

## CURRICULM VITAE

Dr. Randy Gimblett  
Professor

School of Natural Resources and the Environment  
The University of Arizona  
Email: gimblett@ag.arizona.edu  
Office: 520-621-6360  
Cell: 520-205-2817  
Fax: 520- 621-8801  
Last Updated: 3-12-2019

### Chronology of Education

PhD University of Melbourne (1998) - Department of Environmental Planning  
MLA University of Guelph (1984) - School of Landscape Architecture  
DPLA Ryerson Polytechnical University (1977) - Department of Landscape Architecture

Major Fields: Evaluation of human use patterns, interactions and responses across various landscape scales; Geographic Information Systems; Agent based modelling; human/wildlife interactions; coupling human-landscape systems modeling across space and time at multiple scales; land use and land cover modeling in response to climate change; stakeholder involvement and conflict resolution; recreation and environmental impacts.

### Employment Record: Academic

2016 - present Member American Indian Studies Graduate Interdisciplinary Degree Program (AIS GIDP).  
2012 - present Member, Master's in Development Practice (MDP) Program.  
2009 - present Member, The Institute for the Environment  
2007 - 2012 Chair, Conservation Planning and Policy, School of Natural Resources and Environment. The University of Arizona, Tucson, Arizona.  
2004 - present Professor, Arid Lands Resource Sciences Graduate Program. The University of Arizona, Tucson, Arizona  
2000 - present Professor, School of Natural Resources and Environment. The University of Arizona, Tucson, Arizona.  
2000 - 2009 Director for Center on the Impacts of Urban Development in Desert Environments. School of Renewable Natural Resource and Sonoran Institute.  
2000 - present Joint Faculty, School of Landscape Architecture. College of Architecture and Planning.  
1997 - 2000 Associate Professor, School of Renewable Natural Resources. The University of Arizona, Tucson, Arizona.  
1992 - 1997 Associate Professor, Landscape Architecture and School of Renewable Natural Resources. The University of Arizona, Tucson, Arizona.  
1989 - 1992 Assistant Professor, Department of Landscape Architecture, College of Architecture and Planning, Ball State University, Muncie, Indiana..  
1989 - 1990 Visiting Instructor/ Research Associate. School of Renewable Natural Resources, The University of Arizona, Tucson, Arizona.  
1985 - 1989 Director of Computer Graphics Laboratory/Applications Programmer, Adjunct Professor/Research Associate, Department of Landscape Architecture, College of Architecture and Planning, Ball State University, Muncie, Indiana, USA.  
1984 - 1985 Sessional Professor. Landscape Architecture, University of Guelph, Guelph, Ontario, Canada.  
1981 - 1983 Research Assistant. Landscape Architecture. University of Guelph, Guelph, Ontario.

### Honors, Awards and Recognition: 1984-1999

1984 Canadian Society of Landscape Architects (CSLA). Outstanding Graduate Student  
1990 Recognition for Outstanding Young Faculty. Ball State University.  
1991 Recognition for Distinguished Professor in the College of Architecture and Planning. Ball State University.

- 1991 Honored Member of Center for Energy, Research/Education/Service (CERES) Energy Research Fellowship Group. Ball State University.
- 1992 Inducted into The Honor Society of Sigma Lambda Alpha, University of Arizona Tucson Iota Chapter.
- 1995 Overseas Postgraduate Research Scholarship. University of Melbourne. Parkville, Victoria 3052 Australia.
- 1996 University of Melbourne, School of Graduate Studies Travelling Scholarships.
- 1998 Awarded a Ph.D. from the University of Melbourne, Melbourne, Australia in Environmental Planning.
- 2002 Outstanding dissertation advisor - School of Renewable Natural Resources, University of Arizona.
- 2016 American Fisheries Society - Arizona-New Mexico Chapter. Conservationist of the year award to the legal team protection streamflow in Cherry Creek, Arizona.

