vol. 51, no. 10, pp. 2624–2636, Oct. 2003, DOI: 10.1109/TSP.2003.816886. Cited by at least 6 journal papers according to ISI Web of Science Citation Index (as of Aug. 2008).
6. M. D. Adams, F. Kossentini, and R. K. Ward, "Generalized S Transform," *IEEE Transactions on Signal Processing*, vol. 50, no. 11, pp. 2831–2842, Nov. 2002, DOI: 10.1109/TSP.2002.804085.
7. M. D. Adams and A. Antoniou, "Reversible EZW-Based Image Compression Using Best-Transform Selection and Selective Partial Embedding," *IEEE Transactions on Circuits and Systems II: Analog and Digital Signal Processing*, vol. 47, no. 10, pp. 1119–1122, Oct. 2000, DOI: 10.1109/82.877156.
8. M. D. Adams and F. Kossentini, "Reversible Integer-to-Integer Wavelet Transforms for Image Compression: Performance Evaluation and Analysis," *IEEE Transactions on Image Processing*, vol. 9, no. 6, pp. 1010–1024, June 2000, DOI: 10.1109/83.846244. **Cited by at least 73 journal papers** according to ISI Web of Science Citation Index (as of Jul. 2009).
9. M. D. Adams and F. Kossentini, "On the Relationship Between the Overlapping Rounding Transform and Lifting Frameworks for Reversible Subband Transforms," *IEEE Transactions on Signal Processing*, vol. 48, no. 1, pp. 261–266, Jan. 2000, DOI: 10.1109/78.815499.

Refereed Conference Publications

1. M. D. Adams, "A Comparison of Two Fully-Dynamic Delaunay Triangulation Methods," in *Proc. of Canadian Conference on Computational Geometry*, Vancouver, BC, Canada, Aug. 2009, pp. 51–54.
2. M. D. Adams, "Progressive Lossy-to-Lossless Coding of Arbitrarily-Sampled Image Data Using the Modified Scattered Data Coding Method," in *Proc. of IEEE International Conference on Acoustics, Speech, and Signal Processing*, Taipei, Taiwan, Apr. 2009, pp. 1017–1020, DOI: 10.1109/ICASSP.2009.4959759.
3. M. D. Adams, "An Evaluation of Several Mesh-Generation Methods Using a Simple Mesh-Based Image Coder," in *Proc. of IEEE International Conference on Image Processing*, San Diego, CA, USA, Oct. 2008, pp. 1041–1044, DOI: 10.1109/ICIP.2008.4711936.
4. M. D. Adams, "On the Coding Gain of Separable 2D Wavelet Filter Banks," in *Proc. of IEEE International Conference on Image Processing*, San Diego, CA, USA, Oct. 2008, pp. 1204–1207, DOI: 10.1109/ICIP.2008.4711977.
5. D. Xu and M. D. Adams, "An Improved Multiscale Normal-Mesh-Based Image Coder," in *Proc. of IEEE Pacific Rim Conference on Communications, Computers and Signal Processing*, Victoria, BC, Canada, Aug. 2007, pp. 50–53, DOI: 10.1109/PACRIM.2007.4313174.
6. Y. Chen, M. D. Adams, and W.-S. Lu, "Design of Optimal Quincunx Filter Banks for Image Coding Using Sequential Quadratic Programming," in *Proc. of IEEE International Conference on Acoustics, Speech, and*

