

## CURRICULUM VITAE

### ROBERTO J. NICOLALDE

Research Assistant Professor

Dartmouth Medical School

Radiology Department

7785 Vail Room 704

Hanover, NH 03755

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## EDUCATION

### Ph.D. in Evaluative Clinical Sciences

2006 – 2010

*Dartmouth College*

Hanover, NH

- Dissertation Title: A Methodology for Evaluating the Development of New Clinical Emergency Response Technologies: Testing its Validity Using the Case of Electron Paramagnetic Resonance Dosimetry.
- Committee: Harold M. Swartz (chair)  
George T. Blike (Human Factors)  
Robert M. Gougelet (Emergency Response)  
Ann Barry Flood (Health Policy, Technology Assessment)

### M.S. in Industrial Engineering – Human Factors

2000 – 2004

*Oregon State University*

Corvallis, OR

- Thesis Title: The Augmented Stage Model of Human Information Processing: How Well Do Cognitive Abilities Predict Concurrent Task Management Performance?
- Committee: Kenneth H. Funk (chair, Human Factors and Systems Engineering)  
Rob Uttl (Psychology)  
Richard Billo (Industrial Engineering)

### B.S. in Industrial Engineering

1996 – 2000

*Universidad San Francisco de Quito*

Quito, Ecuador

- Senior year at Oregon State University (Exchange Program – full scholarship)

### *Other Certificates*

Six Sigma Green Belt

2006

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## RESEARCH INTERESTS

- human factors and ergonomics design in new clinical technologies and systems
- healthcare processes and systems modeling, simulation and redesign
- development and evaluation of new clinical devices for emergency response
- mathematical modeling and optimization in emergency response systems
- probabilistic risk assessment, failure mode and effect analysis, and root cause analysis for clinical processes
- distributed multi agent systems and parallel computing for real time clinical decision support systems
- cost and comparative effectiveness of new medical technologies
- health policy and regulatory approval of new emergency response clinical technologies

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## ACADEMIC POSITIONS

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<b>Research Assistant Professor</b> Radiology Department <i>Dartmouth Medical School</i>	Jun, 2010 – Present  Hanover, NH
<b>Research and Teaching Assistant</b> The Dartmouth Institute for Health Policy and Clinical Practice <i>Dartmouth Medical School</i>	2006 – 2010  Hanover, NH
<b>Research and Teaching Assistant</b> Department of Industrial and Manufacturing Engineering <i>Oregon State University</i>	2000 – 2006  Corvallis, OR

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## TEACHING EXPERIENCE

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<b>Dartmouth College</b> <i>Teaching Assistant</i>	Hanover, NH
• ECS 142: Epidemiology and Biostatistics II (Advanced Regression Models)	Winter 2007
• ECS 101: Health Policy	Winter 2008
<b>Oregon State University</b> <i>Teaching Assistant</i>	Corvallis, OR
Selected to teach two full upper level and graduate classes at Oregon State University after professor's departure. Developed and give lectures three hours a week, developed exams, and implemented problem-based learning projects. Interacted with a diverse group of national and international students.	
• IE412/512: Information Systems Engineering	Fall 2005
• IE445/545: Human Factors Engineering	Fall 2004
Provided teaching assistance for the following engineering courses. Conducted labs, assisted in the grading of exams, held office hours.	
• Human-Machine Systems Engineering	Spring 2006
• Work Design	Winter 2006
• Human Factors Engineering	Winter 2003
• Industrial Ergonomics/Occupational Biomechanics	Winter 2003
• Facility Design and Operations Management	Fall 2002

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## RESEARCH EXPERIENCE

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<b>Dartmouth Medical School</b> <i>Research Assistant Professor</i>	Hanover, NH
Human Machine Systems Engineer and Project Manager. U19 AI067733 Multi-Center Grant (PI-Swartz HM)	Jun 2010 – Present
• Conduct research and development on a new magnetic resonance medical technology.	
• Lead the human interface design, implementation and testing for the new medical device.	
• Conduct usability testing, cognitive task analysis, and computer interface design and testing.	