### **Publications/Creative Activity (Published or Accepted)**

#### **Books**

- Deadman, P. J. & H. R. Gimblett. (1997). Linking Artificial Neural Networks to Geographic Information Systems for Landscape Research and Education. In Short Subjects for Design Professionals. The Landscape Architectural Registration Boards Foundation and the Council of Educators in Landscape Architecture. 1997. 40pgs.
- Gimblett, H.R. (ed.). (2002). Integrating GIS and Agent Based Modeling Techniques for Understanding Social and Ecological Processes. Oxford University Press. 2002. 329pgs.  
<https://www.amazon.com/Integrating-Geographic-Information-Agent-Based-Techniques/dp/019514337X>
- Gimblett, H.R. & H. Skov-Petersen (eds). (2008). Monitoring, Simulation and Management of Visitor Landscapes. University of Arizona Press. 2008. 468 pgs. ISBN 978-0-8165-2729-8.  
[http://www.uapress.arizona.edu/onlinebks/Monitoring\\_Visitor\\_Landscapes.pdf](http://www.uapress.arizona.edu/onlinebks/Monitoring_Visitor_Landscapes.pdf)
- Poe, A. and H. R. Gimblett. Science, Sustainability, and Community in Prince William Sound, Alaska. (2017). University of Arizona Press. 2017. <https://uapress.arizona.edu/book/sustaining-wildlands>

#### **Book Chapters**

- Gimblett, H. R., B. Durnota & R. M. Itami. Spatial Explicit Autonomous Agents for Modelign Recreation Use in Complex Wilderness Landscapes. (1996). In: Stocker, R. Herbert Jelinek, Bohdan Durnota, Terry Bossomaier (eds). Complex Systems: From Local Interactions to Global Phenomena. IOS Press pgs 69-82. 1996.
- Gimblett, H. R. Introductory Overview of GIS and Agent Technology in Natural Resource Modeling. (2002). In H. R Gimblett, editor. Integrating GIS and Agent based Modeling techniques for Understanding Social and Ecological Processes. Oxford University Press. 2002. Pgs. 1-20.
- Gimblett, H. R., R. M. Itami & M. Richards. Simulating Wildland Recreation Use and Conflicting Spatial Interactions using Rule-Driven Intelligent Agents. (2002). In H. R Gimblett, editor. Integrating GIS and Agent based Modeling techniques for Understanding Social and Ecological Processes. Oxford University Press. 2002. Pgs 211-243.
- Gimblett, H. R. C. Roberts, T. Daniel, M. Meitner, S. (2002).
- Kilbourne, M. Ratliff, D. Stallman, R.  
Bogle. Intelligent Agent Modeling for Simulating and Evaluating River Trip Scheduling Scenarios for the Grand Canyon National Park. In H. R Gimblett, editor. Integrating GIS and Agent based modeling techniques for Understanding Social and Ecological Processes. Oxford University Press. 2002. Pgs 245-275.
- Jiang, B. & H. R. Gimblett. Agent-based Approaches to Modelling Environment and Urban Systems. (2002). In H. R Gimblett, editor. Integrating GIS and Agent based modeling techniques for Understanding Social and Ecological Processes. Oxford University Press. 2002. Pgs. 171-189.
- Manning, R., R. M. Itami, D. Cole & H. R. Gimblett. (2005). Overview of Recreation Simulation Modeling Approaches and Methods. Pgs. 11 –15. In: Cole, David N. (compiler). Computer Simulation Modeling of Recreation Use: Current Status, Case Studies, and Future Directions. Gen. Tech. Rep. RMRS-GTR-143. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. September 2005. Pgs 75.

