David P. Miller
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1 Education:

1. 1985: Ph.D. Computer Science (AI), Yale University, New Haven, Connecticut. Dissertation: *Planning by Search Through Simulations.* (Advisor: Drew McDermott).
2. 1981: B.A. with Honors in Astronomy, Wesleyan University, Middletown, Connecticut. Thesis: *Photometry with the VVO Photometer and Perkin Telescope.* (Advisor: William Herbst).

2 Professional Experience:

1. August 99–present: University of Oklahoma School of Aerospace & Mechanical Engineering, Wilkonson Chair/Professor (8/03-present); Wilkonson Professor (8/99-7/03); Norman, OK.
2. November 95–December 2005: KISS Institute for Practical Robotics, Chief Technical Officer (5/01-12/05); Technical Director (11/95-4/01), Norman, OK.
3. May 00–January 01: Scout Lead, Blastoff! Corporation, Pasadena, CA.
4. March 98–July 2004: Part time assignment to the Intelligent Mechanisms Group, NASA Ames Research Center, Mountain View, CA.
5. May 93–November 95: MITRE Corp, Principal Scientist, McLean VA.
6. January 92–May 93: MIT Artificial Intelligence Laboratory, Visiting Scientist (on assignment from the Advanced Information Technology Section of JPL), Cambridge, Massachusetts.
7. February 88–December 91: Jet Propulsion Laboratory, Member of the Technical Staff (2/88 - 6/88); Technical Group Leader (7/88 - 3/89); Technical Group Supervisor: Robotic Information Systems Group (4/89 - 12/91); Pasadena, California.
8. August 85–February 88: Virginia Polytechnic Institute Department of Computer Science, Assistant Professor, Blacksburg, Virginia.
9. August 81–August 85: Research Assistant, Yale University, Department of Computer Science, New Haven, Connecticut.
10. Additional Teaching and Professional Experience
    (a) September 06–December 06 Visiting Professor, Olin College, Needham, MA
    (b) January 06–June 06 Visiting Scientist, Malin Space Science Systems, Inc., San Diego, CA
    (c) January 01–present: Adjunct Professor, School of Computer Science, University of Oklahoma, Norman, OK.

(d) March 02–August 02: Co-Chair and teaching faculty, Astrobiology Design Project, International Space University Summer Program.

(e) International Space University, Instructor (Summer 1992,1993,2000,2009)

(f) March 94–December 99: Co-Chair and teaching faculty, Department of Space Resources Robotics & Manufacturing, International Space University Summer Program.

(g) January 94–present: Member of the Board of Directors and course instructor, KISS Institute for Practical Robotics, Norman, Oklahoma.

(h) KIPR Robotics Classes (a variety of K-12 robotics classes at a variety of schools) 1993-1999.

(i) Department of Aerospace Engineering, University of Maryland, College Park, MD (Spring Term 1996).

(j) Department of Mechanical Engineering, California Institute of Technology, Pasadena, California (Spring 1990).

(k) Wesleyan University, Department of Mathematics, Middletown, Connecticut (Fall Term 1984)

11. Professional Tutorials Taught:

    (a) Introduction to Robotics for Botball Teachers, 16 contact hours. Taught > 70 times (averaging 60 participants per session), 1997–present. Locations include: Norman, OK, Little Rock, AR, San Jose, CA, San Diego, CA, Los Angeles, CA, College Park, Md, Arlington, VA, Honolulu, HI, Grandville, MI, Dallas, TX, Houston, TX, Jacksonville, FL, Brooklyn, NY & Pittsburgh, PA.

    (b) C Programming for Robotics Teachers, Norman, OK, July 2001.

    (c) Robot Building Lab, AAAI-99 Orlando, FL, July 1999.

    (d) Robot Building Lab, AAAI-98 Madison, WI, July 1998.

    (e) Robot Building Lab, AAAI-97 Providence, RI, July 1997.

    (f) Mobile Robots I: Instantiating Intelligent Agents, with Marc Slack, AAAI-93 Washington DC, July 1993.

    (g) Robotics for AI Researchers, with Rajiv Desai, IJCAI-91, Sydney, Australia, August 1991.

    (h) Robot Navigation, with Marc Slack, AAAI-91 Anaheim, CA, July 1991.

    (i) Autonomous Mobile Robots at the 1989 IEEE Conference on Robotics & Automation, Scottsdale, AZ, April 1989.

12. Consultant to:

    (a) Zurawik Law Firm, Tulsa, OK (2010).

    (b) Atkinson Haskins Nellis & Gladd, Tulsa, OK (2009-2010).

    (c) AT Sciences, Pittsburgh, PA (2002-2008).

    (d) Cohen, Jayson & Foster, P.A., Tampa, FL (2007).

    (e) Malin Space Science Systems, San Diego, CA (2002)

    (f) European Space Agency/ESTEC, Noordwijk, Netherlands (1997-98)

(g) SAIC/DARPA, Arlington, VA (1997-98).
(h) MITRE Corporation, McLean VA (1996)
(i) IS Robotics, Westlake, CA (1990-1993)
(j) Teleos Research, Palo Alto, CA (1992-1993).
(k) Jet Propulsion Laboratory, Pasadena CA (1987)
(l) Naval Surface Weapon Center, Dahlgren, VA (1986)

3 Courses Taught at University of Oklahoma

1. AME 2402: Engineering Computing
2. AME 3112: Solid Mechanics Lab
3. AME 3623: Embedded Real-Time Systems
4. AME 4373: Aerospace Design II
5. AME 4493/5493: Space Science and Astrodynamics
6. AME 4553: Senior Capstone for Mechanical Engineers
7. AME 4593/5593: Space Systems and Mission Design
8. AME 5113: Robot Mobility
9. AME 5123: Robot Planning
10. AME 5133: Space Robotics
11. AME/CS/ECE 5970: Mobile Manipulation
12. AME 4802: Robotics Laboratory
13. AME 4812: Controls Laboratory
14. CS 4013: Artificial Intelligence
15. ECE 4773: Laboratory (Special Projects)
16. ENGR 1001: AME 2401: Engineering Computing
17. ENGR 1112: Introduction to Engineering

4 Awards & Honors:

1. Co-Recipient of NASA Board Award for NTR no. 18731: Experimental Semiautonomous Vehicle. April, 2009.
2. Co-Recipient of Association of American Publishers, Inc, Professional & Scholarly Publishing Division Award for Excellence in Physical Sciences and Mathematics, for Springer Handbook of Robotics 2008.
3. NASA Group Achievement Award to the MARTE Team, May 2006.
4. 2006 recipient of the annual "NASA Dave Lavery Technology Award: For the Outstanding Contribution of Promoting Robotics Technology Integral with NASA Missions."
5. NASA Group Achievement Award to the Personal Satellite Assistant, First Generation Team, September 2004.
6. MITRE Best Paper Award (for "Design & Testing of a Low-Cost Robotic Wheelchair", in Autonomous Robots, volume 1 #3, 1995).
7. Appointment to the College of Teachers, International Space University, Strasbourg, France, July 1995.
8. NASA Certificate of Recognition for "Robby" Mars-Rover Prototype Development, May 1993.
9. NASA Exceptional Service Medal, April 1993.
10. NASA Group Achievement Award to the Rocky IV Team, April 1993.
11. NASA Certificate of Recognition for "Tooth" & "Rocky" Micro-Rover Prototype Development, November 1992.
12. Most Innovative Design Award for the AAAI 1992 Robot Exhibition, SanJose CA July 1992.
13. JPL Lew Allen Award for Excellence ($25,000), December 1991.
14. NASA Group Achievement Award to the Robotic Intelligence Team, May 1991.

5 Book Chapters, Articles & Refereed Conferences:

1. M. A. Ghazi, M. D. Nash, A. H. Fagg, L. Ding, T. H. A. Kolobe, and D. P. Miller, Novel assistive device for teaching crawling skills to infants, in Proceedings of the Field and Service Robotics Conference, (Toronto, Canada), June 2015.
2. D. P. Miller, S. Goodgame, G. Koppensteiner, and M. Yong, "Some effects of culture, gender and time on task of student teams participating in the botball educational robotics program," in *Robot Intelligence Technology and Applications 3* (J. H. Kim, W. Yang, J. Jo, P. Sincak, and H. Myung, eds.), Advances in Intelligent Systems and Computing, pp. 541–557, Springer, April 2015.

3. G. Koppensteiner, R. Grabler, D. Miller, and M. Merdan, "Virtual enterprises based on multi-agent systems," in *Industrial Agents: Emerging Applications of Software Agents in Industry* (P. L. ao and S. Karnouskos, eds.), ch. 7, pp. 121–136, Elsevier, 2015.

4. D. P. Miller, A. H. Fagg, L. Ding, T. H. Kolobe, and M. A. Ghazi, "Robotic crawling assistance for infants with cerebral palsy," in *Proceedings of the AAAI15 Workshop on assistive technologies emerging from artificial intelligence applied to smart environments*, AAAI Press, January 2015.

