

# Rita T. Roy, MD

703-927-5378 [rtroy@mac.com](mailto:rtroy@mac.com) 11718 Bowman Green Drive, Suite 100 Reston Virginia 20190

## Profile

Dr. Roy is the CEO of the National Spine Health Foundation where she oversees all aspects of operations, furthering the three part mission to improve spinal health care for all Americans through patient education, advocacy and research. A general surgeon by training, Dr. Roy has served the medical education and communication sectors for over thirty years. As a successful entrepreneur, she has delivered innovative strategies to drive profitability, taking companies through successful acquisitions and mergers. Previously, she served as Co-Founder and President of Astute Technology until its acquisition in 2016 by Echo 360, Inc. Prior to that, she co-founded Medical Consumer Media (MCM) where she served as President until its acquisition by HealthAnswers, Inc. During her time as a general surgery resident, Dr. Roy served as Medical Director for HT Medical, helping to develop virtual reality training tools for procedural medicine; HT was acquired by Immersion Corporation. Dr. Roy is a frequent speaker on topics including using technology to advance the state of the art for health information and education. She is passionate about patient advocacy. Dr. Roy has written and co-authored numerous scientific studies and is a co-inventor on numerous technology patents.

## Experience

### **CEO, NATIONAL SPINE HEALTH FOUNDATION, RESTON VA — 2019-PRESENT**

Oversee operations. Implement fundraising activities. Oversee planning and execution of educational content offerings. Direct and manage research activity. Engage advocacy directives in forming key partnerships and collaborations with other nonprofits, foundations and corporations.

### **PARTNER, HEALTHCOMM ASSOCIATES, RESTON VA — 2017-2019**

Independent consultancy serving medical associations and patient advocacy organizations. Services include meeting planning, fundraising strategy and implementation, electronic communications strategies, marketing and best practices for optimal content delivery and ROI.

### **CO-FOUNDER&PRESIDENT, ASTUTE TECHNOLOGY, RESTON VA — 2005-2017**

Founded company to develop cutting edge digital educational and communication strategies and solutions for nonprofits, hospitals, universities, and government agencies. Award winning products to enhance conference and learning environments, serviced over 53 medical and scientific associations until acquisition in 2017 by Echo360. Key products included Conference.Cast and Net.Score e-learning platform. Full patent portfolio, profitable balance sheets from inception until acquisition.

### **ASSISTANT RESEARCH PROFESSOR, GWUMC, WASHINGTON, DC — 2001-2005**

Responsible for overseeing the distance learning component of a multi-center genomics study between GWU, Johns Hopkins University Medical Center and Children's National Medical Center.

### **VICE PRESIDENT, MEDICAL AFFAIRS, HEALTHANSWERS, RESTON VA — 1999-2001**

Served as corporate VP of Medical Affairs, overseeing operations and integration after merger. Tasks involved overseeing migration of software platforms, legacy systems management, integration of project management.

### **PRESIDENT & CO-FOUNDER, MEDICAL CONSUMER MEDIA, BETHESDA, MD —1995-1999**

Company is credited with creating the first pharmaceutical sponsored website, GlaxoWelcome's HELIX. Numerous award winning web initiatives include the prestigious Freddie Award in Medicine. Large scale patient awareness program development including the award winning ICRA program for J&J. Designed, developed, deployed and maintained Doctor's Net Access (DNA) an internet service for physicians. Rapid internet growth business in health sector earned a spot on Fairfax County's top 50 to watch list.

### **MEDICAL DIRECTOR, HT MEDICAL, ROCKVILLE MARYLAND, MD — 1993-1995**

HT Medical focused on emerging 3D graphics from supercomputers to desktop computing for visualization in medical and science education. HT Medical was an award winning enterprise notable for securing DARPA funding to create surgical simulators using battlefield and flight simulation technology. HT Medical commercialized a vein-puncture simulator prior to its acquisition by Immersion Corporation (IMMR) in 2000.

