

Anita Berndt

Work Address Dept. of Medical Physics
CancerCare Manitoba
675 McDermot Ave.
Winnipeg, MB, R3E 0V9

Phone Number 204-787-2518

e-mail: anita.berndt@cancercare.mb.ca

DEGREES

September 1995 – December 2001 **Ph.D. in Medical Physics**
University of Manitoba, Dept. of Physics, Winnipeg, MB, R3T 2N2
Thesis topic: A Fourth Generation ^{192}Ir Source-Based CT Scanner for Brachytherapy

September 1993 – August 1995 **Master of Science in Physics**
University of Manitoba, Dept. of Physics, Winnipeg, MB, R3T 2N2
Thesis: A.C. Susceptibility Study of Amorphous $(\text{Fe}_{1-x}\text{Mn}_x)_{75}\text{P}_{16}\text{B}_6\text{Al}_3$

September 1989 – April 1993 **Bachelor of Science in Physics (Honours)**
University of Manitoba, Dept. of Physics, Winnipeg, MB, R3T 2N2

EXPERIENCE

2000 – Present **Radiotherapy Medical Physicist**
CancerCare Manitoba

2001 – Present **Lab / Lecture Contributions to 16.741, 16.737, 16.746 and 16.747**
CancerCare Manitoba

1999- 2000 **Radiotherapy Resident**
CancerCare Manitoba

1996 – 1999 **Physics Assistant Substitute**
CancerCare Manitoba

Summer 1990 – 1993 **Research Assistant**
University of Manitoba, Department of Physics

AWARDS

- 2001 AAPM Young Investigators, Second Place, Award Shared with S. Rathee, D. W. Rickey and J. Bews
- 1999 WESCAN Student Speaking Competition
- 1998 COMP Poster Award, Award Shared with S. Rathee, D. W. Rickey and J. Bews, MHRC Graduate Fellowship
- 1997 University of Manitoba Graduate Fellowship, J. S. Lightcap Award, TransCanada Pipelines Graduate Fellowship in Science, UMSU Scholarship
- 1995 – 1997 NSERC PGS B Scholarship
- 1993 – 1995 NSERC PGS A Scholarship
- 1993 NSERC University Undergraduate Research Award
- 1992 Allen Medal, Sunil K. Sen Scholarship, Professor Robert J. Lockhart Memorial Prize Fund, Canada Scholarship, NSERC University Undergraduate Research Award
- 1991 Samuel M. Neamtan Memorial Scholarship, Canada Scholarship, NSERC University Undergraduate Research Award
- 1990 University Women's Club of Winnipeg Undergraduate Scholarship in Science, Canada Scholarship
- 1989 Kenneth Roulston Memorial Scholarship, Harold R. Coish Memorial Scholarship, Chown Centennial Entrance Scholarship, Canada Scholarship

REFEREED PUBLICATIONS

- J. Beck and A. Berndt, An algorithm for independent verification of Gamma KnifeTM treatment plans, *Med. Phys.*, 31(10) (2004).
- A. Berndt, S. Rathee, D. W. Rickey, J. Bews, An 8-channel Detector for an ¹⁹²Ir Brachytherapy Source-Based Computed Tomography Scanner, *IEEE Transactions on Nuclear Science*, 47(3) (2000).
- A. Berndt, D. W. Rickey, S. Rathee, J. Bews, Size and positioning reproducibility of an ¹⁹²Ir brachytherapy stepping source, *Med. Phys.*, 26(1), 129-131 (2000).
- A. G. Berndt, H. P. Kunkel, G. Williams. Field-dependent ac susceptibility of amorphous (Fe_{1-x}Mn_x)₇₅P₁₆B₆Al₃: Strongly frustrated regime. *Journal of Physics, Condensed Matter*, 10, 8535-8552 (1998).

A. G. Berndt, X. Chen, H. P. Kunkel, G. Williams. Field-dependent ac susceptibility of amorphous $(\text{Fe}_{1-x}\text{Mn}_x)_{75}\text{P}_{16}\text{B}_6\text{Al}_3$: Weakly frustrated regime. *Physical Review B* 52(14): 160 – 169 (1995).

J. S. C. McKee, G. R. Smith, J. J. G. Durocher, H. L. Johnston, M. S. Mathur, J. K. Mayer, A. Mirzai, Y. J. Yeo, A. Hempel (Berndt), H. Hnatiuk, S. King, K. S. Sharma, G. Williams. The role of fractofusion in the creation of anomalies in neutron production from deuterium-implanted solids. *Nuclear Instruments and Methods in Physics Research B* 67: 448-451 (1992).

NON-REFEREED PUBLICATIONS

A. Berndt and J. Beck, Canada's First Gamma Knife (R): Commissioning Report, *Canadian Medical Physics Newsletter*, 50(2), 65-69, 2004.

M. S. Mathur, H. L. Johnston, A. Mizai, J. S. C. McKee, G. R. Smith, J. J. G. Durocher, K. Furutani, J. K. Mayer, Y. J. Yeo, H. Hnatiuk, S. King, A. Hempel (Berndt), K. S. Sharma, G. Williams. Recent modifications to the Manitoba Deuterium Implantation Accelerator and a study of the properties of the online neutron monitor detector. *Conference Proceedings "The Science of Cold Fusion"* 33: 283-288 (1998).