5. A. M. Walker, D. P. Miller, and C. Ling, "User-centered design of an attitude aware controller for ground reconnaissance robots," *Journal of Human Robot Interaction, vol. 4*, no. 1, pp. 30–59, 2015.

6. D. P. Miller, S. Goodgame, G. Koppensteiner, and M. Yong, "Some effects of culture, gender and time on task of student teams participating in the botball educational robotics program," in *Proceedings of the 3rd International Conference on Robot intelligence Technology and Applications*, IROC, November 2014.

7. D. F. Flippo and D. P. Miller, "Turning efficiency prediction for skid steering via single wheel testing," Journal of Terra Mechanics, Vol. 52, 2014, pp 23–29.

8. M. Walker and D. P. Miller, "The Effect of Tether on UAS Flights," Proceedings of the 9th Annual Conference on Field and Service Robots, Brisbane Australia, December 2013.

9. A.M. Walker, C.Ling, and D.P. Miller, Spatial orientation aware smartphones for tele-operated robot control in military environments: A usability experiment, in Proceedings of the Human Factors and Ergonomics Society International Annual Meeting, HFES, 2013.

10. G.Koppensteiner, C.Krofitsch, R.Hametner, D.P. Miller, and M.Merdan, "Application of knowledge driven mobile robots for disassembly tasks," in *Recent Advances in Robotics and Automation* (G.SenGupta, D.Bailey, S.Demidenko, and D.Carnegie, eds.), vol.480 of Studies in Computational Intelligence, pp.311321, Springer Berlin Heidelberg, 2013.

11. A.M. Walker and D.P. Miller, Tele-operated Robot Control Using Attitude Aware Smartphones, in 2012 7th ACM/IEEE International Conference on Human-Robot Interaction, 2012.

12. D.P Miller. Robot Contests at GCER 2011. IEEE Robotics and Automation Magazine. Vol. 18, No. 4. pp. 10-12. December 2011.

13. G. Koppensteiner, M. Merdan, and D. P. Miller, Teaching botball and researching disbotics, in Proceedings of 2nd International Conference on Robotics in Education (RiE 2011) (R. Stelzer and K. Jafarmadar, eds.), pp. 177–184, INNOC - Austrian Society for Innovative Computer Sciences, 2011.

14. D. Flippo and D.P. Miller. Suspension and wheel evaluation and experimentation testbed for planetary rovers. Int. J. Mechatronics and Automation, Vol. 1, No. 1, 2011. pp 29–37.

15. David P. Miller. Functional Programmers: Get Them When They Are Young. In Proceedings of the Eleventh Symposium on Trends in Functional Programming. pp 328–334. May 2010.

16. David P. Miller, Matthew Oelke, Matthew J. Roman, Jorge Villatoro, Charles N. Winton. The cbc: a linux-based low-cost mobile robot controller. Proceedings of the International Conference on Robotics and Automation. IEEE, May 2010.

17. Jennifer Kay, Frank Klassner, Fred G. Martin, David P. Miller & Keith J. OHara. Beyond First Impressions and Fine Farewells: Electronic Tangibles throughout the Curriculum. Proceedings of the AAAI Spring Symposium on Educational Robotics and Beyond. March 2010.

18. Daniel Flippo, Richard Heller and David P. Miller. Turning Efficiency Prediction for Skid Steer Robots Using Single Wheel Testing. FSR 2009 Conference Proceedings. Cambridge, MA. July 2009.

19. C. R. Stoker, H. N. Cannon, S. E. Dunagan, L. G. Lemke, B. J. Glass, D. Miller, J. Gomez-Elvira, K. Davis, J. Zavaleta, A. Winterholler, M. Roman, J. A. Rodriguez-Manfredi, R. Bonaccorsi, M. S. Bell, A. Brown, M. Battler, B. Chen, G. Cooper, M. Davidson, D. Fernandez-Remolar, E. Gonzales-Pastor, J. L. Heldmann, J. Martínez-Frias, V. Parro, O. Prieto-Ballesteros, B. Sutter, A. C. Schuerger, J. Schutt, and F. Rull, The 2005 MARTE robotic drilling experiment in río tinto, spain: Objectives, approach, and results of a simulated mission to search for life in the martian subsurface, Astrobiology Journal, vol. 8, pp. 921945, December 2008.

20. David P. Miller, Rosalba Bonaccorsi, and Kiel Davis. Design and practices for use of automated drilling and sample handling in MARTE while minimizing terrestrial and cross contamination. Astrobiology Journal, 8(5):947965, December 2008.

21. David P. Miller, Illah Nourbakhsh & Roland Swiegart. Robots for Education. Chapter 55, Springer Handbook of Robotics. B. Siciliano & O. Khatib editors. Springer Reference, May 2008.

22. Matthew Roman, David Miller & Zac White. Roving Faster Farther Cheaper. Field and Service Robotics. Springer Tracts in Advanced Robotics. p 179-188. 2008.

23. H. Cannon, C. Stoker, S. Dunagan, K. Davis, J. Gomez-Elvira, B. Glass, L. Lemke, D. Miller, R. Bonaccorsi, M. Branson, S. Christa, J. Rodrìguez-Manfredi, E. Mumm, G. Paulsen, M. Roman, A. Winterholler, and J. Zavaleta, Marte: Technology development and lessons learned from a Mars Drilling Mission Simulation. Journal of Field Robotics, vol. 24, no. 10, 2007.

24. Igor Werner, David Ahlgren & David P. Miller. Robotics Olympiads: A New Means to Integrate Theory and Practice in Robotics. Computers in Education Journal, vol. 17, #4. 2007.

25. Matthew Roman & David Miller. Roving Faster Farther Cheaper. In Proceedings of the 2007 Field and Service Robotics Conference. France, July 2007.

26. David P. Miller & Michael Ravine. Semi-autonomous rover operations: An integrated hardware and software approach for more capable mars rover missions. Proceedings of the NASA Science Technology Conference. June 2007.

27. David P. Miller, Jacob Q. Milstein and Cathryne Stein. Scarecrow, If I Only Had AI. Autonomous Robots Journal. v22, #4, pp 325-332. 2007.

28. Matthew J. Roman & David P. Miller. Four is Enough. AIAA Space 2006. San Jose, CA. September 2006.

29. Igor Werner, David Ahlgren & David P. Miller. Robotics Olympiads: A New Means to Integrate Theory and Practice in Robotics. In Proceedings of the ASEE National Conference. Chicago, IL. June 2006.

30. A. Winterholler, M. Roman, T. Hunt, and D.P. Miller. Design Of A High-Mobility Low-Weight Lunar Rover. Proceedings of iSAIRAS 2005. Munich Germany. September 2005.

31. M. Murarka, A. Iyer, D. P. Miller, T. Taber, and T. Hunt. An Automated Sample Acquisition & Preparation System For Lorax. Proceedings of iSAIRAS 2005. Munich Germany. September 2005.

32. Alois Winterholler, Matt Roman, David P. Miller, Jörg Krause & Tim Hunt. Automated Core Sample Handling For Future Mars Drill Missions. Proceedings of iSAIRAS 2005. Munich Germany. September 2005.

33. David P. Miller and Kyle Machulis. Visual Aids For Lunar Rover Tele-Operation. Proceedings of iSAIRAS 2005. Munich Germany. September 2005.

34. Richard LeGrand , Kyle Machulis , David P. Miller , Randy Sargent & Anne Wright. The XBC: a Modern Low-Cost Mobile Robot Controller. Proceedings of IROS 2005. Edmonton, Canada. August 2005.

35. R. Simpson, E. LoPresti, S. Hayashi, I. Nourbakhsh & D.P. Miller. The Smart Wheelchair Component System. Journal of Rehabilitation Research & Development, vol 41 #3B, pp 429-442. May/June 2004.

36. D.P. Miller and C. Winton. Botball Kit for Teaching Engineering Computing. In Proceedings of the ASEE National Conference. Salt Lake City, UT. June 2004.

37. T. S. Hunt, D. P. Miller, E. Ortega, and A. G. Striz. High Powered Rocketry: Design-Build-Instrument-Fly and Student Outreach. In Proceedings of the ASEE National Conference. Salt Lake City, UT. June 2004.

38. D.P. Miller, D. Hougen & D. Shirley, The Sooner Lunar Schooner: Lunar Engineering Education, Journal of Advances in Space Research, vol. 31/11, pp. 2449-2454, 2003.

39. D. P. Miller & T. S. Hunt & M. J. Roman. Experiments & Analysis of the Role of Solar Power in Limiting Mars Rover Range. Proceedings of the IROS 2003 Conference. Las Vegas, NV. Oct 2003.

40. S. Hayashi, E.F. LoPresti, R.C. Simpson, I. Nourbaksh and D.P. Miller. An Inexpensive Alternative Drop-off Detection Solution. Proceedings of the 26th Annual Conference on Rehabilitation Engineering (RESNA), Atlanta, GA, June 2003.