## Education

- 1988 B.A.** Philosophy, George Washington University, Washington, DC
- 1988 B.S.** Zoology, George Washington University, Washington, DC
- 1990 M.S.** Biological Sciences, George Washington University, Washington, DC
- 1994 M.D.** The George Washington University Medical Center, Washington, DC
- 1995** General Surgery Internship The George Washington University Medical Center, Washington, DC

## Awards, and Honors

- 2024** Best Paper North American Spine Society (NASS)
- 2023** Best Healthcare Internet Content
- 2023** Best Patient Video Program
- 2023** Best Healthcare Podcast
- 2023** Best Paper Award, International Society for the Advancement of Spine Surgery (ISASS)
- 2023** Best Paper Award, Global Spine Journal
- 2022** Best Healthcare Podcast
- 2021** Best Poster Award, ISASS
- 2021** Best Healthcare Communications, e-Healthcare Awards
- 2021** Best Healthcare Podcast, e-Healthcare Awards
- 2021** Best Healthcare Social Media, e-Healthcare Awards
- 1994** Student Leadership Award-ODK, GWUMC
- 1992** Omicron Delta Kappa, Medical Honor Society, GWUMC
- 1991** W.T. Gill Summer Research Fellowship Award, GWUMC
- 1990** University Excellence in Scholarship, Fellowship Award, GWU
- 1989** Outstanding Graduate Award, Philosophy Department, GWU

## Boards, Community, Volunteer Involvement

- 2023-** Virginia Innovation Partnership Authority, State of Virginia
- 2021-** Patient Engagement Advisory Committee, US Food&Drug Administration
- 2021- 2023** Executive Committee, United States Bone and Joint Initiative
- 2019-2023** Dean's Corporate Advisory Council, GWU School of Business
- 2017-2021** Executive Committee, Parents Council, The University of Virginia
- 2012-2018** Board Member, The Virginia Foundation for the Humanities
- 2019-2021** Board of Trustees, St. Albans School
- 2010-2016** Board Member, The Washington Ballet
- 2006-2012** Board of Trustees, The Langley School
- 2003-2005** Advisory Board Member, The Junior League of Northern Virginia
- 1998-1999** Board Member, World Congress on Information Technology
- 1997-2000** Programs Board Member, OperationSmile

## Lectures/Presentations

- 2024** IOF/ESCEO/World Congress Osteoporosis: Bone Health and the Spine: Opportunities to Drive Public Health
- 2023** Spine20 Global Conference, New Delhi, India: "How Physical Activity Affects Spine Health"
- 2022** Spine20 Global Meeting, Bali, Indonesia: "Public engagement to strengthen public safety"
- 2021** The Capital Speakers "Informed decision making for optimal health results"
- 1996** Nat'l Managed Healthcare Congress: InfoHealth. "Virtual Reality, the World Wide Web& the Doctor Patient Relationship."
- 1996** American Society of Health Systems Pharmacists. "The Web & Pharmacy Education--HELIX."
- 1996** Interactive Healthcare '96. "Using the WWW to Enhance the Doctor Patient Relationship."
- 1995** American Academy of Ophthalmology Annual Meeting. "Virtual Tour Through the Eye."

1995 Symposium for Computer Applications in Medical Care. "Disseminating Virtual Reality"  
1995 TED-Medical '95. "Virtual Reality, the World Wide Web and Consumer Health Information."  
1995 Radiologic Society of North America. "Virtual Reality and Interventional Radiology."  
1994 American College of Cardiology Annual Meeting. "Virtual Reality Angioplasty."  
1994 American Urologic Association Annual Meeting. "Virtual Reality Ureteroscopy."  
1994 Symposium for Computer Applications in Medical Care. "Virtual Reality Medical Education."  
1993 American College of Surgeons Annual Meeting. "Virtual Reality for Surgical Training."