**Dartmouth Medical School, The EPR Center***Research Assistant*

Hanover, NH

Jul 2006- Jun 2010

- Collaborated on a multidisciplinary team of researchers and engineers for the design, implementation and testing of a new emergency response technology for the rapid screening of mass casualties in the event of catastrophic exposures to radiation.
- Integrated engineering processes and tools; regulatory policies; and policy and funding considerations to guide the development of a new emergency response technology and for its integration in the current system of emergency response for catastrophic events.
- Used simulation exercises to gather users and stakeholders' feedback and input into the development and implementation process of the emergency response technology.
- Developed a framework for evaluating the costs and benefits of different supply chain strategies for responding to mass casualty incident involving radiation exposures.
- Conducted clinical studies in cancer patients using in vivo Electron Paramagnetic Resonance to measure radiation dose.
- Collaborated on writing and execution of two DARPA funded contracts to develop a high throughput-low cost biologically based triage system for radiation measurements of radiation-induced changes in teeth in vivo and fingernails in vitro using Electron Paramagnetic Resonance (EPR) dosimetry.
- Collaborated in the design and execution of experiments to measure Rhesus Macaques using in vivo Electron Paramagnetic Resonance Measurements
- Conducted a meta-analysis comparing the efficacy between in vitro Electron Paramagnetic Resonance and the cytogenetic based assay for estimating radiation dose exposures in humans. Paper in progress.

**The Dartmouth Institute for Health Policy and Clinical Practice***Research Collaborator*

Lebanon, NH

Fall &amp; Winter 2008

Collaborated in the research and preparation of a background paper titled "Incentives to Improve the Evidence Base of Surgical Procedures" for a workshop held in Washington DC in April 2008.

Workshop title: Surgical and Minimally Invasive Therapeutic Procedures: Devising Incentives to Improve the Evidence Base.

**Oregon State University***Research Assistant*

Corvallis, OR

Jun 2000- Jul 2006

Jun 2000- Aug 2005

- Federal Aviation Administration Grant, (PI: Dr. Ken Funk)  
Collaborated on development of an Information System and user interface to aid the certification process of aircraft equipment with regard to Human Factors Consideration.
- Operating Room Systems-Engineering Project, (PI: Dr. Ken Funk) Mar 2003- Jul 2006  
Collaborated in a multidisciplinary team for the development of a comprehensive functional model of the operating room (OR), as a dynamic system, using IDEF0 to help understand the design and system interaction issues that lead to mishaps in the OR environment. Paper was published.
- NASA funded 'Cockpit Task Management' Grant, (PI: Dr. Ken Funk) Sep 2002- Mar 2003  
Designed, planned, ran and evaluated an experiment that involved 15 pilots. Investigated the effect of a new training program on the pilots' concurrent task management ability.
- NASA funded 'Cockpit Task Management' Grant, (PI: Dr. Ken Funk) May 2000-Sep 2002  
Designed, planned, ran and evaluated an experiment that involved 94 participants. Investigated the cognitive abilities that influence concurrent task management. Developed several user-interfaces.

- Boeing funded Grant, (PI: Dr. Jeff Woldstad) Jan 2001-May 2001  
Developed a biomechanical model of the neck and shoulders that could predict how working postures and forces external to the body would result in internal stresses.
- NASA funded 'Cockpit Task Management' Grant, (PI: Dr. Ken Funk) Mar - May 2001  
Developed an Experimental Flight Simulator to be used in the data collection and analysis of Task Management factors that affects pilots' performance in the cockpit environment.

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## PROFESSIONAL EXPERIENCE

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### **Nicolalde R&D, LLC.**

*Founder, President and CEO*

Thetford, VT  
2010 – Present

Conduct research and development in the emergency response domain.

Prepare and submit SBIR grants for developing emergency response technologies.

One SBIR Phase 1 funded and in progress, two other under review.