41. E.F. LoPresti, R.C. Simpson, S. Hayashi, I. Nourbakhsh and D.P. Miller. The Design of the Smart Wheelchair Component System. Proceedings of the 26th Annual Conference on Rehabilitation Engineering (RESNA), Atlanta, GA, June 2003

42. D. P. Miller, T. Hunt, M. Roman, S. Swindell, L. Tan, and A. Winterholler. Experiments with a long-range planetary rover. In Proceedings of the The 7th International Symposium on Artificial Intelligence, Robotics and Automation in Space, Nara, Japan, May 2003.

43. D. P. Miller, L. Tan, and S. Swindell. Simplified navigation and traverse planning for a long-range planetary rover. In Proceedings of the 2003 International Conference on Robotics and Automation. IEEE, Taipei, Taiwan, May 2003.

44. E.F. LoPresti, R.C. Simpson, D. Miller and I. Nourbakhsh, Evaluation of Sensors for a Smart Wheelchair, Proceedings of the 25th Annual Conference on Rehabilitation Engineering (RESNA), pp. 166-168, June 2002.

45. C. Stein, D. Schein, and D.P. Miller, AAAI Hosts the National Botball Tournament!, in AI Magazine, volume 23 #1, pp. 51-54, Spring 2002.

46. L. Tan and D.P. Miller, Navigation Templates for PSA, in the Proceedings of the First International NAISO Congress on Autonomous Intelligent Systems, Geelong, Australia, February, 2002.

47. D.P. Miller and C. Stein, AI in Space: Creating Autonomous Roboticists in IEEE Intelligent Systems v. 16, #2, pp. 20-23, 2001.

48. D.P. Miller and C. Stein, "So That's What Pi is For" and Other Educational Epiphanies from Hands-on Robotics, in Robots for kids: Exploring new technologies for learning experiences. A. Druin, A. & J. Hendler (Eds.) 2000. San Francisco, CA: Morgan Kaufmann.

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50. D.P. Miller, Space Robots, in Keys to Space: an interdisciplinary approach to space studies, Houston, A. & Rycroft, M. (ed.). McGraw-Hill, Boston, 1999.

51. D.P. Miller, Assistive Robotics: Semi-Autonomous Movement Towards Independence, in Lecture Notes in Artificial Intelligence: Assistive Technology and Artificial Intelligence, eds. Vibhu Mittal, Holly Yanco, John Aronis and Richard Simpson, Springer-Verlag, 1998.

52. M.A. Perino, R. Licata, G. Savant Aira, and D. Miller, Micro-Robot Concepts for Planetary Exploration. IAF-97 - Q.2.07, 1997 International Astronautical Federation World Congress, Torino Italy, October 1997.

53. D.P. Miller, A. Wright, R. Sargent, R. Cohen, and T. Hunt, Attitude and Position Control Using Real-Time Color Tracking, in Proceedings of the AAAI-97/IAAI-97 Conference, pp. 1026-1031, Providence, RI, July 1997.

54. D.P. Miller, C. Stein, A. Wright, and R. Sargent, Are You Being Served?, in Proceedings of the AAAI-97/IAAI-97 Conference, pg. 793, Providence, RI, July 1997.

55. R. P. Bonasso, R. J. Firby, E. Gat, David Kortenkamp, D. Miller, and M. Slack, Experiences with an Architecture for Intelligent, Reactive Agents, Journal of Experimental and Theoretical Artificial Intelligence, Vol. 9, No. 1, 1997.

56. D.P. Miller, Design of a Small Cheap UUV for Under-Ship Inspection and Salvage, in 1996 IEEE symposium on Autonomus Underwater Vehicle Technology, pp 18-20, Monterey CA, June 1996.

57. D. Hinkle, D. Kortenkamp and D. Miller, The 1995 IJCAI Robot Competition and Exhibition in AI Magazine volume 17, #1 , 1996.

58. R. P. Bonasso, David Kortenkamp, D. Miller, and M. Slack, Experiences with an Architecture for Intelligent, Reactive Agents, in Intelligent Agents II: Agent Theories, Architectures, and Languages Edited by Michael Wooldridge, Jörg P. Mueller, and Milind Tambe. Springer-Verlag Lecture Notes in AI - Volume 1037, January 1996 (Europe), March 1996 (USA)

59. D.P. Miller, & M.G. Slack, Design & Testing of a Low-Cost Robotic Wheelchair, in Autonomous Robots, volume 1 #3, 1995.

60. M.G. Slack and D.P. Miller, An Integrating Architecture for Robust Autonomous Robots, in the Proceedings of the Symposium on Autonomous Vehicles in Mine Countermeasures, Monterey, CA, April, 1995.

61. D.P. Miller, & M.G. Slack, Increasing Access with a Low-Cost Robotic Wheelchair, in the Proceedings of IROS '94, September, 1994.

62. E. Gat, R.S. Desai, R. Ivlev, J. Loch and D.P. Miller, Behavior Control for Robotic Exploration of Planetary Surfaces, IEEE Journal of Robotics and Automation, volume 10 #4, pp. 490-503, August 1994.

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64. D.P. Miller, Robots, in The New Book of Knowledge, Grolier Inc., Danbury CT, 1994.

65. D.P. Miller & G. Varsi, Micro-Technology for Planetary Exploration and Education, in Acta Astronautica Journal, v29 #7, pp. 561-567, July 1993.

66. D.P. Miller, A Twelve Step Program to More Efficient Robotics, in AI Magazine, volume-14, #1, pp. 60-63, 1993.

67. D.P. Miller, The Mass of Massive Rover Software, in Missions, Technologies and Design of Planetary Mobile Vehicles, pp. 411-414, D. Moura, Ed., Cepadues-Editions Publisher, Toulouse France, 1993.

68. J.B. Plescia, A. Lane and D.P. Miller, Unmanned Rovers: Utilization for Exploration, in Missions, Technologies and Design of Planetary Mobile Vehicles, pp. 181-192, D. Moura, Ed., Cepadues-Editions Publisher, Toulouse France, 1993.

69. D.P. Miller, R.S. Desai, E. Gat, R. Ivlev and J. Loch, Experiments with a small behavior controlled planetary rover, in Missions, Technologies and Design of Planetary Mobile Vehicles, pp. 545-551, D. Moura, Ed., Cepadues-Editions Publisher, Toulouse France, 1993.

70. D.P. Miller, P.A. Fishwick, R.J. Firby, D.W. Franke and J. Rothenberg, AI: What Simulationists Really Need to Know, in The ACM Transactions on Modeling and Computer Simulation, vol 2, #4 October 1992.

71. D.P. Miller, Small Robots, Big Missions, in the National Forum Journal, v 72, #3, pp 42-44, 1992.

72. D.P. Miller, R.S. Desai, E. Gat, R. Ivlev and J. Loch, Reactive Navigation Through Rough Terrain: Experimental Results, in the Proceedings of the 1992 National Conference on Artificial Intelligence, pp. 823-828, San Jose, CA, July 1992.

73. D.P. Miller and M.G. Slack, Global Symbolic Maps from Local Navigation, in the Proceedings of the 1991 National Conference on Artificial Intelligence, Anaheim, CA, July 1991.

74. T. Dean, R.J. Firby and D.P. Miller, Hierarchical Planning with Deadlines and Resources, in Autonomous Mobile Robots: Control, Planning and Architectures, vol II, pp. 117-134, S. Iyengar & A. Elfes, eds., IEEE Computer Society Press, Los Alamitas CA, 1991.

75. E. Gat, M.G. Slack, D.P. Miller and R.J. Firby, Path Planning and Execution Monitoring for a Planetary Rover, in Autonomous Mobile Robots: Control, Planning and Architectures, vol II, pp 178-183, S. Iyengar & A. Elfes, eds., IEEE Computer Society Press, Los Alamitas CA, 1991.

76. D.P. Miller, Towards a Believable Theory of Planning, in the Journal of Mathematical Psychology, v 34, pp. 489-498, December 1990.

77. D.P. Miller, P.A. Fishwick, R.J Firby, D. W. Franke and J. Rothenberg, AI: What Simulationists Really Need to Know, in Proceedings of the 1990 Winter Simulation Conference, pp. 204-209, December 1990, New Orleans, LA.

78. D.P. Miller, Multiple Behavior-Controlled Micro-Robots for Planetary Surface Missions, in the Proceedings of the 1990 IEEE International Conference on Systems Man and Cybernetics, pp. 289-292, LosAngeles, CA, November 1990.

79. T. Dean, R.J. Firby and D.P. Miller, Hierarchical Planning with Deadlines and Resources, in Readings in Planning, pp. 369-388, Allen, Hendler, & Tate eds., Morgan Kaufman, 1990.

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85. D.P. Miller, Mishkin, A., Lambert, K., Bickler, D., & Bernard, D., Autonomous Navigation & Mobility for a Planetary Rover, in the Proceedings of the 1989 AIAA Meeting on Aerospace Sciences, paper #89-0859, Feburary 1989, Reno NV.