- Gimblett, H. R., S. Cable, D. Cole & R. M. Itami. (2005). Recreation Visitation and Impacts in the Bighorn Crags Portion of the Frank Church – River of No Return Wilderness. Pgs. 18 –21. In: Cole, David N. (compiler). Computer Simulation Modeling of Recreation Use: Current Status, Case Studies, and Future Directions. Gen. Tech. Rep. RMRS-GTR-143. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. September 2005. Pgs 75.
- Gimblett, H. R., R. M. Itami & S. Cable. 2005. Recreation Visitation in Misty Fjords National Monument in the Tongass National Forest. (2005). Pgs. 22-26. In: Cole, David N. (compiler). Computer Simulation Modeling of Recreation Use: Current Status, Case Studies, and Future Directions. Gen. Tech. Rep. RMRS-GTR-143. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. September 2005. Pgs 75.
- Gimblett, H. R. 2005. Simulation of Recreation Use Along the Colorado River in Grand Canyon National Park. Pgs. 27 – 30. (2005). In: Cole, David N. (compiler). Computer Simulation Modeling of Recreation Use: Current Status, Case Studies, and Future Directions. Gen. Tech. Rep. RMRS-GTR-143. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. September 2005. Pgs 75.
- Lawson, S., R. M. Itami, H. R. Gimblett & R. Manning. (2005). John Muir Wilderness: Describing the Spatial Distribution of Backpacking Use on a System of Trails and Campsites. Pgs. 31-35. In: Cole, David N. (compiler). Computer Simulation Modeling of Recreation Use: Current Status, Case Studies, and Future Directions. Gen. Tech. Rep. RMRS-GTR-143. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. September 2005. Pgs 75.
- Itami, R. H. R. Gimblett, D. Zell, D. McVetty & F. Grigel. Simulating Patterns of Human Use in Canada's National Parks. (2008). In Gimblett, H.R. & H. Skov-Petersen (eds) Monitoring, Simulation and Management of Visitor Landscapes. University of Arizona Press. 2008. pgs. 389-410.
- Wolfe, P., H. R. Gimblett, R. Itami & B. Garber-Yonts Monitoring and Simulating Recreation Use in Prince William Sound, Alaska. (2008). In Gimblett, H.R. & H. Skov-Petersen (eds) Monitoring, Simulation and Management of Visitor Landscapes. University of Arizona Press. 2008. pgs. 349-369.
- Lace, S., H. R. Gimblett & A. Poe. Applying an Agent-Based Modelling Approach to Simulating Spring Black Bear Hunting Activities in Prince William Sound, Alaska. (2008). In Gimblett, H.R. & H. Skov-Petersen (eds) Monitoring, Simulation and Management of Visitor Landscapes. University of Arizona Press. 2008. pgs. 295-313.
- Nelson, R., C. Sharp, C. Prew & H. R. Gimblett. Balancing Increased Visitor Use and Wilderness Character using Simulation Modeling in Misty Fjords National Monument. (2008). In Gimblett, H.R. & H. Skov-Petersen (eds) Monitoring, Simulation and Management of Visitor Landscapes. University of Arizona Press. 2008. pgs. 315-329.
- Gimblett, H. R. & H. Skov-Petersen. (2008). Introduction: Monitoring, Simulation and Management of Visitor Landscapes. In Gimblett, H.R. & H. Skov-Petersen (eds) Monitoring, Simulation and Management of Visitor Landscapes. University of Arizona Press. 2008. pgs. 425-437
- Skov-Petersen, H. & H. R. Gimblett. (2008). Conclusions: Monitoring, Simulation and Management of Visitor Landscapes? In Gimblett, H.R. & H. Skov-Petersen (eds) Monitoring, Simulation and Management of Visitor Landscapes. University of Arizona Press. 2008. pgs 1 – 11.
- Sharp, C. & H. R. Gimblett. Assessing Border-Related Human Impacts at Organ Pipe Cactus National Monument. (2009). In: Conservation of Shared Environments: Learning from the United States and Mexico. (eds) L. Lopez-Hoffman, E. D. McGovern, R. G. Vardy & K. W. Flessa. University of Arizona Press. 2009. pgs 226-240.
- Billington, C., H. R. Gimblett, P. R. Krausman. Implications of Illegal Border Crossing and Drug Trafficking on the Management of Public Lands. (2010). In: Halvorson, W., C. Schwalbe & C. van Riper III.(eds). Sonoran Desert Resources. The University of Arizona Press. 2010. pgs. 109-122.
- Gallaher, J., H. R. Gimblett & Yoon-Sung Jung. (2010). Ecotourism's Contribution to Social-ecological Resilience of Protected Areas and Local Communities: Case Study Analysis of Rural Dryland Ecotourism in Guanacaste, Costa Rica. In: Ecotourism and Environment in Brazil. IBAMA, the Brazilian Environmental Agency. 2010.
- Gallaher, J., H. R. Gimblett & Yoon-Sung Jung. (2010). Ecotourism's Contribution to Social-ecological Resilience of Protected Areas and Local Communities: Case Study Analysis of Rural Dryland