- Signal Processing*, Honolulu, HI, USA, Apr. 2007, vol. 3, pp. 897–900, DOI: 10.1109/ICASSP.2007.366825.
7. D. Xu and M. D. Adams, “Design of High-Performance Filter Banks for Image Coding,” in *Proc. of IEEE International Symposium on Signal Processing and Information Technology*, Vancouver, BC, Canada, Aug. 2006, pp. 868–873, DOI: 10.1109/ISSPIT.2006.270920.
 8. M. D. Adams, “Efficient Breadth-First Implementation of the Wavelet Transform,” in *Proc. of IEEE International Symposium on Signal Processing and Information Technology*, Vancouver, BC, Canada, Aug. 2006, pp. 127–132, DOI: 10.1109/ISSPIT.2006.270783.
 9. Y. Chen, M. D. Adams, and W.-S. Lu, “Design of Optimal Quincunx Filter Banks for Image Coding,” in *Proc. of IEEE International Symposium on Circuits and Systems*, Kos, Greece, May 2006, pp. 2041–2044, DOI: 10.1109/ISCAS.2006.1693016.
 10. P. W. van Vugt and M. D. Adams, “Reversible Integer-to-Integer Wavelet Transforms With Improved Approximation Properties,” in *Proc. of Asilomar Conference on Signals, Systems, and Computers*, Pacific Grove, CA, USA, Oct. 2005, pp. 247–251, DOI: 10.1109/ACSSC.2005.1599742.
 11. Y. Chen, M. D. Adams, and W.-S. Lu, “Symmetric Extension for Two-Channel Quincunx Filter Banks,” in *Proc. of IEEE International Conference on Image Processing*, Genova, Italy, Sept. 2005, vol. 1, pp. 461–464, DOI: 10.1109/ICIP.2005.1529787.
 12. Y. Chen, M. D. Adams, and W.-S. Lu, “Symmetric Extension for Quincunx Filter Banks,” in *Proc. of IEEE Pacific Rim Conference on Communications, Computers and Signal Processing*, Victoria, BC, Canada, Aug. 2005, pp. 542–545, DOI: 10.1109/PACRIM.2005.1517346.
 13. M. D. Adams and R. K. Ward, “JasPer: A Portable Flexible Open-Source Software Tool Kit for Image Coding/Processing,” in *Proc. of IEEE International Conference on Acoustics, Speech, and Signal Processing*, Montreal, PQ, Canada, May 2004, vol. 5, pp. 241–244, DOI: 10.1109/ICASSP.2004.1327092.
 14. M. D. Adams, “Generalized Reversible Integer-to-Integer Transform Framework,” in *Proc. of IEEE Pacific Rim Conference on Communications, Computers and Signal Processing*, Victoria, BC, Canada, Aug. 2003, pp. 569–572, DOI: 10.1109/PACRIM.2003.1235845.
 15. M. D. Adams and R. Ward, “Two Families of Symmetry-Preserving Reversible Integer-to-Integer Wavelet Transforms,” in *Proc. of IEEE International Symposium on Circuits and Systems*, Scottsdale, AZ, USA, May 2002, vol. 2, pp. 600–603, DOI: 10.1109/ISCAS.2002.1011424.
 16. M. D. Adams and R. Ward, “Symmetry-Preserving Reversible Integer-to-Integer Wavelet Transforms,” in *Proc. of IEEE International Conference on Acoustics, Speech, and Signal Processing*, Orlando, FL, USA, May 2002, vol. 3, pp. 2509–2512, DOI: 10.1109/ICASSP.2002.1005195.
 17. M. D. Adams and R. Ward, “Wavelet Transforms in the JPEG-2000 Standard,” in *Proc. of IEEE Pacific Rim Conference on Communications, Computers and Signal Processing*, Victoria, BC, Canada, Aug. 2001, vol. 1, pp. 160–163, DOI: 10.1109/PACRIM.2001.953547.
 18. M. D. Adams and F. Kossentini, “Generalized S Transform,” in *Proc. of IEEE International Conference on Acoustics, Speech, and Signal Processing*, Salt Lake City, UT, USA, May 2001, vol. 3, pp. 1749–1752, DOI: 10.1109/ICASSP.2001.941278.
 19. M. D. Adams and F. Kossentini, “JasPer: A Software-Based JPEG-2000 Codec Implementation,” in *Proc. of IEEE International Conference on Image Processing*, Vancouver, BC, Canada, Oct. 2000, vol. 2, pp. 53–56, (Part of the Special Session on JPEG 2000.) DOI: 10.1109/ICIP.2000.899223.
 20. M. D. Adams and F. Kossentini, “Evaluation of Reversible Integer-to-Integer Wavelet Transforms for Image Compression,” in *Proc. of IEEE International Conference on Image Processing*, Kobe, Japan, Oct. 1999, vol. 3, pp. 541–545, DOI: 10.1109/ICIP.1999.817173.
 21. M. D. Adams and F. Kossentini, “Low-Complexity Reversible Integer-to-Integer Wavelet Transforms for Image Coding,” in *Proc. of IEEE Pacific Rim Conference on Communications, Computers and Signal Processing*, Victoria, BC, Canada, Aug. 1999, pp. 177–180, DOI: 10.1109/PACRIM.1999.799506.
 22. M. D. Adams and F. Kossentini, “Performance Evaluation of Reversible Integer-to-Integer Wavelet Transforms for Image Compression,” in *Proc. of IEEE Data Compression Conference*, Snowbird, UT, USA, Mar. 1999, p. 514, DOI: 10.1109/DCC.1999.785671.