86. T. Dean, R.J Firby and D.P. Miller, Hierarchical Planning with Deadlines and Resources, in The International Journal of Computational Intelligence 4(4), pp. 381-398, 1988.

87. D.P. Miller, A Task and Resource Scheduling System for Automated Planning, in The Annals of Operations Research: Approaches to Intelligent Decision Support, volume 12, pp. 169-198, 1988.

88. D.P. Miller, The Role of Simulation in Task Planning, in Proceedings of the 1987 Winter Simulation Conference, pp. 530-533, December 1987, Atlanta, GA.

89. D.P. Miller and J.P. Bixler, A Taxonomy of Obstacles as Seen by an Ultrasonic Rangefinder, in Proceedings of the 1987 IEEE Conference on Systems Man and Cybernetics, pp. 360-364, IEEE, Alexandria, VA, October, 1987.

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91. D.P. Miller and M.G. Slack, Efficient Navigation Through Dynamic Domains, in Proceedings of the Workshop on Spatial Reasoning and Multi-Sensor Fusion, pp. 230-239, AAAI, St.Charles, Il, October 1987.

92. M.G. Slack and D.P. Miller, Path Planning Through Time and Space in Dynamic Domains, in Proceedings of the 10th International Joint Conference on Artificial Intelligence, pp. 1067-1070, AAAI, IJCAI, Milano Italy, August 1987.

93. M. Orey and D.P. Miller, Diagnostic Computer Systems for Arithmetic, Computers in the School, volume 3, #4, 1987.

94. D.P. Miller, Temporal Reasoning, in Proceedings of the 1986 Winter Simulation Conference, WSC, Washington, D.C. December 1986, pp. 437-439.

95. D.P. Miller, A Plan Language for Dealing with the Physical World, Proceedings of the Third Annual Computer Science Symposium on Knowledge Based Systems, Columbia, SC, March 1986.

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97. R.J. Firby, D.P. Miller and T. Dean, Efficient Robot Planning with Deadlines and Travel Time, Proceedings of the 6th International Symposium on Robotics and Automation, IASTED, Santa Barbara, Ca., May 1985, pp. 97-101.

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99. D.P. Miller, Two Dimensional Mobile Robot Positioning Using Onboard Sonar, Proceedings of the Ninth William T. Pecora Memorial Remote Sensing Symposium, IEEE, USGS, NASA, ASP, Sioux Falls, SD., October,1984, pp. 362-369.

100. W. Herbst, and D.P. Miller, The Age Spread and Initial Mass Function of NGC3293: Implications for the Formation of Clusters, Astronomical Journal, pp. 1478-1490, volume 87, number 11, November 1982.

101. W. Herbst, D.P. Miller, J. Warner, and A. Herzog, R Associations VI. The Reddening Law in Dust Clouds and the Nature of Early-Type Emission Stars in Nebulosity from a Study of Five Associations, Astronomical Journal, pp. 98-124, volume 87, number 1, January 1982.

6 Conferences & Technical Reports:

1. S. Zeltner and D. P. Miller, "Kiss your old kiss goodbye," in *Proceedings of the 2015 Global Conference on Educational Robotics*, (Albuquerque, NM), KIPR, July 2015.

2. G. Koppensteiner, L. Vittori, D. P. Miller, and S. Goodgame, "Teaching programming on the elementary level," in *6th International Conference on Robotics in Education*, May 2015.

3. D. P. Miller, A. H. Fagg, L. Ding, T. H. Kolobe, and M. A. Ghazi, "Robotic crawling assistance for infants with cerebral palsy," in *Proceedings of the AAAI15 Workshop on assistive technologies emerging from artificial intelligence applied to smart environments*, AAAI Press, January 2015.

4. H. T. Kolobe, A. H. Fagg, P. Pidcoe, and D. Miller, "The effect of robotic reinforced movement learning technology on the development of prone mobility in infants at low and high risk for cerebral palsy," in *Proceedings of the 43rd Annual Child Neurology Society Meeting*, October 2014.

5. Mustafa A. Ghazi and David P. Miller. Position Control Using Pitch Feedback. GCER 2012 Conference. Honolulu HI. July 2012.

6. THA. Kolobe, A. Fagg, P. Pidcoe, D. Miller, J. Southerland. Acquisition of prone locomotion in infants with and without risk for cerebral palsy: Kinetic and kinematic reconstruction. In proceedings of ICPC 2012, Pisa Italy. Oct 2012.

7. M. C. Malin, M. A. Ravine, M. S. Robinson, M. Roman, and D. Miller. Acquisition of Quantitative Metrics From Teleoperational Field Testing of a Lunar Rover. In Proceedings of the International Workshop on Instrumentation for Planetary Missions. Green belt MD. Oct 2012.

8. T. Fong and D.P. Miller. Space Automation and Robotics. Aerospace America. Pg 58. December 2011.

9. L. J. Billingsley, D. P. Miller. A Robotic Mission to Study Wet Gullies on Mars. Lunar and Planetary Institute Science Conference Abstracts, volume 41 series Lunar and Planetary Institute Science Conference Abstracts, #1684, March 2010.

10. Tim Annesley and David P. Miller. Review of a Robotics Lab for Engineering Undergraduates. In the Proceedings of the ASEE-Midwest Section Meeting 2008 (ASEE-Midwest). Tulsa OK. September 2008.

11. Tim Annesley and David P. Miller. A Robotics Lab for Engineering Undergraduates. In the Proceedings of the Global Conference on Robotics Education. Norman OK. July 2008.

12. D. Miller & R. Bonaccorsi. Lessons Learned from Microbial Contamination in MARTE Field Tests. AbSciCon 2008. Santa Clara, CA, April 2008.

13. Beth Ann Hockey and David Miller. A Demonstration of a Conversationally Guided Smart Wheelchair. Proceedings of the ASSETS 2007 Conference, Tempe AZ, October 2007.

14. Igor M. Vernor, David J. Ahlgren and David P. Miller. Robotics Olympiads: A New Means to Facilitate Conceptualization of Knowledge Acquired in Robot Projects. Presented at the AAAI Spring Symposium on Robot Venues for Education, March 2007, Palo Alto CA.

15. David P. Miller, Charles Winton and Jerry B. Weinberg. Beyond Botball: A Software Oriented Robotics Challenge for Undergraduate Education. Presented at the AAAI Spring Symposium on Robot Venues for Education, March 2007, Palo Alto CA.

16. Zac White, David P. Miller, Matt Roman, Michael Ravine, Daniel Flippo, Brandon Mills, Brian Nixon, Eldar Noe and Michael Malin. Control and Operations for a Long Duration Solar Powered Mars Rover. Apple Developers Conference 2006, San Francisco CA. August 2006.

17. Ravine, M. A., J. F. Bell III, M. C. Malin, and D. P. Miller, "Semi-autonomous rover operations: A Mars Technology Program demonstration," Lunar and Planetary Science XXXVI, Extended Abstract No. 1592, Lunar and Planetary Institute, Houston, Texas, 2005.

18. D.P. Miller. Robotic Sample Handling. Chapter 3 of NASA Robotics Alliance Project online course: Robotic Exploration in Rio Tinto. http://robotics.nasa.gov/courses/fall05/ November 1, 2005.D.P. Miller. Mitigating teleoperator time-delay with dialog. In Symposium notes from the AAAI Spring Symposium on Dialogical Robots. Palo Alto CA, March 2005.

19. C. R. Stoker, L.G. Lemke, H. Cannon, B. Glass, S. Dunagan, J. Zavaleta, D. Miller, J. Gomez-Elvira. Field Simulation Of A Drilling Mission To Mars To Search For Subsurface Life. In Abstracts from 36th Lunar & Planetary Science Conference, LPI, Houston, TX, March 2005.

20. M.J. Roman & D.P. Miller. Experiments with a More Capable Lunar Rover. Abstracts from the International Lunar Conference 6. Udaipur, India. November 2004.

21. D.P. Miller. Using Robotics to Teach Computer Programming & AI Concepts to Engineering Students. In Proceedings of the AAAI Spring Symposium on Accessible Hands-on Artificial Intelligence and Robotics Education. Stanford, CA. March 2004.

22. D. P. Miller, M. Alfaro, A. Balasubramanyam, Z. Butler, J. Calero, J. Coplin, B. DeKock, M. Dirckx, A. Huizenga, T. Hunt, M. Moffitt, M. Roman, A. Shah, J. Stephens, E. Tirado, M. Welker, L. Wilmes, A. Winterholler & J. Yoon. Landing Capsule and Rover Designs for the Sooner Lunar Schooner Mission. in Abstracts from the International Lunar Conference. Hawaii Island, HI 2003.

23. T.S. Hunt, D.P. Miller, E. Ortega, and A.G. Striz. Rocketry: System Development Experience and Student Outreach, Proceedings of the 2003 ASEE Midwest Section Meeting, University of Missouri-Rolla, September 2003.