## Patent Portfolio

8-Filed: October 23, 2014 Publication date: April 23, 2015  
ENHANCED CAPTURE, MANAGEMENT AND DISTRIBUTION OF LIVE PRESENTATIONS  
Publication number: 20150112676  
7-Filed: August 28, 2012 Date of Patent: December 23, 2014  
Enhanced capture, management and distribution of live presentations  
Patent number: 8918708  
6-Filed: August 28, 2012 Publication date: December 20, 2012  
ENHANCED CAPTURE, MANAGEMENT AND DISTRIBUTION OF LIVE PRESENTATIONS  
Publication number: 20120324323  
5-Filed: March 29, 2010 Date of Patent: October 9, 2012  
Enhanced capture, management and distribution of live presentations  
Patent number: 8286070  
4-Filed: March 29, 2010 Publication date: December 30, 2010  
ENHANCED CAPTURE, MANAGEMENT AND DISTRIBUTION OF LIVE PRESENTATIONS  
Publication number: 20100328465  
3-Filed: October 13, 2006 Date of Patent: March 30, 2010  
Enhanced capture, management and distribution of live presentations  
Patent number: 7689898  
2-Filing Date: October 13, 2006 Publication date: February 8, 2007  
Enhanced capture, management and distribution of live presentations  
Publication number: 20070033528  
1-Filing date: 1998 Publication Date: 2006  
Method and system for the storage and retrieval of web-based education materials  
Publication Number US 6789228 B1 Patent number: US 09073871

## Research Experience

2019-2022: *CEO*, National Spine Health Foundation. Serve in the role of Director of Research. See Publication list.  
1997-2000: *Assistant Research Professor*, Department of Biochemistry and Molecular Biology, The George Washington University Medical Center, Washington, DC

- Directed the distance learning initiative for multicenter study.

1992- 1995: *Surgical Research Assistant*, The George Washington University Medical Center, Washington, DC

- Studied complication rates of laparoscopic surgical procedures.
- Collaborated with American College of Surgeons and Association of Program Directors in Surgery to assess the role of computer assisted instructional simulators for training and credentialing residents in laparoscopic surgery.

1990-91: *Research Assistant*. Department of Biochemistry, The George Washington University Medical Center, Washington, DC

- Created biochemical experiments for analysis of ionic flux in ischemic neural tissue.
- Utilized state of the art laboratory equipment to perform assays on cortical homogenates
- Performed large and small animal dissection

1988-90: *Fellow and Graduate Teaching Assistant*, Biological Sciences Department , George Washington University

- Taught and developed curricula for laboratory courses in biology and human physiology

- Designed an independent project involving animal dissection, tissue fixation, ultra-microtomy, scanning and transmission electron microscopy.
  - Master's Thesis entitled, "*Characterization of a Modified Gill Structure in the Swordtail Characin, Corynopoma risseii.*"
- 1987-88: Visiting Scientist, The Naval Medical Research Institute, Rockville, MD.
- Employed phlebotomy, parasitemia, indirect fluorescent microscopy.
  - Presented preliminary data entitled "*Sensitivity of a Rapid Diagnostic Test for Malaria.*"