### **Bauer Labs Inc.**

*Vice-president for Research and Development*

Florence, OR  
2004 – Present

Developed and patented a distributed multi agent system for monitoring clinical processes and alert clinicians about potential errors.

Prepare and submit SBIR grants.

### **Clin-EPR, LLC**

*Consultant*

Lyme, NH  
2008 – 2010

Medical R&D, and SBIR grant writing.

### **Dartmouth-Hitchcock Medical Center (DHMC)**

*Consultant*

Lebanon NH  
Fall 2007

Health Systems Analyst for developing fast response clinical teams.

### **Department of Health and Human Services**

*Consultant*

New Hampshire  
Winter 2007

Health Systems and Health Care Quality Analyst for improving long term care for the elderly.

### **Department of Transportation**

*Consultant*

Oregon  
Feb 2006- Aug 2006

Systems Engineer. Designing, implementing and testing Global Positioning Systems (GPS).

### **General Motors**

Manufacturing and Quality Control Departments

*Industrial and Manufacturing Intern*

Quito, Ecuador

May 1999- Sep1999

Responsible for the implementation and certification of ISO 9000. Developed a prototype for a new workstation following Human Factors considerations.

### **Pioneer Electronics**

Logistic Department

*Industrial and Manufacturing Intern*

Quito, Ecuador

Summer 1998

Responsible for Production Planning, Quality Control, Inventory Administration, Warehouse Administration, Just-in-time delivery (JIDOKA) and the KANBAN system.

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## RESEARCH FUNDING

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### Current

BARDA-09-34 (Swartz, PI) - \$30,000,000

09/01/11 – 10/31/16

In Vivo Electron Paramagnetic Resonance (EPR) Tooth Dosimetry for Rapid Point-of-Care Diagnostic of Absorbed Doses of Ionizing Radiation.

To develop a FDA approved EPR spectrometer for measuring radiation doses in humans after a catastrophic nuclear event.

Role: Human Factors and Systems Engineer

IPA (Elwy, PI) - \$25,000

08/01/11 – 12/30/11

Department Of Veterans Affairs, New England Healthcare Engineering Partnership Veterans Engineering Resource Center. This grant is aimed at improving the process of depression screening by incorporating veterans' perspectives of their care into this process. Our long-term objective is to improve the quality of VA depression treatment through improvements in the depression screening process.

Role: Consultant

NIH/NIEHS 1R43 (SBIR) ES020135-01 (Rea, PI) - \$100,000

08/01/11 – 7/31/12

First Responders e-Training Curricula for Mass Screening After a Nuclear Event

This grant is aimed at developing e-training curricula for First Responders, Skilled Service Personnel (SSP), and volunteers to respond to a catastrophic nuclear event that requires the screening and medical triage of larger numbers of potential victims.

Role: Key Personnel

U19 AI091173-01 (Swartz, PI) – 16,000,000

08/1/10 - Present

National Institute of Health. Center Title: Dartmouth Biodosimetry Center for Medical Countermeasures against Radiation.

Role: Key Personnel Project / Project Manager, Human Factors Engineer.

### Completed

VA NEHCEP Pilot Grant

Nov 2010- Sep 2011

Department Of Veterans Affairs, New England Healthcare Engineering Partnership Veterans Engineering Resource Center, Pilot Grant.

Role: Principal Investigator. Amount: \$25,000.

Agency for Healthcare Research and Quality's (AHRQ) National Research Service Award, Institutional Training Grant (PI - Flood)

07/2007- 06/2009

Role: Pre-Doctoral Training Fellow.

HR0011-08-C-0022 (Swartz, PI)

01/08-09/2009

DARPA (Defense Advanced Research Projects Agency), High Throughput-Low Cost Biologically Based Triage for Radiation Exposure Based on EPR Measurements of Radiation-Induced Changes in Fingernails and Toenails. Role: Key Personnel.

HR0011-08-C-0023 (Swartz, PI)

01/08-09/2009

DARPA (Defense Advanced Research Projects Agency), High Throughput-Low Cost Biologically Based Triage for Radiation Exposure Based on EPR Measurements of Radiation-Induced Changes in Teeth. Role: Key Personnel.