24. C. Stoker, L. Lemke, H. Mandell, D. McKay, J. George, J. Gomez-Alvera, R. Amils, T. Stevens and D.P. Miller. Mars Analog Research And Technology Experiment (MARTE): A Simulated Mars Drilling Mission to Search for Subsurface Life at the Rio Tinto, Spain, in Abstracts from 34th Lunar & Planetary Science Conference, LPI, Houston, TX, March 2003.

25. M.J. Roman, T.S. Hunt, J. Yoon and D.P. Miller. The Sooner Lunar Schooner Mission, in Abstracts from 34th Lunar & Planetary Science Conference, LPI, Houston, TX, March 2003.

26. D.P. Miller, Creating Scientists Through the Botball Robotics Education Program, in AAAS Annual Meeting – Abstracts, pg. A25, Denver, CO, Feb 2003.

27. D.P. Miller, D. Hougen & D. Shirley, The Sooner Lunar Schooner: Lunar Engineering Education, in the Proceedings of the 34th COSPAR Scientific Assembly - The Second World Space Congress, October 2002.

28. L. French, D.P. Miller and Members of the ISU SSP 2002, Astrobiology: guidelines and future missions plan for the international community, in the Proceedings of the 34th COSPAR Scientific Assembly - The Second World Space Congress, October 2002.

29. D.P. Miller, and T.L. Lee, High-Speed Traversal of Rough Terrain Using a Rocker-Bogie Mobility System, in the Proceedings of Robotics 2002: The 5th International Conference and Exposition on Robotics for Challenging Situations and Environments, Albuquerque, New Mexico, March 2002.

30. M. Fair, and D.P. Miller, Automated Staircase Detection, Alignment, & Traversal, Proceedings of the IASTED Int'l Conference on Robotics and Manufacturing, pp 218-222, Cancun, Mexico, May 21-24, 2001.

31. G. Bekey, I. Bekey, D. Criswell, G. Friedman, D. Greenwood, D. Miller, & P. Will editors, NASA/NSF Space Solar Power Workshop, Washington DC, April 2000.

32. D.P. Miller and C. Stein, Oh, That's What You Use Pi For! and Other Stories, in Proceedings of the AIAA SARTC Robotics Workshop, Cambridge MA, July 1998.

33. P. Bonasso, D. Kortenkamp, D.P. Miller and M. Slack, Experiences with an Architecture for Intelligent, Reactive Agents, in the Working Notes of the IJCAI-95 Workshop on Agent Theories, Architectures, and Languages, Aug 19th-20th, 1995 Montreal Canada.

34. D.P. Miller & A. Wright, Autonomous Spacecraft Docking Using Multi-Color Targets, in the Proceedings of the 6th Topical Meeting on Robotics, Monterey, CA, February 1995.

35. D.P. Miller, M.G. Slack & C. Elsaesser, An Implemented Intelligent Agent Architecture for Autonomous Submersibles, in the Intelligent Ships Symposium Proceedings: Intelligent Ship Technologies for the 21st Century, June 1994.

36. D.P. Miller and M.G. Slack, An Implemented Intelligent Agent Architecture for Autonomous Vehicles, in the Proceedings of the 1994 AUVS Conference, pp. 427-434, May 1994.

37. S. Yu, M.G. Slack & D.P. Miller, A streamlined software environment for situated skills, in Proceedings of the AAIA/NASA Conference on Intelligent Robots in Field, Factory, Service and Space, March 1994.

38. D.P. Miller, and E. Grant, A Robot Wheelchair, in Proceedings of the AAIA/NASA Conference on Intelligent Robots in Field, Factory, Service and Space, March 1994.

39. D.P. Miller. Intelligent Mobile Robots: Perception of Performance, In the Proceedings of the 1993 International Conference on Automation and Robotics, Tokyo Japan, November 1993.

40. J.L. Loch, R.S. Desai, E. Gat, E., & D.P. Miller, Moose on the Loose: Toward Extended Mission Autonomy for Robotic Exploration of Planetary Surfaces, In the Proceedings of the 1993 International Conference on Automation and Robotics, Tokyo Japan, November 1993.

41. D.P. Miller, Reducing Software Mass Through Behavior Control, in The Proceedings of Cooperative Intelligent Robotics in Space III, SPIE 1992 Cambridge Symposium, Cambridge, MA, November 1992.

42. E. Gat, A. Behar, R.S. Desai, R. Ivlev, J. Loch and D.P. Miller, Simple Sensors for Performing Useful Tasks in Complex Outdoor Terrain, in The Proceedings of Sensor Fusion V, SPIE 1992 Cambridge Symposium, Cambridge, MA, November 1992.

43. D.P. Miller, The Mass of Massive Rover Software, in the Notes of the International Symposium on Missions, Technologies and Design of Planetary Mobile Vehicles, Toulouse France, September 1992.

44. A. Lane, J.B. Plescia and D.P. Miller, Unmanned Rovers and Their Utilization Strategies for Lunar Exploration, in the Notes of the International Symposium on Missions, Technologies and Design of Planetary Mobile Vehicles, Toulouse France, September 1992.

45. D.P. Miller, R.S. Desai, E. Gat, R. Ivlev and J. Loch, Experiments with a small behavior controlled planetary rover, in the Notes of the International Symposium on Missions, Technologies and Design of Planetary Mobile Vehicles, Toulouse France, September 1992.

46. D.P. Miller & J.Q. Milstein, Scarecrow the Robot, in AI Magazine, vol 13 #2, Robotics Competition Conference Supplement, 1992.

47. J.B. Plescia, A.L. Lane & D.P. Miller, Lunar Surface Rovers, in Proceedings of the Joint Workshop on New Technologies for Lunar Resource Assessment, Lunar Planetary Institute, pp. 44-45, 1992.

48. D.P. Miller, Autonomous Rough Terrain Navigation: Lessons Learned, paper #AIAA-91-3813- CP in the Proceedings of Computing in Aerospace 8, AIAA, pgs 748-753, October, 1991.

49. D.P. Miller & G. Varsi, Micro-Technology for Planetary Exploration and Education, in The Proceedings of the 42nd Congress of the International Astronautical Federation, Montreal, Canada, October 1991.

50. D.P. Miller & E. Gat, Exploiting Known Topologies to Navigate with Low-Computation Sensing, in The Proceedings of Sensor Fusion III, SPIE 1990 Cambridge Symposium, Cambridge, MA, November 1990.

51. D.P. Miller, Rover Navigation Through Behavior Modification, in The Proceedings of the Space Operations Automation and Robotics Workshop, NASA, Albuquerque, NM, June 1990.

52. D.P. Miller, Execution Monitoring for a Mobile Robot System, in the Proceedings of the 1989 SPIE Conference on Intelligent Control and Adaptive Systems, vol 1196, pp. 36-43, Philadelphia, PA, November 1989.

53. D.P. Miller, B. Wilcox and G. Varsi, Planetary Rover Local Navigation & Hazard Avoidance, in the Proceedings of the XXXXth IAF Congress: Symposium on Space Systems: Intelligent Autonomous Systems and Robotics, IAF-89-047. Malaga, Spain, October, 1989.

54. E. Gat, R.J. Firby & D.P. Miller, Planning for Execution Monitoring on a Planetary Rover, in The Proceedings of the Space Operations Automation and Robotics Workshop, NASA, Houston, TX, July 1989.

55. J.P. Bixler & D.P. Miller, Extracting Text from a Real World Scene, in the Proceedings of the 1988 SPIE Cambridge Symposium on Sensor Fusion: Spatial Reasoning and Scene Interpretation pp 376-383, Cambridge, MA, November 1988.

56. L.A. Hite & D.P. Miller, Designing a Testing Strategy for Expert Systems, Virginia Tech Department of Computer Science Research Report #TR-88-41, 1988.

57. M.G. Slack & D.P. Miller, Route Planning in a Four Dimensional Environment, in Proceedings of the 1987 Workshop on Tele-Robotics, pp 41-47, JPL, Pasadena, CA, January, 1987.

58. E. Gat & D.P. Miller, Reasoning About Knowledge Using Extensional Logics, Virginia Tech Department of Computer Science Research Report #TR-87-36, 1987.

59. T. Dean, R.J. Firby and D.P. Miller, The FORBIN Paper, Yale University Department of Computer Science Technical Report RR#550, July, 1987.

60. J.P. Bixler and Miller. D.P., A Sensory Input System for Autonomous Mobile Robots, Virginia Tech Department of Computer Science Research Report #TR-87-14, 1987.

61. M.G. Slack and D.P. Miller, Path Planning Through Time and Space in Dynamic Domains, Virginia Tech Department of Computer Science Research Report #TR-87-5, 1987.

62. D.P. Miller, A Task and Resource Scheduling System for Automated Planning, Virginia Tech Department of Computer Science Research Report #TR-87-1, 1987.

63. D.P. Miller and P. Koushik, Low-Error Path-Planning for a Synchro-Drive Mobile Robot, Virginia Tech Department of Computer Science Research Report #TR-86-28, 1986.

64. D.P. Miller, Scheduling Robot Sensors for Multiple Sensor Tasks, in Proceedings of Robots West, 1986, RIA, SME, Long Beach, CA. September 1986, pp. 3:105-3:114.