- Ecotourism in Guanacaste, Costa Rica. In: Ecotourism and Environment in Brazil. IBAMA, the Brazilian Environmental Agency. 2010.
- Quijada-Mascareñas, A. C. Van Riper, D. James, L. Lopez-Hoffman, C. Sharp, R. Gimblett, M. Scott, L. Norman, R. Medellín, J. B. Callegary, R. List, C. Wallace, P. Holm, E. Glenn, J. Leenhouts, T. Esque, M. Culver, R. Webb, R. Steidl, M. Villarreal, W. Lackner, R. Castillo-Gamez & G. Ceballos. 2011. An Ecosystem Approach for a Monitoring Program for the Wall. In: de la Parra CA, A. Córdova & E Peters (Eds) *The Border Wall: Venues, Mechanisms and Stakeholders for a Constructive Dialogue Between the United States and Mexico*. INE/El Colegio de la Frontera Norte, Mexico. 2011.
- Gimblett, H. R. Computer Modelling and Sustainability. (2012). In Daniel Fogel, Sarah Fredericks, Lisa Harrington, & Ian Spellerberg (Eds.), *The Encyclopedia of Sustainability*, Vol. 6: *Measurements, Indicators, and Research Methods for Sustainability*. Great Barrington, MA: Berkshire Publishing.
- Quijada-Mascareñas, A., C. V. Riper, D. L. James, Laura Lopez-Hoffman, Chris Sharp, Randy Gimblett, Michael L Scott, Laura M Norman, Rodrigo Medellín, James B Callegary, [.....], Todd Esque, Melanie Culver, Robert H Webb, Robert J Steidl, Miguel L Villarreal, Pamela L Nagler, Wayne Lackner, Mark Sturm, Reyna Castillo- Gamez, Gerardo Ceballos. Desarrollo de un programa de monitoreo a nivel ecosistema en el muro fronterizo México-Estados Unidos. In: En Cordova, A. y C. de la Parra (coordinadores) *El muro fronterizo entre México y Estados Unidos*. Espacios, instrumentos y actores para un diálogo constructivo. El Colegio de la Frontera Norte. . pp .01/2012: pages 165-185;
- Gimblett, H. R. Viewshed Protection. (2012). In Daniel Fogel, Sarah Fredericks, Lisa Harrington, & Ian Spellerberg (Eds.), *The Encyclopedia of Sustainability*, Vol. 6: *Measurements, Indicators, and Research Methods for Sustainability*. Great Barrington, MA: Berkshire Publishing. Pgs 402-406.
- Peters, D. P. C., B. T. Bestelmeyer, K. M. Havstad, A. Rango, S. R. Archer, A. C. Comrie, H. R. Gimblett, L. López-Hoffman, O. E. Sala, E. R. Vivoni, M. L. Brooks, J. Brown, H. C. Monger, J. H. Goldstein, G. S. Okin, and C. E. Tweedie. (2013). Desertification of Rangelands. Climate Vulnerability: Understanding and Addressing Threats to Essential Resources. Elsevier Inc., Academic Press, 239–258. 2013.
- Itami, R. M. & H. R. Gimblett. LACAD: Looking back and looking forward at simulating and visualising the real world. In: Barry Wellar (eds) *AutoCarto Six Retrospective Book*. 2013.
- Gimblett, H. R., R. Itami & A. Poe. (2014). Agent-based Modelling of Social Networks: Natural resource applications of Human/Landscape Interactions across Space and Time. In: R. Stocker & T. Bossomaier. (eds). *Networks in Society: Links and Language*. Pan Stanford Publishing Pte Ltd. 2014.
- Pope, A. & H. R. Gimblett. Linking bayesian and agent-based models to simulate complex social-ecological systems in semi-arid regions. In: C. E. Vincenot, S. Mazzoleni & L. Parrott (eds) *Hybrid Modelling of Environmental Systems*. *Front. Environ. Sci.* December 2016.
- Pope, A. & H. R. Gimblett. Linking Participatory, Bayesian, and Agent-based Modeling Techniques to Simulate Coupled Natural-Human System: A Case Study with Ranchers in Sonora, Mexico. In: Stefan Gray & Rebecca Jordan (eds). *Participatory modeling in environmental decision-making: Methods, tools, and applications*. Springer 2016.
- Itami, R., H. R. Gimblett & A. Poe. Level of Sustainable Activity: A Framework for Integrating Stakeholders into the Simulation Modeling and Management of mixed use Waterways. In: Stefan Gray & Rebecca Jordan (eds). *Participatory modeling in environmental decision-making: Methods, tools, and applications*. Springer 2016.
- Gimblett, H. R., Poe, A., & Blahna, D. (2017). Learning from the Sound: Introducing This Place and This Volume. In *Sustainable Wildlands: A Prince William Sound Case Study of Science-based Strategies for Managing Human Use* (pp. xiii–2). Tucson: University of Arizona Press.
- Poe, A. & H. R. Gimblett. (2017). Social and Economic Services Injured by the Exxon Valdez Oil Spill in Prince William Sound and a Path toward Recovery. In *Sustainable Wildlands: A Prince William Sound Case Study of Science-based Strategies for Managing Human Use* (pp. 37–50). Tucson: University of Arizona Press.
- Poe, A., H. R. Gimblett & R. Itami. (2017). Characterizing the Spatial and Temporal Patterns of Recreation Use and Experience Opportunities in the Sound: Perceptions of the Stakeholders. In *Sustainable Wildlands: A Prince William Sound Case Study of Science-based Strategies for Managing Human Use* (pp. 74–87). Tucson: University of Arizona Press.