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## HONORS & AWARDS

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- Member of the Sigma Xi Scientific Honor Society 2010 - present
- Agency for Healthcare Research and Quality's (AHRQ),  
National Research Service Award Fellow 2007-2009
- Bauer Labs Scholarship Summer 2004
- Finalist for the University Club Foundation Fellowship 2004
- Selected Member of the Alpha Pi Mu Engineering Honor Society 2003 - present
- Full scholarship from Oregon State University and Universidad San Francisco de Quito 1999-2002

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## INVITED TALKS

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- Faculty Seminar, School of Mechanical, Industrial and Manufacturing Engineering,  
Oregon State University, Corvallis, OR May 27<sup>th</sup>, 2011
- Guest Lecturer, IE548 Cognitive Engineering course,  
Oregon State University, Corvallis OR May 26<sup>th</sup>, 2011
- Guest Lecturer, ENGS 06 Technology and Biosecurity,  
Thayer School of Engineering, Dartmouth College, Hanover, NH May 24<sup>th</sup>, 2011
- Graduate Speaker, Graduation Day, Dartmouth College, Hanover, NH June 2010
- Graduate Speaker, Graduation Day, Oregon State University, Corvallis, OR June 2004
- Lectured on Concepts of Quality and Manufacturing at the 66<sup>th</sup> Annual Surgical Update of the  
International College of Surgeons and the American Academy of Neurological and Orthopedic  
Surgeons, Alaska Summer 2004
- Guest Lecturer, IE445/545 Human Factors course Fall 2002  
Oregon State University, Corvallis, OR,

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## PROFESSIONAL MEMBERSHIPS

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- Member of the Institute of Industrial Engineers 2001 - present
- Human Factors and Ergonomics Society 2004 - present
- AcademyHealth 2008 - present

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## PATENTS

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- Patent US 7966269 B2: Intelligent Human-Machine Interface. June 2011
- Patent WO 2007/048137 A2: Intelligent Human-Machine Interface April 2007
- Patent Pending WO/2010/047879: System and Method for Post-Exposure Dosimetry Using Electron  
Paramagnetic Resonance Spectroscopy Submitted 2010
- Two others in progress.

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## LANGUAGES

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- English (Fluent)
- Spanish (Native Speaker)
- French (Conversational)

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## PUBLICATIONS PEER REVIEWED