65. D.P. Miller, AI Planners for Shop Scheduling, in Proceedings of the 1986 Artificial Intelligence and Advanced Computer Technology Conference, April 1986, pp. 220-225.

66. D.P. Miller, Planning by Search Through Simulations, Yale University, Department of Computer Science, Research Report #423, October 1985. (Ph.D. Dissertation)

67. D.P. Miller, Scheduling Heuristics for Problem Solvers, Yale University, Dept of Computer Science, Research Report #264, April 1983.

7 Invited Talks and Workshops (no proceedings):

1. David P. Miller. Robots for Exploring the Moon and Mars. OU Speakers Service Seminar. Moore Public Library, Norman OK. August 2014.

2. David P. Miller and Charles Winton. Coordinate Transforms for Utilizing Depth Sensors for Obstacle Detection. Global Conference on Educational Robotics (GCER). Los Angeles CA. July 2014.

3. David P. Miller. Robots for Exploring the Moon and Mars. OU Speakers Service Seminar. Rivermont Gardens, Norman OK. May 2014.

4. David P. Miller. A Robot System for Teaching Infants with Disabilities How to Crawl. ME Seminar Series at US Military Academy, West Point NY. April 2014.

5. David P. Miller and Andrew H. Fagg. Mobility Assistance for Infants with Cerebral Palsy. Global Conference on Educational Robotics (GCER). Norman OK. July 2013.

6. David P. Miller, Charles Winton and Jonathan Meyer. Visual Control of a Syma Helicopter. Global Conference on Educational Robotics (GCER). Norman, OK. July 2013.

7. David P. Miller. Why Learning About Robotics is Important. ECER 2013 Conference. Vienna Austria. May 2013.

8. David P. Miller. Robots that Learn & Teach How to Crawl. ECER 2012 Conference. Vienna Austria. May 2012.

9. The Botball and KIPR Autonomous Aerial Vehicle Contests. (with S. Goodgame) Oklahoma UAS Summit. Stillwater OK, October 2011

10. Teaching Programming Through Robotics & Robotics Outreach. Department of Computer Science, Oklahoma State University. March 2009.

11. Using the Simulation & Reality of Robots to Teach Programming. Future of Robots in Education Workshop, ACM SIGCSE, Chattanooga TN. March 2009.

12. K-12 Robotics: The Need for Inspiration and Education.Dept of Electrical and Systems Engineering, Washington University, St. Louis MO. November 2008.

13. Experiments in Semi-Autonomous Rover Operations. Dept of Mechanical Engineering, University of Nebraska, Lincoln. October 2008.

14. Plenary talk: Robotics Education. IEEE International Conference on Mechatronics and Automation, Takamatsu Japan, August 2008.

15. Educational Robotics as an Op-Amp for Consumer Robots. RoboBusiness 2008. Pittsburgh, PA. April 2008.

16. The Intelligent Robotics Lab. Presented at the January meeting of the Engineering Club of Oklahoma City. January 2007.

17. The Sooner Lunar Schooner Project. Joint Central Oklahoma ASME/AIAA meeting. Oklahoma City OK. October 2005.

18. Learning to Schedule, Organize, Write & Program Through Robotics Education. Robonexus 2005. San Jose CA. October 2005.

19. Robot Education in the USA. RoboFesta 2005 International Forum on The Future of the Young and "Robot Creation". Nagoya, Japan. August 2005.

20. Going Faster & Farther on the Moon & Mars. Plenary Talk, Satellite Symposium on Micro/Nano Mechatronics and Human Science. Nagoya, Japan. August 2005.

21. The Sooner Lunar Schooner. Lunch Keynote Address, OU Club of Houston. March 2005.

22. Sometimes Real Robots do Need Remote Control. National Conference on Educational Robotics. San Jose, CA. July 2004.

23. Using Robotics to Teach Computer Programming & AI Concepts to Engineering Students. Closing keynote address. AAAI Spring Symposium on Accessible Hands-on Artificial Intelligence and Robotics Education. Stanford, CA. March 2004.

24. Moving Faster & Farther (not necessarily better, but probably cheaper), Ames Research Center, Intelligent Systems Seminar Series, Mountain View, CA, September 2002.

25. High-Speed Traversal of Rough Terrain Using a Rocker-Bogie Mobility System, AIAA Space Automation and Robotics Technical Committee Conference, Pittsburgh, PA, September 2002.

26. Botball: a Multi-disciplinary Robotics Education Program, Building for Tomorrow Educators Conference, plenary talk, Middlesex NJ, August 2002.

27. Once & Future Robot Contests, AAAI National Conference on Artificial Intelligence–Plenary Robotics Panel, Edmonton Alberta, Canada, August 2002.

28. When I grow up, I want to be an astronaut, keynote speech, National Robotics Education Conference, Norman, OK, July 2002.

29. Multi-Disciplinary Robotics Education, Robo-Cup Symposium - International Joint Conference on Artificial Intelligence, Seattle, WA, August 2001.

30. Botball: Robotics Education, The New Jersey Center for Advanced Technological Education Symposium on Building for Tomorrow, Edison, NJ, June 2001.

31. The Cost of Computation in Going to Mars, University of North Florida, February 2001.

32. Planetary Rovers, Johnson Space Center, Houston, TX, May 2000.

33. Botball: a Multi-disciplinary Robotics Program, NASA/Tech Museum Robotics Education Symposium, San Jose, CA, October 2000.

34. Designing Robots and Robot Designers, EPSCoR Teachers Workshop, Plenary Talk, Norman, OK, September 2000.

35. Robots, Education & the Media, WIRE 2000 Conference, Plenary Talk, Pittsburgh, PA, April 2000.

36. On the Automated Generation of Robot Designers, plenary talk at the IEEE CIRA Conference, Monterey, CA, November 1999.

37. Mind Expanding Robots at the Mindfest Conference, Cambridge, MA, October 1999.

38. National Botball Tournament at the National Conference on Artificial Intelligence, Orlando, FL, August 1999.

39. The Evolution of the Mars Rover, Trinity Firefighting Tournament/Conference, Hartford, CT, April 1999.

40. Semi-Autonomous Mobility vs. Semi-Mobile Autonomy, AAAI Spring Symposium on Adjustable Autonomy, Stanford, CA, March 1999.

41. The Mars Rover: Designing Simple Machines for Complicated Tasks, St. Louis Science Center AIAA Invited Talk, 3 December, 1998.

42. The (de)Evolution of the Mars Rover, University of Maryland Honors Program Invited Lecture, 14 April, 1998.

43. On Competitions, Building Labs, Specialization and Robot Integration,AAAI Spring Symposium on Robot Integration, Stanford, CA, March 1998.

44. Moving in Tandem: Automated Person Pacing for Wheelchair Users, AAAI Fall Symposium on AI for People with Disabilities, Cambridge, MA, November 1996.

45. Communicating with Mobile Agents, AAAI Fall Symposium on Embodied Language and Action, Cambridge, MA, November 1995.

46. Experiences Looking Into Niches, AAAI Spring Symposium on Implemented Architectures for Intelligent Agents, Palo Alto, CA, March 1995.

47. On the Role of Physical Form on Intelligent Function, AAAI Fall Symposium on Control of the Physical World by Intelligent Agents, AAAI Technical Report FS-94-03, New Orleans, LA, November 1994.

48. Using a Semi-Autonomous Wheelchair invited talk at the Annual Conference of the President's Commission on the Employment of People with Disabilities, Atlanta, GA, May, 1994.

49. Touring the Planets for $20K a Day, keynote address at SPACE 94, The Conference and Exposition on Robotics for Challenging Environments, Alberquerque, NM, March 1994.

50. The (de)Evolution of the Planetary Rover Program, plenary address at SPACE 94, The Fourth International Conference on Engineering, Construction and Operations in Space, Alberquerque, NM, February 1994.

51. Miller's Emporium of Second-Hand Sensors, keynote address at the NASA workshop on Intelligent Perception, Houston TX, November 1993.

52. Cleaning Up With Second Hand Sensing, In the Working Notes, AAAI Fall Symposium on Instantiating Real-World Agents, October 1993, Raleigh, NC.

53. Real-Time AI for Mobile Robots, at the NSF Workshop on Artificial Intelligence in Real Time, College Park, MD, February, 1993.

54. Real Robots Eat Quiche, or at Least Can Cook It, at the AAAI Fall Symposium on Application of AI to Real-World Autonomous Mobile Robots, Cambridge MA, October 1992.

55. Autonomous Rough Terrain Navigation, at the Electrical Technical Laboratory, Tskuba Japan, July 1992.

56. Micro-Software for Micro-Robots, at the NASA Microtechnologies and Applications to Space Sytems, Pasadena CA, May 1992.

57. A Simple Reactive Architecture for Robust Robots, with Rajiv Desai, at the IEEE International Conference on Robotics and Automation workshop on Intelligent Architectures for Autonomous Robots, Nice France May 1992.