- Poe, A., H. R. Gimblett & M. Bircham. (2017). Evaluating the Subsistence Service Recovery: Spatial and Temporal Characterization of Prince William Sound Subsistence Harvest Activities. In Sustainable Wildlands: A Prince William Sound Case Study of Science-based Strategies for Managing Human (pp. 109–127). Tucson: University of Arizona Press.
- Itami, R., H. R. Gimblett & A. Poe. (2017). Level of Sustainable Activity (LSA) in Prince William Sound: Understanding and Managing Quality of Experience and Capacity in Wilderness Waterways. In Sustainable Wildlands: A Prince William Sound Case Study of Science-based Strategies for Managing Human (pp. 89–105). Tucson: University of Arizona Press.
- Lace, S. & H. R. Gimblett. (2017). Evaluating the Interactions between Black Bear Hunting and Kayaking Activities in Western Prince William Sound, Alaska. In Sustainable Wildlands: A Prince William Sound Case Study of Science-based Strategies for Managing Human Use (pp. 132 –144). Tucson: University of Arizona Press.
- Poe, A., H. R. Gimblett & D. Blahna. (2017). What We've Learned from the Sound: A Broader Perspective on Sustainable Human Use of Wildlands. In Sustainable Wildlands: A Prince William Sound Case Study of Science-based Strategies for Managing Human Use (pp. 297 –304). Tucson: University of Arizona Press.
- Pope, A. & H. R. Gimblett. (2017). Effects of policy decision-making on riparian corridors in a semi-arid desert: a modeling approach. In In: M. Nemiche & M. Essaaidi (eds). Advances in Complex Societal, Environmental and Engineered Systems. Springer.
- Poe, A., C. Brown, D. Blahna, C. Ryan & H. R. Gimblett. (2017). Toward Sustainable Human Use Management in Prince William Sound: A Synthesis of Data and Management Recommendations. In Sustainable Wildlands: A Prince William Sound Case Study of Science-based Strategies for Managing Human (pp. 276–294). Tucson: University of Arizona Press.
- Pope, A., & H. R. Gimblett. (2017). Linking Bayesian and agent-based models to simulate complex social-ecological systems in semi-arid regions. In In: Vincenot, C. E., Mazzoleni, S., Parrott, L., eds. (2016). Hybrid Solutions for the Modelling of Complex Environmental Systems. Lausanne: Frontiers Media. doi: 10.3389/978-2-88945-055-8. Pgs 65-73. Accepted December 2016. Frontiers eBook released 2017. Frontiers Medi.
- Pope, A. & H. R. Gimblett. Effects of policy decision-making on riparian corridors in a semiarid desert: a modeling approach. In Nemiche, M. Complex Societal, Environmental and Engineered Systems. New York: Springer. 2017.
- Bunting, D., J. Bennett, H. R. Gimblett, A. Gonzales, M. Hammer, C. Hoagstrom, R. Itami, J. Murrieta, J. J. Ochoa, A. Roberson, J. Sirotnak, N. Whiterod, & M. Briggs. Chapter Six: Putting your Stream Corridor Restoration Plan into Action. In: M. Briggs & D. Bunting (eds). Renewing Our Rivers: A Guidebook to River Restoration in Arid Regions. Island Press. 2019.