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- Flood AB, **Nicolalde RJ**, Demidenko E, Williams BB, Shapiro A, Wiley AL, Swartz HM. A framework for comparative evaluation of dosimetric methods to triage a large population following a radiological event. In press Radiation Measurements. 2011. DOI: 10.1016/j.radmeas.2011.02.019
- Swartz HM, Williams BB, **Nicolalde RJ**, Demidenko E, Flood AB. Overview of Biodosimetry for Management of Unplanned Exposures to Ionizing Radiation. In press Radiation Measurements. 2011. DOI: 10.1016/j.radmeas.2011.03.011
- Williams BB, Dong R, Flood AB, Grinberg O, Kmiec M, Lesniewski PN, Matthews TP, **Nicolalde RJ**, Raynolds T, Salikhov I, Swartz HM. In Vivo EPR Tooth Dosimetry for Triage After a Radiation Event Involving Large Populations. In press Radiation Measurements. 2011. doi:10.1016/j.radmeas.2011.03.009
- **Nicolalde RJ**, Gougelet RM, Rea M, Williams BB, Dong R, MD; Kmiec M, Lesniewski P, Swartz HM. The View from the Trenches: Part 2—Technical Consideration for EPR Screening. Health Phys 98(2):128-135; 2010.
- Williams BB, Dong R, Kmiec M, Burke G, Corliss B, Demidenko E, Gladstone D, Grinberg O, **Nicolalde RJ**, Pollack J, Raynolds T, Salikhov I, Sucheta A, Lesniewski P, Swartz HM. Radiation dose estimation from EPR tooth measurements. Health Phys 98(2):327-338; 2010.
- Gougelet RM, **Nicolalde RJ**, Rea M, Geiling JA, and Swartz HM. The View from the Trenches: Part 1—Emergency Medical Response Plans and the Need for EPR Screening. Health Phys 98(2):118-127; 2010.
- Rea M, Gougelet RM, **Nicolalde RJ**, and Swartz HM. Proposed Triage Categories Using High Accuracy Biodosimetry Methods. Health Phys 98(2):136-144; 2010.
- Swartz HM, Flood AB, Gougelet RM, **Nicolalde RJ**, Rea ME, Williams BB. A Critical Assessment of Biodosimetry Methods for Large Scale Incidents. Health Phys 98(2):95-108; 2010.
- Funk KH, Bauer JD, Doolen TL, Telasha D, **Nicolalde RJ**, Reeber M, Yodpigit N, and Long M. Use of Modeling to Identify Vulnerabilities to Human Error in Laparoscopy. Journal of Minimally Invasive Gynecology 17:311-320;2010.
- Swartz HM, Burke G, Coey M, Demidenko E, Dong R, Grinberg O, Hilton J, Iwasaki A, Lesniewski P, Kmiec M, Lo K, **Nicolalde RJ**, Ruuge A, Sakata Y, Sucheta A, Walczak T, Williams BB, Mitchell CA, Romanyukha A, and Schauer DA. In vivo EPR for dosimetry. Radiat Meas 42(6-7):1075-84; 2007.
- Flood AB, Bhattacharyya S, **Nicolalde RJ**, Swartz HM. Implementing EPR Dosimetry for Life-Threatening Incidents: Factors Beyond Technical Performance. Radiation Measurements 42(6-7):1099-1109; 2007.
- Swartz HM, Burke, G., Coey M., Demidenko, E., Dong, R., Grinberg, O., Hilton, J., Iwasaki, A., Lesniewski, P., Kmiec, M., Lo, K.M., **Nicolalde, RJ.**, Ruuge, A., Sakata, Y., Sucheta, A., Walczak, T., Williams, BB., Mitchell, C., Romanyukha, A., Schauer, D.A. In Vivo EPR For Dosimetry. Radiation Measurements 42(6-7): 1075-1084; 2007.

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## CONFERENCE PROCEEDINGS - PEER REVIEWED

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- Funk K, Doolen T, **Nicolalde RJ**, Bauer JD, Telasha DP, Reeber M. “A Methodology to Identify Systemic Vulnerabilities to Human Error in the Operating Room,” Proceedings of the Human Factors And Ergonomics Society 50th Annual Meeting, San Francisco, CA, 16-20, pp. 999-1003; 2006.
- **Nicolalde RJ**, Funk K, and Uttl B. “How Well Do Cognitive Abilities Predict Concurrent Task Management Performance?,” Proceedings of the IIE 2003 Annual Conference, Portland, OR, May 17-21, 2003

- Funk K, **Nicolalde RJ**, and Bishara S. “Can Concurrent Task Management Be Trained?,” Proceedings of the 12th International Symposium on Aviation Psychology, Dayton, OH, April 14-17, 2003.
- Woldstad JC, **Nicolalde RJ**. The Contribution of Hand Loads to Cervical Disc Compression, Proceedings, 45th Annual Meeting of Human Factors Society, Minneapolis, MI, 2001.

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## PUBLICATIONS IN PROGRESS

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- **Nicolalde RJ**, Flood AB, Swartz HM, Developing Technologies for Point-of-Care Diagnosis Under Emergency Conditions Involving Large Numbers of Individuals. In preparation.
- **Nicolalde RJ**, et al., Method to Advance and Evaluate Biodosimetric Technologies, to be submitted to the International Journal of Radiation Biology. In preparation.