## Publications and Academic Presentations

- Best Paper 2024  
North American Spine Society (NASS) Schuler KA BS, Orosz LD, MSPAC, Yamout T, MD, Allen BJ, BA, Lerebo WT, PhD, Roy RT, MD, Schuler TC, MD, Good CR, MD, Haines, CM, MD, Jazini E, MD "Performance Comparison between Hounsfield Units and DEXA in Predicting Lumbar Interbody Cage Subsidence after Circumferential Lumbar Fusion" *Podium Presentation* at the NASS, Chicago, IL, September 25-28, 2024.
- Fenil R. Bhatt, BS, Lindsay D. Orosz, MSPA-C, Kirsten A. Schuler, BS, Brandon J. Allen, BA, Rita T. Roy, MD, Julia N. Grigorian, BA, Thomas C. Schuler, MD, Christopher R. Good, MD, FACS, Ehsan Jazini, MD, Colin M. Haines, MD, Cervical Hybrid Constructs Reduce Superior Adjacent Segment Burden Compared to Multilevel Anterior Cervical Discectomy and Fusion, *Journal of Spine Surgery* (2024) doi: 10.21037/jss-23-135
- Glenn A. Gonzalez MD, Ellina Hattar MD, Teleale Fikru MD, Shreya Vinjamuri, Lindsay D. Orosz, MSPA-C, Brandon J. Allen, Daniela A. Perez-Chadid<sup>3</sup>, Rita Roy, MD<sup>2</sup>, Michael Vo BS and James S. Harrop MD, MSHQS, Public Interest in Cervical Spine Topics Informs Educational Needs: 5,448 Survey Results, *Surgical Research* (2024) ISSN: 2689-1093
- Best Paper 2023  
*Global Spine Journal*, June 1, 2023  
Bhatt FR, Orosz LD, Tewari A, Boyd D, Roy R, Good CR, Schuler TC, Haines, CM, Jazini E. Augmented Reality-Assisted Spine Surgery: An Early Experience Demonstrating Safety and Accuracy with 218 Screws. *Global Spine Journal*. January 2022. doi:10.1177/21925682211069321
- Orosz LD, Thomson AE, Yamout T, Bhatt FR, Allen B, Schuler TC, Roy R, Good CR, Haines CM, Jazini E. Opioid Use After Elective Spine Surgery: Do Spine Surgery Patients Consume Less than Prescribed Today? *North American Spine Society Journal*. 23 November, 2022. doi: <https://doi.org/10.1016/j.xnsj.2022.100185>
- Bhatt FR, Orosz L, Tewari A, Roy R, Good CR, Schuler TC, Haines CM, Jazini E. "Augmented Reality-Assisted Spine Surgery: An Early Experience Demonstrating Safety and Accuracy with 218 Screws." *Podium Presentation* at the International Meeting on Advanced Spine Techniques, Miami, FL, April 9th, 2022.
- Thomson AE, Orosz L, Haines CM, Jazini E, Bhatt FR, Sabet A, Roy R, Schuler TC, Good CR. "Robotic-Guided Thoracolumbar Fusion Experience: A Multi-Surgeon, Single-Center Study of 628 Patients and 3,874 Robotic-Guided Screws from 2012 to 2020." *Poster Presentation* at the Canadian Spine Society, virtual, April 6th, 2022.
- Good CR, Orosz L, Thomson AE, Bhatt FR, Grigorian JN, Schuler TC, Haines CM, Merrill JR, Roy R, Jazini E, Wang M. "Comparison of Complications, Revision Rates, and Fluoroscopy Time Using the Latest Technology in Robotic-Guided Surgery to Historic Fluoroscopic-Guided Controls." *Poster Presentation* at the Canadian Spine Society, virtual, April 6th, 2022.
- Bhatt FR, Orosz L, Tewari A, Boyd D, Roy R, Good CR, Schuler TC, Haines CM, Jazini E. "Augmented Reality-Assisted Spine Surgery: An Early Experience Demonstrating Safety and Accuracy with 218 Screws." *Poster Presentation* at the Canadian Spine Society, virtual, April 6th, 2022.
- Bhatt FR, Orosz L, Tewari A, Roy R, Good CR, Schuler TC, Haines CM, Jazini E. "Augmented Reality-Assisted Spine Surgery: An Early Experience Demonstrating Safety and Accuracy with 218 Screws." *Podium Presentation* at the International Society for the Study of the Lumbar Spine, Boston, MA, May 13th, 2022.
- Bhatt FR, Orosz L, Tewari A, Roy R, Good CR, Schuler TC, Haines CM, Jazini E. "Augmented Reality-Assisted Spine Surgery: An Early Experience Demonstrating Safety and Accuracy with 218 Screws." *Podium Presentation* at the Global Spine Congress, Las Vegas, NV, June 4th, 2022.
- Good CR, Orosz LD, Thomson AE, Schuler TC, Haines CM, Bhatt FR, Boyd D, Grossman KM, Roy R, Jazini E. Robotic-guidance allows for accurate S2AI placement without complications. *J Robotic Surg*. 2021 Dec 1. doi: 10.1007/s11701-021-01345-x