### **Refereed Journal Articles**

- Itami, R. M. & H. R. Gimblett. Simulating Growth Effects on Design. Landscape Architecture. July/August 1984 Vol. 75, No.3. Pgs. 94-97.
- Gimblett H.R., R. M. Itami & J. Fitzgibbon. Mystery in an Informational Processing Model of Landscape Preference. Landscape Journal. Vol. 4 No. 2, Fall, 1985. Pgs. 87-95.
- \_\_\_\_\_, and Kelley B.B. In Tandem: Teaching Design with Computers. Landscape Architecture. Sept/Oct. 1987. Pgs. 96-98.
- \_\_\_\_\_, J. Fitzgibbon, R.M. Itami, J. A. Wightman, & K.P. Bechard. A Procedure for Assessing Visual Quality for Landscape Planning and Management. Environmental Management. Vol. 11, No. 3, 1987. Pgs. 359-367.
- \_\_\_\_\_, Linking Perception Research, Visual Simulation, Dynamic Modeling within a GIS Framework. Journal of Computers, Environment and Urban Systems. 1989. Vol. 13. Pgs. 109-123.
- \_\_\_\_\_, Visualizations: Linking Dynamic Spatial Models with Computer Graphic Algorithms for Simulating Planning and Management Decisions. Journal of the Urban and Regional Information Systems Association. Fall, 1990. Pgs. 26-34.
- \_\_\_\_\_, Environmental Cognition: The Prediction of Preference in Rural Indiana. Journal of Architecture and Planning Research, 7:3. Autumn, 1990. Pgs. 222-234.

- Lynch, J. & H. R. Gimblett. Perceptual Values in the Cultural Landscape: A Computer Model for Assessing and Mapping Perceived Mystery in Rural Environments. Journal of Computers, Environment and Urban Systems, Vol. 16, 1992. Pgs. 453-471.
- Ball, G. L. & H. R. Gimblett. Spatial Dynamic Emergent Hierarchies Simulation and Assessment System. Ecological Modelling, 62 (1992). Pgs. 107-121.
- Kroh, D & H. R. Gimblett. Comparing Live Experience with Pictures in Articulating Landscape. Landscape Research, Summer 1992, Volume 17, Number 2. Pgs. 58-69.
- Kirkwood, J. J. & H. R. Gimblett. Expert Systems and Weather Forecasting in the 4th and 5th Grade. Association for the Advancement of Computers in Education. Journal of Computing in Childhood Education, Volume 3, Number 3/4, 1992. Pgs. 323-333.
- Deadman, P. & H. R. Gimblett. Modelling Rural Residential Settlement Patterns with Cellular Automata. Journal of Environmental Management, (1993) 37. Pgs. 147-160.
- Gimblett, H. R. Virtual Ecosystems. AI Applications in Natural Resources, Agriculture, and Environmental Science Journal. Volume 8, No. 1. Winter, 1994. Pgs. 77-81.
- \_\_\_\_\_, Computer Simulation and Visualization: Education and Practice at the University of Arizona. Microstation Education Journal. Winter, 1994. Pgs. 15-19.
- Deadman, P., & H.R. Gimblett. The Role of Goal-Oriented Autonomous Agents in Modeling People-Environment Interactions in Forest Recreation. Mathematical and Computer Modelling. Volume 19, Number 9, November, 1994.
- Saarenmaa, H. & H. R. Gimblett. Preface to the Special Issue on Object-Oriented Modelling of Natural and Artificial Agents in Ecosystem and Natural Resource Management. Mathematical and Computer Modelling. Volume 19, Number 9, November, 1994.
- Gimblett, H. R., G. L. Ball., & A.W. Guisse. Autonomous Rule Generation and Assessment for Complex Spatial Modeling. Landscape and Urban Planning Journal. 30 (1994) 13-26.
- \_\_\_\_\_, & G.L. Ball. An Exploration and Application of Neural Network Architectures for Monitoring and Simulating Changes in Forest Resource Management. AI Applications. Natural Resources, Agriculture, and Environmental Science. Vol. 9. No. 1, 1995.
- Harris, L. K., H. R. Gimblett, & W. W. Shaw. Multiple Use Management: Using a GIS Model to Understand Conflicts Between Recreationists and Sensitive Wildlife. Society and Natural Resources, Volume 8, pp. 559-572. 1995.
- Gimblett, H.R. & M. Stock. AI Education in Natural Resources and Agriculture. AI Applications, Summer, 1996. Editors: Special Issue on Artificial Intelligence Education in Natural Resource Management and Agriculture. AI Applications. Vol. 11, No. 3, 1997. Pg 56-57.
- \_\_\_\_\_, Some Ideas on How to Augment Resource Management Education with AI and Advanced Problem Solving Technologies. AI Applications, Vol. 11, No. 3, 1997. Pg 57-61.
- Gimblett, H. R. & A. W. Guisse. A Neural Net based Model for Assessing Conflicting Recreation Values in Natural Resource Settings. AI Applications, Vol. 11, No. 3, 1997. Pg 79-89.
- Clay, G. R. & H. R. Gimblett. Integrating Spatial Data with Photography for Visualizing Changes in Forested Environment. URISA - Urban and Regional Information Systems Association Journal. Volume 10, Number 2, Fall 1998. pgs. 22-35.
- Gimblett, H. R., B. Durnota & R.M. Itami. Conflicts in Recreation Use in Natural Areas: A Complex Adaptive Systems Approach. Complexity International Journal. Volume 3, July, 1996.
- Gimblett, H. R., R. M. Itami & D. Durnota. Some Practical Issues in Designing and Calibrating Artificial Human Agents. Complexity International Journal. Volume 3, July, 1996.
- Deadman, P. J. & H. R. Gimblett. An Application of Neural Net based Techniques for Vegetation Management and Plan Development. AI Applications, Vol. 11, No. 3, 1997. Pg 107-112.
- Gimblett, H. R. R. M. Itami & M. Richards. A Complex Systems Approach to Simulating Human Behaviour Using Synthetic Landscapes. Complexity International Vol. 6. 1998.
- Deadman, P. J., E. Schlager & H. R. Gimblett. 2000. Simulating Common Pool Resource Management Experiments with Adaptive Agents Employing Alternative Communication Routines. Journal of Artificial Societies and Social Simulation. vol. 3, no. 2. 2000.
- Gimblett, H. R., T. Daniel, S. Cherry & M. Meitner.. The Simulation and Visualization of Complex Human-Environment Interactions. Landscape and Urban Planning. 54 (2001) 63-78.