58. JPL Rovers for Lunar Exploration, with Donald Bickler, at the NASA Rover/Mobility Systems Workshop, Houston, Tx, April 1992.

59. Planetary Rovers: The New Explorers, at the National Science Teachers of America Conference, Boston, MA, February 1992.

60. Levels of Sensing for Rough Terrain Navigation, at the AAAI Fall Symposium on Intelligent Robotics, Monterey, CA, November 1991.

61. Micro-Rovers for Macro Exploration, at the JPL/Planetary Society Workshop on Small Spacecraft, October 1991.

62. Imaging for Mobile Robot Navigation in Rough Terrain, at the IJCAI-91 workshop on Dynamic Scene Understanding, Sydney Australia, August, 1991.

63. Navigation Through Rough Terrain: Deliberation verses Reaction, at the IEEE Robotics and Automation Workshop on Sensory Systems for Space Robotics, Sacramento, CA, April 1991.

64. A Layered Architecture for Integrating Planning and Reaction, at the DARPA Workshop on Planning, Scheduling and Control, San Diego, CA November 1990.

65. DARPA Workshop on Planning Metrics and Benchmarks, San Jose, CA June 1990.

66. Micro-Rovers for Solar System Exploration, with B.Wilcox, at the AIAA Workshop on Solar System Exploration, Pasadena, CA, August 1989.

67. Scheduling Task Monitors, at the CORS/TIMS/ORSA Joint National Meeting, Vancouver, Canada, May 1989.

68. Planning for Robot Execution, at the CalTech Industrial Affliliates Conference on Robotics & Automation, Pasadena, CA, April, 1989.

69. Planning Systems for a Mars Rover, at the 1989 AAAI Spring Symposium Series: Robot Navigation, April 1989.

70. Local Navigation for a Planetary Rover, at the Workshop in Spacecraft Autonomy: Present & Future Capabilities, IFAC, Pasadena, CA, September 1988.

71. Plan Recognition for Execution Monitoring, at the Plan Recognition Workshop, part of AAAI 1988, St Paul, Minnesota, August 1988.

72. Robot Navigation, at the NASA Code Z Workshop on Robotics and Automation for the Exploration of the Moon and Mars, Palo Alto, CA, May 1988.

73. Mars Rover and Interpretation of Ground Looking Radar, at the DARPA/ALV Quarterly Review, Vail, Co, March, 1988.

74. Dualism and Robot Planning, at the DARPA Workshop on Automated Planning, Santa Cruz, CA, October 1987.

75. ADA Verses LISP for AI Programming, part of the panel on ADA and Traditional AI Languages, at AIDA-87 Conference, Herndon, VA, October 1987.

76. The Role of Temporal Scheduling in Planning, at the ORSA/TIMS 1986 Meeting, Miami Beach, FL, October 1986.

77. Reactive Planning for Robot Navigation, at the DARPA Workshop on Automated Planning, Washington D.C., May 1986.

78. Temporal Planning for Mobile Robots, at the IEEE Conference on Robotics and Automation Workshop on Mobile Robots, St Louis, MO, March 1985.

79. Mobile Robot Navigation, at the Artificial Intelligence Society of New England, Providence, RI, October 1983.

8 Graduate Students Supervised:

1. Michael Petri, Thesis title: Mechanism to Power Personal Wheelchair Lift. M.S., School of Aerospace and Mechanical Engineering, University of Oklahoma, May 2015.

2. Jonathan Meyer, Thesis title: A Low Cost, Vision Based Micro Helicopter System for Education and Control Experiments. M.S., School of Aerospace and Mechanical Engineering, University of Oklahoma, May 2014.

3. Mustafa Ghazi, Thesis title: Position Control Using Pitch Feedback. M.S., School of Aerospace and Mechanical Engineering, University of Oklahoma, August 2013.

4. Owen Dodd, Dissertation title: Neural Correlates of Detection and Decision in Auditory Cortex During Frequency Discrimination. Ph.D., Bioengineering/Biomedical Engineering, University of Oklahoma, June 2013.

5. Amber Walker, Dissertation title:Attitude Aware Smart Phones for Tele-Operated Robot Control. Ph.D., School of Aerospace and Mechanical Engineering, University of Oklahoma, May 2013.

6. Gottfried Koppensteiner, Dissertation title: Knowledge-based Agent Architecture for Cooperative Production Systems. Dr. Technology, Technical University of Vienna. Co-Advised with Dr. G. Schitter. November 2012.

7. Matthew Roman, Dissertation title: Effects of Perception Range on Path Efficiency. Ph.D. School of Aerospace and Mechanical Engineering, University of Oklahoma. October 2011.

8. Lisa Billingsley, Thesis title: Analysis of Requirements of a Mars Rover Mission to Active Gullies. M.S., School of Aerospace and Mechanical Engineering, University of Oklahoma, July 2010.

9. Daniel Flippo, Dissertation title: Design and Analysis of Rover Wheel Testbed. Ph.D., School of Aerospace and Mechanical Engineering, University of Oklahoma, December 2009.

10. Brandon Mills, thesis title: Design and Analysis of Compliant Wheels for a Planetary Rover. M.S., School of Aerospace and Mechanical Engineering, University of Oklahoma, May 2007.

11. Amit Iyer, thesis title: An Automated Sample Acquisition System for LORAX. M.S., School of Aerospace and Mechanical Engineering, University of Oklahoma, August 2006.

12. Mayank Murarka, thesis title: Desing and Implementation of a Low-Cost Rock Abrasion Tool. M.S., School of Aerospace and Mechanical Engineering, University of Oklahoma, August 2006.

13. Todd Taber, thesis title: Desing and analysis of a Lightweight Lunar Rover. M.S., School of Aerospace and Mechanical Engineering, University of Oklahoma, May 2006.

14. Jörg Krause, thesis title: Design, Calculation and Realization of two Parts of an Automated Rock Core Sample Handling System, Diploma - Ingenieur, Fachhochschule Augsburg Hochschule fur Technic - Wirtschaft - Gestaltung, University of Applied Sciences. Co-Chaired with H.E. Schurk. February 2006.

15. Tim Hunt, thesis title: Collection and Analysis of Dynamic Data with an Instrumented Aluminum High Power Rocket. M.S., School of Aerospace and Mechanical Engineering, University of Oklahoma, August 2005.

16. Matt Roman, thesis title: Design and Analysis of a Four-Wheeled Planetary Rover. M.S., School of Aerospace and Mechanical Engineering, University of Oklahoma, August 2005.

17. Alois Winterholler, thesis title: Development, Design and Verification of different Wheel Concepts for NASA's Field Integrated Design and Operations Rover, Diploma - Ingenieur, Fachhochschule Augsburg Hochschule fur Technic - Wirtschaft - Gestaltung, University of Applied Sciences. Co-Chaired with H.E. Schurk. December 2002.

18. Tze-Liang Lee, thesis title: Behavior and Control of a Rocker-Bogie Suspension Under Relatively High Speed, M.S., School of Aerospace and Mechanical Engineering, University of Oklahoma, December 2001.

19. Mike Fair, thesis title: Autonomous Stair Climbing with a Mobile Robot, M.S., School of Aerospace and Mechanical Engineering, University of Oklahoma, September 2000.

20. Erann Gat. Dissertation title: Reliable Goal-directed Reactive Control for Mobile Robots, Ph.D., Department of Computer Science, Virginia Tech, May 1991.

21. Marc Slack. Dissertation title: Situationally Driven Local Navigation for Mobile Robots, Ph.D., Department of Computer Science, Virginia Tech, May 1990.

22. Lee Hite, thesis title: Towards a Testing Methodology for Expert Systems, M.S., Department of Computer Science, Virginia Tech, February 1988.

23. Keneth Landry, thesis title: Evolutionary Neural Networks, M.S., Department of Computer Science, Virginia Tech, February 1988.

24. Erann Gat, thesis title: Reasoning About Knowledge Using Extensional Logics, M.S., Department of Computer Science, Virginia Tech, November 1987.

25. M. Prabhakar Koushik, project title: A Low Error Path-Planner for a Synchro-Drive Mobile Robot, M.S., Department of Computer Science, Virginia Tech, July 1987.

26. Marc Slack, thesis title: Spatial and Temporal Path Planning, M.S., Department of Computer Science, Virginia Tech, June 1987.

9 Professional Affiliations and Activities:

1. Faculty sponsor for University of Oklahoma Rocket Club
2. Faculty sponsor for University of Oklahoma AIAA Student Chapter
3. Faculty sponsor for University of Oklahoma Sigma Gamma Tau Student Chapter
4. Chair of the KIPR Technical Advisory Committee
5. Member of American Association for Artificial Intelligence

6. Member of American Institute of Aeronautics and Astronautics
7. Member of American Society for Engineering Education
8. Member of Institute of Electronics & Electrical Engineers
9. Member of the AIAA Space Automation and Robotics Technical Committee, since 1994.