- Jazini E, Thomson AE, Sabet AD, Sohail O, Carreon LY, Orosz L, Bhatt FR, Roy R, Haines CM, Schuler TC, Good CR. Adoption of enhanced surgical recovery (ESR) protocol for adult spinal deformity (ASD) surgery decreases in-hospital and 90-day post-operative opioid
- Haines CM, Gorick C, Thomson AE, Jazini E, Schuler TC, Roy R, Good CR. "Cervical BMP Use is Associated with Increased Fusion Rates Without More Complications in Anterior Cervical Discectomy and Fusion." Podium Presentation at the Global Spine Congress, Paris, France, November 4th, 2021.
- Jazini E, Thomson AE, Sabet A, Carreon LY, Roy R, Haines CM, Schuler TC, Good CR. "Adoption of Enhanced Recovery After Surgery (ERAS) Protocol for Lumbar Fusion Decreases In-Hospital Post-operative Opioid Consumption." *Podium Presentation* at North American Spine Society 36th Annual Meeting, Boston, MA, USA, September 29th, 2021.
- Haines CM, Orosz L, Thomson AE, Schuler TC, Good CR, Grover P, Dreischarf M, Roy R, Jazini E. "Novel Artificial Intelligence Algorithm can Accurately and Independently Measure Spinopelvic Parameters." *Podium Presentation* at the North American Spine Society 36th Annual Meeting, Boston, MA, USA, September 29th, 2021.
- Haines CM, Orosz L, Thomson AE, Schuler TC, Good CR, Grover P, Dreischarf M, Roy R, Jazini E. "Novel Artificial Intelligence Algorithm can Accurately and Independently Measure Spinopelvic Parameters." *Podium Presentation* at the International Society for the Advancement of Spine Surgery 21st Annual Meeting, Miami, FL, USA, May 15th, 2021.
- Best Poster Award - ISASS 2021
- Jazini E, Thomson AE, Sabet A, Carreon LY, Roy R, Haines CM, Schuler TC, Good CR. "Adoption of Enhanced Recovery After Surgery (ERAS) Protocol for Lumbar Fusion Decreases In-Hospital Post-operative Opioid Consumption." Poster Presentation at the International Society for the Advancement of Spine Surgery 21st Annual Meeting, Miami, FL, USA, May 14th, 2021.
- Jazini E, Thomson AE, Sabet AD, Carreon LY, Roy R, Haines CM, Schuler TC, Good CR. Adoption of Enhanced Surgical Recovery (ESR) Protocol for Lumbar Fusion Decreases In-Hospital Postoperative Opioid Consumption. *Global Spine Journal*. May 2021. doi:10.1177/21925682211015652
- Haines CM, Orosz L, Thomson AE, Schuler TC, Good CR, Grover P, Dreischarf M, Roy R, Jazini E. "Novel Artificial Intelligence Algorithm can Accurately and Independently Measure Spinopelvic Parameters." Podium Presentation at the International Meeting on Advanced Spine Techniques, Dublin, Ireland, virtual, April 22-24th, 2021.
- Haines CM, Orosz L, Thomson AE, Schuler TC, Good CR, Grover P, Dreischarf M, Roy R, Jazini E. "Novel Artificial Intelligence Algorithm can Accurately and Independently Measure Spinopelvic Parameters." Podium Presentation at the Lumbar Spine Research Society 14th Annual Meeting, virtual, April 8th, 2021.
- Jazini E, Thomson AE, Sabet A, Carreon LY, Roy R, Haines CM, Schuler TC, Good CR. "Adoption of Enhanced Recovery After Surgery (ERAS) Protocol for Lumbar Fusion Decreases In-Hospital Post-operative Opioid Consumption." Podium Presentation at the Lumbar Spine Research Society 14th Annual Meeting, virtual, April 10th, 2021.
- Jazini E, Haines C, Schuler TC, Sohail O, Orosz L, Roy R, Carreon LY, Good CR. "Adoption of Enhanced Recovery After Surgery (ERAS) Protocol for Adult Spinal Deformity (ASD) Surgery Decreases In-Hospital and 90-day Post-operative Opioid Consumption." *North American Spine Society (NASS)*, 2020.
- Jazini E, Haines C, Orosz L, Bharara N, Schuler TC, Sohail O, Roy R, Carreon LY, Good C. "Adoption of Enhanced Recovery After Surgery (ERAS) Protocol for Lumbar Fusion Decreases In-Hospital Post-operative Opioid Consumption." *North American Spine Society (NASS)*, 2020.
- Jazini E, Haines C, Orosz L, Bharara N, Schuler TC, Sohail O, Roy R, Carreon LY, Good C. "Adoption of Enhanced Recovery After Surgery (ERAS) Protocol for Lumbar Fusion Decreases In-Hospital Post-operative Opioid Consumption." *Lumbar Spine Research Society (LSRS)*, 2019.
- Roy, R., Merrill, J. "The Internet and Healthcare Education: HELIX," *The Journal of the Florida Medical Association*, Vol. 83, No.9, November, 1996, p 634-644.
- Roy, R., Merrill, J., Merrill, G., Raju, R., Millman, A., Meglan, D., Preminger, G., Babayan, R., "Photorealistic Interactive Three-dimensional Graphics in Surgical Simulation," *Interactive Technology and the New Paradigm for Healthcare*, Vol., 18, p. 244-252, 1995.
- Merrill, J., Higgins, G., Raju, R., Millman, A., Roy, R., Merrill, G., 'A Virtual Reality Swiss Army Knife: An Authoring System for Developing Everything from Neurosurgical Training Applications to Video Games,' *VR World Magazine*, March 1995; *in press*.