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## CONFERENCE PRESENTATIONS

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- Flood AB, Demidenko E, **Nicolalde RJ**, Shapiro A, Wiley A, Williams B, Zubkoff L, Swartz HM. Evaluating the Evidence for Current Guidelines to Triage a Large Population Following a Major Radiation Event. Presentation at Annual meeting of Nuclear Medical Defense Conference. May 16-17, 2011. Munich Germany.
- Flood, AB, **Nicolalde RJ**, Demidenko E, Williams BB, Shapiro A, Wiley, Jr. AL, Swartz HM. Evaluating the Evidence Base for Current Guidelines to Triage a Large Population Following a Nuclear Event. Podium presentation at EPR Biodose 2010 (combined meetings of the International Symposium on EPR dosimetry and Dating and the International Conference on Biological Dosimetry), Mandelieu-La-Napoule, France. October 10-14, 2010
- Williams BB, Dong R, **Nicolalde RJ**, Raynolds T, Lesniewski P, Grinberg O, Sidabras J, Hyde J, Swartz HM. In vivo EPR radiation biodosimetry: Overview and progress towards field deployment. 56th Annual Meeting Radiation Research Society. Maui, Hawaii, 2010.
- Flood AB, **Nicolalde RJ**, Gougelet R, Williams BB, Swartz HM. Evaluating The Effectiveness Of EPR Dosimetry For Triage Following A Catastrophic Nuclear Event. A Joint Conference of the 14th In Vivo EPR Spectroscopy and Imaging and the 11th International EPR Spin Trapping/Spin Labeling, San Juan, Puerto Rico, May 2-6, 2010
- Dong R, Salikhov I, Kmiec M, Lesniewski PN, Matthews TP, **Nicolalde RJ**, Raynolds T, Williams BB, Swartz HM. Development and Validation of Model Systems to Accurately Simulate In Vivo Conditions for Tooth Dosimetry. EPR2010 A Joint Conference of the 14th In vivo ESR/EPR Spectroscopy & Imaging and the 11th International EPR Spin Trapping/Spin Labeling, San Juan, Puerto Rico, (2010).
- Williams BB, Dong R, Demidenko E, Grinberg O, Gui J, He X, Kmiec M, Matthews T, **Nicolalde RJ**, Pollack J, Raynolds T, Ruuge A, Salikhov I, Wilcox D, Lesniewski P, Swartz HM. In Vivo EPR Radiation Biodosimetry Overview and Progress Towards Field Deployment. EPR2010 A Joint Conference of the 14th In vivo ESR/EPR Spectroscopy & Imaging and the 11th International EPR Spin Trapping/Spin Labeling, San Juan, Puerto Rico, (2010).
- Swartz HM, Williams BB, Khan N, Dong R, Hou H, Lesniewski P, Kmiec M, Lariviere J, Matthews T, Raynolds T, Grinberg O, Salikhov I, Demidenko E, **Nicolalde RJ**, Flood AB, Hartford A, Zaki B, Jarvis L, Chen E, Gladstone D. Clinical EPR: Challenges and Progress. EPR2010 A Joint Conference of the 14th In vivo ESR/EPR Spectroscopy & Imaging and the 11th International EPR Spin Trapping/Spin Labeling, San Juan, Puerto Rico, (2010).