23. I. Balasingham, M. Adams, T. Ramstad, F. Kossentini, H. Coward, A. Perkins, and G. Oien, "Performance Evaluation of Different Filter Banks in the JPEG-2000 Baseline System," in *Proc. of IEEE International Conference on Image Processing*, Chicago, IL, USA, Oct. 1998, vol. 2, pp. 569–573, DOI: 10.1109/ICIP.1998.723525.
24. M. D. Adams and F. Kossentini, "Performance Evaluation of Different Reversible Decorrelating Transforms in the JPEG-2000 Baseline System," in *Proc. of IEEE Symposium on Advances in Digital Filtering and Signal Processing*, Victoria, BC, Canada, June 1998, pp. 20–24, DOI: 10.1109/ADFSP.1998.685687.
25. M. D. Adams and A. Antoniou, "A Multi-Transform Approach to Reversible Embedded Image Compression," in *Proc. of IEEE International Symposium on Circuits and Systems*, Monterey, CA, USA, June 1998, vol. 4, pp. 93–96, DOI: 10.1109/ISCAS.1998.698766.
26. M. D. Adams and A. Antoniou, "Design of Reversible Subband Transforms Using Lifting," in *Proc. of IEEE Pacific Rim Conference on Communications, Computers and Signal Processing*, Victoria, BC, Canada, Aug. 1997, vol. 1, pp. 489–492, DOI: 10.1109/PACRIM.1997.620004.
27. M. D. Adams and A. Antoniou, "A Comparison of New Reversible Wavelet Transforms for Image Compression," in *Proc. of IEEE Pacific Rim Conference on Communications, Computers and Signal Processing*, Victoria, BC, Canada, Aug. 1997, vol. 1, pp. 298–301, DOI: 10.1109/PACRIM.1997.619959.

International Standards Contributions

1. M. D. Adams, "The JPEG-2000 Still Image Compression Standard," *ISO/IEC JTC 1/SC 29/WG 1 N 2412*, Dec. 2005. Available online from <http://www.ece.uvic.ca/~mdadams> and also earlier version published in British Standards Institution document "PD 6777: 2003 Guide to the practical implementation of JPEG 2000," 2003.
2. M. D. Adams, "JasPer Software Status Report (Dec. 2003)," *ISO/IEC JTC 1/SC 29/WG 1 N 3151*, Dec. 2003.
3. M. D. Adams, "JasPer Software Reference Manual," *ISO/IEC JTC 1/SC 29/WG 1 N 2415*, Feb. 2003. Available online from <http://www.ece.uvic.ca/~mdadams>.
4. M. D. Adams, H. Man, F. Kossentini, and T. Ebrahimi, "JPEG 2000: The Next Generation Still Image Compression Standard," *ISO/IEC JTC 1/SC 29/WG 1 N 1734*, June 2000.
5. M. D. Adams and F. Kossentini, "UBC's Comments on the JPEG-2000 WD Version 3.1," *ISO/IEC JTC 1/SC 29/WG 1 N 1522*, Dec. 1999.
6. M. D. Adams and F. Kossentini, "JasPer: UBC's JPEG-2000 Codec Implementation," *ISO/IEC JTC 1/SC 29/WG 1 N 1485*, Dec. 1999.
7. M. D. Adams, I. Kharitonenko, and F. Kossentini, "Report on Core Experiment CodEff4: Performance Evaluation of Several Reversible Integer-to-Integer Wavelet Transforms in the JPEG-2000 Verification Model (Version 2.1)," *ISO/IEC JTC 1/SC 29/WG 1 N 1015*, Oct. 1998.
8. M. D. Adams and F. Kossentini, "Performance Evaluation of the Spatially Segmented Wavelet Transform in the JPEG-2000 Baseline System," *ISO/IEC JTC 1/SC 29/WG 1 N 868*, June 1998.
9. M. D. Adams and F. Kossentini, "SBTLIB: A Flexible Computation Engine for Subband Transforms," *ISO/IEC JTC 1/SC 29/WG 1 N 867*, June 1998.
10. M. D. Adams and F. Kossentini, "Performance Evaluation of Several Reversible Integer-to-Integer Wavelet Transforms in the JPEG-2000 Baseline System (VM Release 0.0)," *ISO/IEC JTC 1/SC 29/WG 1 N 866*, June 1998.
11. M. D. Adams and F. Kossentini, "Performance Evaluation of Different Reversible Decorrelating Transforms in the JPEG-2000 Baseline System," *ISO/IEC JTC 1/SC 29/WG 1 N 750*, Mar. 1998.

Theses, Technical Reports, and Online Content

1. M. D. Adams, *Reversible Integer-to-Integer Wavelet Transforms for Image Coding*, Ph.D. thesis, Department of Electrical and Computer Engineering, University of British Columbia, Vancouver, BC, Canada, Sept. 2002.

Available online from <http://www.ece.uvic.ca/~mdadams>.

2. M. D. Adams, "The JasPer Project Home Page," <http://www.ece.uvic.ca/~mdadams/jasper>, 1999. (Online information for the JasPer Project and JasPer JPEG-2000 software.)
3. M. D. Adams, *Reversible Wavelet Transforms and Their Application to Embedded Image Compression*, M.A.Sc. thesis, Department of Electrical and Computer Engineering, University of Victoria, Victoria, BC, Canada, Jan. 1998.

Student Theses

1. D. Xu, "Improved Subband-Based and Normal-Mesh-Based Image Coding," M.A.Sc. thesis, Department of Electrical and Computer Engineering, University of Victoria, Victoria, BC, Canada, Aug. 2007.
2. Y. Chen, "Design and Application of Quincunx Filter Banks," M.A.Sc. thesis, Department of Electrical and Computer Engineering, University of Victoria, Victoria, BC, Canada, May 2006.