- Roy, R., Merrill, J., Allman, S., Merrill, G., "Virtual Heart Surgery: Trade Show and Medical Education." *Virtual Reality World*, Vol. 2, No. 4, July/August, p. 55-57, 1994.
- Merrill, J., Allman, S., Roy, R., Merrill, G., "Cyber Surgery: Cutting Costs, Sewing Benefits." *Virtual Reality Special Report*, Summer, p. 39-42, 1994.
- Roy, R., Merrill, J., Millman, A., Raju, R., "Window to the Soul: A High-Tech Look into the Eye." *VR World*, Vol. 3, No. 1, January/February, p. 51-53, 1994.
- Merrill, J., Raju, R., Roy, R., "VR Applications in Medical Education." *Virtual Reality Special Report; Premier Issue*, p. 61-64, 1994.
- Merrill, J., Roy, R., Raju, R., "Virtual Reality for Trade Shows and Individual Physician Training." *Virtual Reality Systems*, Vol. 1, No. 3 Spring p. 40-44, 1994.
- Merrill, J., Roy, R., Merrill, G., Raju, R., 'Revealing the Mysteries of the Brain with VR.' *Virtual Reality Special Report*, Vol. 1, No. 4, Winter, p. 61-65, 1994.
- Merrill, J., Preminger, G., Babayan, R., Roy, R., 'Surgical Simulation Using Virtual Reality Technology: Design, Implementation, and Implications.' *Surgical Technology International III*.
- Hoehner, P., Blanck, T., Roy, R., Rosenthal, R., Fiskum, G., 'Alteration of voltage sensitive Ca<sup>2+</sup> channels in canine brain during global ischemia and reperfusion,' *Journal of Cerebral Blood Flow and Metabolism*, 12(3) 418-24, 1991.
- Hoehner, P., Blanck, T., Roy, R., Rosenthal, R., Fiskum, G. 'Alteration of voltage dependent calcium channels (VDCC) in the brain during global ischemia and reperfusion,' *Journal of Cardiothoracic Anesthesia*, 1991.