- Swartz HM, Demidenko E, Dong R, Grinberg OY, Gui J, He X, Lesniewski P, Li H, **Nicolalde RJ**, Ruuge A, Wilcox D, Williams BB. Use of EPR for dosimetry for management of potential radiation exposures to a large population. 54th Annual Radiation Research Society, Savannah, GA, (2009)
- Ann Barry Flood, Harold M. Swartz, Roberto Javier **Nicolalde**. 'Policy Considerations in Approving and Implementing EPR Dosimetry to Manage Radiation Exposure to a Large Population'. ICRB 2008: International Conference on Radiation Biology & Translational Research in Radiation Oncology. Jaipur, India, November 10- 12, 2008.
- Williams BB, Dong R, Kmiec M, Sucheta A, Demidenko E, Lesniewski P, Ruuge A, Gui J, Li H, He X, Grinberg O, **Nicolalde RJ**, Romanyukha A, and Swartz HM. Spatially Resolved Biodosimetry based on Electron Paramagnetic Resonance of Teeth and Fingernails, Partial-Body Radiation Diagnostic Biomarkers and Medical Management of Radiation Injury Workshop, AFRRI, Bethesda, Maryland, 2008
- Williams BB, Dong R, Kmiec M, Burke G, Corliss B, Demidenko E, Grinberg O, **Nicolalde R**, Pollack J, Raynolds T, Salikhov I, Sucheta A, Lesniewski P, Swartz H. In Vivo EPR Tooth Dosimetry. Biodose 2008, Hanover, NH, (2008).
- Dong R, Williams BB, Kmiec M, Demidenko E, Sucheta A, Raynolds T, **Nicolalde RJ**, Lesniewski P, Burke G, Swartz HM. Estimation of Radiation Doses of Teeth Using In Vivo EPR Spectroscopy. Biodose 2008, Hanover, NH, (2008).
- Swartz HM, Williams BB, Khan N, Dong R, Sucheta A, Sakata Y, Lesniewski P, Kmiec M, Burke G, Ruuge A, Gubaydullin F, Li H, Lu S, LaRiviere J, Demidenko E, **Nicolalde RJ**, Hartford A, Zaki B, Ernstoff M, Gladstone D. Overview Of In Vivo EPR For Use In Human Subjects. 12th In Vivo EPR Spectroscopy and Imaging Conference, Chicago, IL, (2007).
- Bauer JD, **Nicolalde RJ**, Funk K, Stebel J. Analyzing Tension Free Vaginal Tape: Obturator (TVT-O) Suburethral Sling Procedures with Integrated Definition (IDEF-0) Modeling Language and Performance Audits of Intraoperative Video, Journal Of The Society Of Laparoendoscopic Surgeons 10(3); 2006.
- Bauer JD, Funk KH, Doolen T, Hasson HM, **Nicolalde RJ**, Modeling the Process of Surgery, Open Laparoscopy, AAGL 32nd Annual Meeting, Las Vegas, NV, 2003.

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## POSTERS

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- **Nicolalde RJ**, Blike GT, Dong R, Flood AB, Gougelet RM, Grinberg O, Kmiec MM, Matthews TP, Lesniewski PN, Rea ME, Raynolds T, Williams BB, Swartz, HM. EPR Dosimetry for Triaging Mass Casualties After Catastrophic Nuclear Events: Three Simulation Exercises. Poster presentation at EPR Biodose 2010 (combined meetings of the International Symposium on EPR dosimetry and Dating and the International Conference on Biological Dosimetry), Mandelieu-La-Napoule, France. October 10-14, 2010
- Flood AB, **Nicolalde RJ**, Demidenko E, Williams BB, Shapiro A, Wiley AL, Swartz HM. A Framework for Comparative Evaluation of Dosimetric Methods to Triage a Large Population Following a Nuclear Event. International Conference on Radiation Biology, India, 2010.
- **Nicolalde RJ**, Flood AB, Gougelet RM, Blike GT, and Swartz HM, A Conceptual Framework to Evaluate the Cost-Effectiveness of Alternatives to Triage Mass Casualties after a Catastrophic Nuclear Event, AcademyHealth Annual Research Meeting, Boston, 2010.
- **Nicolalde RJ**, Flood AB, Gougelet RM, Blike GT, Rea M, Dong R, Kmiec M, Grinberg O, Matthews TP, Lesniewski PN, Raynolds T, Williams B, and Swartz HM. Using Simulation Exercises to Test Field-Readiness of Biodosimetry for Triaging Mass Casualties: EPR Dosimetry. EPR BioDose 2010: International Symposia on EPR Dosimetry and Dating (EPR) and the International Conference on Biological Dosimetry (BioDose), Cannes, France 2010.