A. Hempel (Berndt), H. Hnatiuk, S. King. Maximising heat dissipation from hot coffee. *Physics in Canada*, Nov.: 201-202 (1991).

S. King, A. Hempel (Berndt). A new design for the Canadian greenhouse. *Physics in Canada*, March: 76-77 (1991).

PRESENTATIONS

Stephen Pistorius, A. Berndt, J. Beck, K. Jabbari, B. McCurdy, P. Potrebko, N. Venugopal, N. Sidhu, P. Cadman, S. Sidhu, C. Lapointe (presented by Stephen Pistorius). *Radiotherapy Physics Research in Manitoba & Saskatchewan: Subtitle - Keeping it Simple, Smart and Successful*, (Invited Lecture) Elekta Research Symposium on "Innovations in Radiation Oncology in Canada - Clinical Research Programs", CARO-ACRO Annual Scientific Meeting, Halifax, NS, Sept 9, 2004.

A. Berndt and J. Beck. Gamma Knife[®] Commissioning Report. Presented at the Canadian Organization of Medical Physicists Annual Meeting, Winnipeg, MB, June 13-17 (2004).

J. Beck and A. Berndt. An Algorithm for Independent Verification of Gamma Knife[®] Treatment Plans. Presented at the Canadian Organization of Medical Physicists Annual Meeting, Winnipeg, MB, June 13-17 (2004).

- H. Johnson and A. Berndt. Licensing, Construction and Radiation Safety of Canada's First Gamma Knife[®]. Presented at the Canadian Organization of Medical Physicists Annual Meeting, Winnipeg, MB, June 13-17 (2004).
- A. Berndt, Gamma Knife Stereotactic Radiosurgery. Presented at WESCAN, Winnipeg, MB, March 19 – 22 (2003).
- A. Berndt, D. W. Rickey, S. Rathee, J. Bews, Source and Positioning Reproducibility of an ¹⁹²Ir Brachytherapy Stepping Source. Presented at WESCAN, Saskatoon, SK, March 30 – April 1 (2000).
- S. Rathee, A. Berndt, D. W. Rickey, J. Bews, An 8-channel Detector for an ¹⁹²Ir Brachytherapy Source Based Computed Tomography Scanner. American Society for Therapeutic Radiology and Oncology. San Antonio, TX, Oct.31 - Nov.4, Int. J. of Rad. Onc. 45:3, Supplement (1999).
- S. Miller, C. Jeffrey, J. Bews, A. Berndt, Virtual Reality Assisted Brachytherapy. American Society for Therapeutic Radiology and Oncology. San Antonio, TX, Oct.31 – Nov 4, Int. J. of Rad. Onc. 45:3, Supplement (1999).
- A. Berndt, S. Rathee, D. W. Rickey, J Bews, An 8-channel Detector for an ¹⁹²Ir Brachytherapy Source Based Computed Tomography Scanner. AAPM, Nashville, TN, July 25-29, Medical Physics 26:6 (1999).
- A. Berndt, S. Rathee, D. W. Rickey, J Bews, An 8-channel Detector for an ¹⁹²Ir Brachytherapy Source Based Computed Tomography Scanner. Presented at WESCAN, Kelowna BC, March 25-27 (1999).
- A. Berndt, S. Miller, C. Jeffrey, J. Bews, A Virtual Reality Assisted Brachytherapy Prototype. Presented at WESCAN, Kelowna BC, March 25-27 (1999).
- A. Berndt, J. Bews, C. Jeffrey, S. Miller, S. Rathee, D. W. Rickey, S. Pistorius. Advances in Medical Physics. Presented at the 13th Annual Community Cancer Programs Network Symposium, Winnipeg, October 22-24 (1998).
- S. El-Sayed, J. Bews, S. Miller, A. Berndt, D. Christle, S.Pistorius, R. Nason, K. Jones. Virtual Reality Brachytherapy: From Dream to Reality. ESTRO (1998).
- A. Berndt, J. Bews, S. Rathee, D. W. Rickey. "A High-Dose-Rate Brachytherapy Computed Tomography Scanner". Presented at the Canadian Organization of Medical Physicists Annual Meeting, London, ON, June 19 -21 (1998).
- A. Berndt, S. Miller, J. Bews, D. Christle, S. Pistorius. "Virtual Reality Assisted Brachytherapy". Presented at the American Association of Physicists in Medicine Conference, San Antonio, TX, August 9-13 (1998).

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- S. Miller, A. Berndt, J. Bews, B. McCurdy, W. Kinsner. “An Implementation of a Virtual Reality Interstitial Brachytherapy System”. Presented at the Canadian Conference for Electrical and Computer Engineering, Waterloo, ON, May 23-27 (1998).
- J. Bews and A. Berndt. Virtual Reality Assisted Brachytherapy. Presented at the Canadian Organization of Medical Physicists Conference, Charlottetown, PEI, July 10-12 (1998).