- Daniel, T. & H. R. Gimblett. 2000. Autonomous Agent Model to Support River Trip Management Decisions in Grand Canyon National Park. International Journal of Wilderness -Special Issue on Wild Rivers. December 2000. Volume 6, Number 3. Pgs 39-42
- Itami, R. M. & H. R. Gimblett. Intelligent Recreation Agents in a Virtual GIS World. Complexity International Journal. Vol. 8. 2001. <http://www.csu.edu.au/ci/vol08/itami01/itami01.pdf>
- Gimblett, H. R. M. Richards & R. M. Itami. 2000. Simulating Wildland Recreation Use and Conflicts for Ecosystem Management. Journal of Forestry. April 2001. Volume 99, Number 4. Pgs. 36-42.
- Bishop, I. D. & H. R. Gimblett. Management of Recreational Areas: Geographic Information Systems, Autonomous Agents and Virtual Reality. Environment and Planning B: Planning and Design 2002, Volume 27, pgs 423-435.
- Itami, R., R. Raulings, G. MacLaren, K. Hirst, R. Gimblett, D. Zanon, P. Chladek. RBSim 2: Simulating the complex interactions between human movement and the outdoor recreation environment. Journal for Nature Conservation. 11, pgs. 278-286:2003.
- Gimblett, R., J. Lynch, T. Daniel, L. Ribes & G. Oye. Deriving Artificial Models of Visitors From Dispersed Patterns of Use in Sierra Nevada Wilderness. Journal for Nature Conservation. 11, pgs. 287-296:2003
- Lawson, S., Itami, R., Gimblett, R. and Manning, R. 2006. Benefits and Challenges of Computer Simulation Modeling of Backcountry Recreation Use in the Desolation Lake Area of the John Muir Wilderness. Journal of Leisure Research, 38, 187-207.
- Gimblett, H. R. & R. M. Itami. Travel Simulation Modeling in Outdoor Recreation Settings: A Brief Overview. Pacific Northwest Research Experiment Station. 2004. (In Press). 46pgs.
- Morris, S. K. Barnard & R. Gimblett. Probabilistic Travel Modeling Using GPS Data. Mathematics and Computer Modeling. 2005.
- Lawson, S., Itami, R., Gimblett, R. and Manning, R. 2006. Benefits and Challenges of Computer Simulation Modeling of Backcountry Recreation Use in the Desolation Lake Area of the John Muir Wilderness. Journal of Leisure Research, 38, 187-207.
- Gallaher, J., H. R. Gimblett & Yoon-Sung Jung. Ecotourism as a Social-ecological System: The Case of Santa Rosa National Park Costa Rica. Annals of Tourism (Submitted). 2009.
- Gallaher, J., R. Gimblett & Yoon-Sung Jung. Ecotourism's Contribution to Social-ecological Resilience of Protected Areas and Local Communities: Case Study Analysis of Rural Dryland Ecotourism in Guanacaste, Costa Rica. University of Brazilia. (In Review).
- Gallaher, J. E., H. R. Gimblett, and Yoon-sung Jung. 2009. Barrier-free Ecotourism? The Costa Rican Approach. Landscape and Urban Planning. (In Review).
- Itami, R. M., H.R. Gimblett, A. Poe, D. Blahna & B. Meldrum. 2011. Level of Sustainable Activity: A Social Science Framework for Integrating Visitor Simulation and Recreational Capacity in mixed use outdoor settings. Paper for Theme issue (TI) on spatial agent-based models for socio-ecological systems. Environmental Modelling and Software Journal (In Review).
- Murdock, E. R. M. Itami & R. Gimblett. Devils Postpile National Monument Visitor Behavior Model and Travel Simulation. Landscape Planning Journal. (In Review). 2013.
- Fornander, D. E. & H. R. Gimblett. The effect of commercial floatboat activity on the establishment of Chinook salmon redds on the upper Salmon River, Idaho. Journal of Environmental Planning and Management. (In Review). 2013.
- Pope, A. & H. R. Gimblett. Linking bayesian and agent-based models to simulate complex social-ecological systems in semi-arid regions. In: C. E. Vincenot, S. Mazzoleni & L. Parrott (eds) Hybrid Solutions for the Modelling of Complex Environmental Systems. Front. Environ. Sci. 3:55. 2015.
- Lehew, M., H. R. Gimblett & F. Valenzuela. Assessing the Potential for Social Capital Development and Sustainable Recreation in the Sabino Canyon Recreation Area. Natural Resources and Conservation 3(4): 57-69, 2015.
- Zuniga-Teran, A.A., B. Orr, H. R. Gimblett, S. Going, N. Chalfoun, P. Guertin, S. Marsh. Designing healthy communities: A walkability analysis of LEED-ND. Frontiers of Architectural Research (2016), <http://dx.doi.org/10.1016/j.foar.2016.09.004>.
- Gimblett, H. R., C. Scott & M. Hammersley. Dam Removal on the Lower White Salmon River, Washington: Rewilding, Sacred Spaces, and 'Outstanding and Remarkable Values'. International Journal of Wilderness. December 2017. Volume 23, Number 2.