10 Research Contracts:

1. PI: L. Song, Co-PI: D. P. Miller. Prototype design of a virtual energy meter for enhanced building operations. OCAST OARS. $89,995. 8/2015-7/2017.
2. PI: A. H. Fagg, Co-PIs: D. P. Miller, T. Kolobe, L. Ding. NRI-Small: Robot Assistants for Promoting Crawling and Walking in Children at Risk of Cerebral Palsy. NSF NRI Program. $1,333,022. 10/2012-9/2015.
3. PI: D.P.Miller, Co-PIs: Phil Chilson, Prakash Vedula. Boundary Layer Sensor Platform Suitability Study. 2012 SEED Funding for Interdisciplinary Research CoE. $9525. 5/2012-5/2013.
4. D. P. Miller, PI: Mentor Support for KIPR-Biofuels-Native American Outreach. KIPR. $4,500. 8/2010 – 12/2010.
5. A. Fagg, PI: D. P Miller, Co-I. Prone Locomotion in Infants With or At Risk for Disabilities. OUHSC/NIH. $69,870. 8/2010-8/2012.
6. PI E. ORear, Co-I: M. Nollert, D. P. Miller, D. Schmidtke, R. Harrison, R. Gan, H. Liu, P. McFetridge, V. Sikavitsas, R. Rennaker, T. Ibriham, B. Starly. Supplement to Promoting Versatility in Doctoral Bioengineering Education. U.S. Department of Education. $174,208. 9/2009 – 12/2010.
7. D.P. Miller, PI. Equipment in support of Assistive Technology Research. HRSA. $141,570. September 2009, August 2010.
8. D.P. Miller, PI. Supplement to Semi-autonomous Rover Operations (additional field tests). Malin Space Science Systems. $40,329.
9. D.P. Miller, PI. Additional supplement to Semi-autonomous Rover Operations. Malin Space Science Systems. $34,071.
10. PI E. ORear, Co-I: M. Nollert, D. P. Miller, D. Schmidtke, R. Harrison, R. Gan, H. Liu, P. McFetridge, V. Sikavitsas, R. Rennaker, T. Ibriham, B. Starly. Supplement to Promoting Versatility in Doctoral Bioengineering Education. U.S. Department of Education. $171,504.
11. E. ORear, P.I. Co-PI: M. Nollert, D. P. Miller, D. Schmidtke, R. Harrison, R. Gan, H. Liu, P. McFetridge, V. Sikavitsas, R. Rennaker, T. Ibriham, B. Starly. Promoting Versatility in Doctoral Bioengineering Education. U.S. Department of Education. August 2007-August 2010. $170,508.

12. R. Rennaker, PI. Co-PI: D.P. Miller, P. Skubic, D. Wilson, T. Ibrahim. Micro-Neural Interface. State of Oklahoma, Center for the Advancement of Science and Technology. Supplement $45,000. R. Rennaker, PI. T. Ibrahim Co-PI, D. Miller, P. Skubic, & D. Wilson, Co-Is. Micro-Neural Interface. July 2005 - August 2008. OK-CAST OHRP. $133,814.

13. D.P. Miller, PI. Mars Analog Research & technology Experiment (MARTE) Year 3. December 2004 - October 2005. NASA Ames Research Center. $179,097.

14. D.P. Miller, PI. Semi-Autonomous Rover Operations. Malin Space Science Systems. October 2004 - September 2007. $369,863.

15. D.P. Miller, PI. LORAX Mission Sample Acquisition Subsystem. April 2004 - September 2005. NASA Ames Research Center. $95,999.

16. D.P. Miller, PI. Copernicus Rover Design. KISS Institute for Practical Robotics. February 2004 - December 2004. $74,660

17. D.P. Miller, PI. Mars Analog Research & technology Experiment (MARTE) Year 2. November 2003 - October 2004. NASA Ames Research Center. $170,947.

18. D.P. Miller, principal investigator, Rock Abrasion Tool Redesign. September 2003–February 2003. $23,230. NASA Ames Research Center.

19. D.P. Miller, IPA Assignment Agreement for David Miller to ARC. July 2003 - July 2004 $42,989. NASA Ames Research Center.

20. D.P. Miller, MARTE Sample Handling System. January 2003-Dec 2003. $158,272. NASA Ames Research Center.

21. D.P. Miller, principal investigator, Support for the Implementation of a Solar Powered Rover. April 2002 - July 2002. $37,872. Malin Space Science Systems Inc.

22. F. Striz, principal investigator; D.P. Miller Co-PI, Project in Launch Vehicle Design, Instrumentation, and Data Evaluation. November 2001 - December 2002. $28,464. State of Oklahoma, Space Industry Development Authority.

23. D. Shirley, J.Y. Cheung, D.P. Miller, & M.C. Court, Co-PIs, The University of Mars: An Interdisciplinary Study in Engineering. January-June 2002. $47,042. Oklahoma State Regents for Higher Education.

24. D.P. Miller, principal investigator; Shirley, D. & Rhoads, T., Co-PIs, Hands on Experience in Robotics. June 2001 - September 2003. $400,000. US Department of Education.

25. D.P. Miller, principal investigator, Formation of the Institute for Practical Robotics at the University of Oklahoma: A Member of the KISS Insitute University Consortium. February - June 2001. $4,403. KISS Insitute for Practical Robotics.

26. D.P. Miller, IPA Assignment Agreement for David Miller to NASA Ames. October 2000-September 2002. $41,334.

27. D.P. Miller, principal investigator, Three Dimensional Planning for PSA. 5/15/00-9/30/00. $8,928. USRA.

28. D.P. Miller, principal investigator, NASA EPSCoR: Smart Rovers Prep Grant. 7/1/00-12/31/00. $18,854, OK Regents.

29. D.P. Miller, IPA consultant for research coordination on rover autonomy program and robotics outreach program, $181,041, NASA Ames Research Center, March 1998-March 2000.

30. D.P. Miller, principal investigator, Adding Autonomous Alignment to TETRA, NIST, $50,000, June - November 1996.

31. D.P. Miller, principal investigator, Adding Visual Navigation to Ranger, Sub contract from University of Maryland, $100,000, October 1995 - March 1996.

32. D.P. Miller, principal investigator, Survey of Robotic Needs for the Services, ARPA, $200,000, October 94 - October 95.

33. M.G. Slack, principal investigator, D.P. Miller, investigator, Control of Intelligent Agents, MITRE MSR, $350,000, Oct 94 - Sept 95.

34. D.P. Miller, principal investigator, $20,000, MITRE Special Initiative on robotic wheelchair development, April-May 1994.

35. D.P. Miller, principal investigator, R.Desai, E.Gat, J.Loch, investigators, Micro-Rovers for Planetary Surface Exploration, $100,000, JPL Directors Discretionary Fund, December 1991 - December 1992. (renewal)

36. D.P. Miller, principal investigator, R.Desai, E.Gat, J.Loch, investigators, Integrating Strategic Planning with Reactive Control, $250,000, NASA OAET, October 1991- September 1992.

37. L. Matthies, principal investigator, C.Anderson, D. Gennery, D.P. Miller, B.H. Wilcox, investigators, Real-time Passive 3D Sensing and Navigation in Unstructured Domains, $435,000 DARPA, January 1992-December 1992.

38. D.P. Miller, principal investigator, R.Desai, E.Gat, J.Loch, investigators, Micro-Rovers for Planetary Surface Exploration, $100,000, JPL Directors Discretionary Fund, December 1990 - December 1991.

39. D.P. Miller, principal investigator, Micro-rover System Test, $172,000 NASA OAET, January 1991- September 1991.

40. L. Matthies, principal investigator, C.Anderson, D. Gennery, D.P. Miller, B.H. Wilcox, investigators, Real-time Passive 3D Sensing and Navigation in Unstructured Domains, $150,000 DARPA, September 1991-December 1991.

41. D.P. Miller, principal investigator, Planetary Rover Navigation Planning, $100,000, OAET, October 1990 - September 1991.

42. D.P. Miller, principal investigator, R.Desai, E. Gat, investigator, Automatic Network Design and Physical Configuration, $200,000, OAET, October 1990 - September 1991.

43. D.P. Miller, principal investigator, R.J. Firby, M.G. Slack, investigators, Planning and Execution Monitoring element of the Pathfinder Planetary Rover, $390,000, OAST, October 1989 - September 1990.

44. D.P. Miller, principal ivestigator, E. Gat, investigator, Planner Evaluation Techniques, $200,000, OAST, October 89-October 1990.

45. D.P. Miller, principal investigator, Planning and Execution Monitoring element of the Pathfinder Planetary Rover, $465,000, OAST, October 1988 - September 1989.

46. D.P. Miller, principal investigator, Marc Slack, investigator, Path Planning for Space Structure Construction, $20,000, NASA Code-Z, November-February, 1989.

47. D.P. Miller, principal investigator, Marc Slack, investigator, Refinement of a Message-Passing Route Planner, NSWC, $27,990, August 1987-February 1988.

48. D.P. Miller, principal investigator, Evaluating AI Applications for the Tomahawk System, NSWC, $33,786, July 1986-July 1987.