- Dong R, Salikhov I, Kmiec M, Lesniewski PN, Matthews TP, **Nicolalde RJ**, Raynolds T, Williams BB, Swartz HM. Development and Validation of Model Systems to Accurately Simulate In Vivo Conditions for Tooth Dosimetry. EPR2010 A Joint Conference of the 14th In vivo ESR/EPR Spectroscopy & Imaging and the 11th International EPR Spin Trapping/Spin Labeling, San Juan, Puerto Rico, (2010).
- **Nicolalde RJ**, Gougelet RM, Food AB, Rea M, Blike GT, Williams BB, Dong R, Kmiec M, Swartz HM. Breaking the Translational Gap in the Development of Emergency Response Technologies. 2009 Annual Research Meeting of AcademyHealth, Chicago, 2009.
- Swartz HM, Demidenko E, Dong R, Grinberg OY, Gui J, He X, Lesniewski P, Li H, Kmiec M, Raynolds T, **Nicolalde RJ**, Ruuge A, Williams BB. Use of EPR for Dosimetry for Management of Potential Radiation Exposures to a Large Population. 55th Annual Meeting of the Radiation Research Society, Savannah, GA, 2009.
- **Nicolalde RJ**, Gougelet RM, and Swartz HM, EPR Dosimetry for the Process of Triaging Mass Casualties After a Catastrophic Nuclear Event: A Simulation Exercise. Biodose-2008: The 8<sup>th</sup> International Symposium of EPR Dating and Dosimetry and 3<sup>rd</sup> Joint International Conference on Biodosimetry, Hanover, NH, 2008.
- **Nicolalde RJ**, Toler AWJ. A Structured Literature Review of Electron Paramagnetic Resonance (EPR) Versus the Cytogenetic Chromosome Analysis (CCA) for the Measurement of Radiation Exposures in Humans. 2008 Annual Research Meeting of AcademyHealth, Washington DC, 2008.
- **Nicolalde RJ**, Swartz HM, & Gougelet RM. A Process For The Medical Triage Of Acute Radiation Syndrome Using In-Vivo Epr Dosimetry, 12th In Vivo EPR Spectroscopy and Imaging Conference, Chicago, 2007
- **Nicolalde RJ**, Funk K, Doolen T, Bauer JD, Human Error Vulnerability Analysis in Healthcare: A Systematic Comparison of Methodologies, 11th International Scientific Symposium on Improving Quality and Value in Health Care, Orlando, 2005.

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## TECHNICAL REPORTS

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- Funk K, Colvin K, Bishara S, **Nicolalde RJ**, Shakeri S, Chen J, Braune R. Training Pilots to Prioritize Tasks: Theoretical Foundations and Preliminary Experiments, Final Report, NASA Grant NAG 2-1287, July 2003.

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## IMMIGRATION AND WORK STATUS

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Permanent Resident (Green Card)  
Eligible for US Citizenship in April 2010

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## REFERENCES

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Harold M. Swartz, MD, Ph.D.  
Professor of Radiology, Physiology and Biomedical Engineering, Dartmouth College  
Phone Number: 603-650-1955  
Email Address: [harold.m.swartz@dartmouth.edu](mailto:harold.m.swartz@dartmouth.edu)

Ken Funk, Ph.D.  
Associate Professor of Industrial Engineering, Oregon State University  
Phone Number: 541-737-2357  
Email Address: [funkk@enr.orst.edu](mailto:funkk@enr.orst.edu)

Richard Billo, Ph.D.

Associate Dean and Professor of Engineering, University of Texas at Arlington

Phone Number: 817-272-2708

Email Address: richard.billo@uta.edu

Robert Gougelet, MD.

Assistant Professor of Medicine, Dartmouth College

Phone Number: 603-520-5958

Email Address: Robert.Gougelet@dartmouth.edu

Ann B. Flood Ph.D

Professor of Health Policy and Clinical Practice, Dartmouth College

Phone Number: 603-795-4919

Email Address: Ann.B.Flood@dartmouth.edu

James Bauer, MD,

Physician/Surgeon, Peace Health, Oregon

Phone Number: 541-451-7600

Email Address: dr.james.d.bauer@comcast.net