- Blahna, D., A. Poe, C. Brown, C. Ryan & H. R. Gimblett. 2017. Social and Environmental Sustainability in Large-scale Coastal Zones: Taking an Issue-based Approach to the Implementation of the Prince William Sound Sustainable Human Use Framework. Tourism in Marine Environments, Vol. 12, No. 3-4, 2017.
- Hammersley, M., C. Scott & H. R. Gimblett. 2018. Evolving conceptions of the role of large dams in social-ecological resilience. Ecology and Society 23(1):40. <https://doi.org/10.5751/ES-09928-230140>

### **Conference Papers and Presentations**

- Lynch, J & Gimblett, H. R. Mystery in the Landscape: Procedures for Assessing and Mapping Mystery. EDRA 1988 Pomona, California. Pgs 135- 145.
- Ball, G. L. and Gimblett, H.R. The ART of Complex Systems. Center for the Study of Complex Systems. University of Arizona. Volume II, Number 2. October, 1989. Pgs 6- 8.
- Gimblett, H. R. The Exploration of Artificial Intelligence Techniques for Extracting Meaningful Experiential Descriptors of Preferred Landscape Settings: A Pilot Study. EDRA 21 Environmental Design and Research Associations Annual Conference. University of Illinois. April 6-9, 1990. Pgs 225-235.
- Wenzel, B. C., McGrew, M. J. and Gimblett, H. R. An Approach to Image Compression and Reconstruction using Neural Networks. Proceedings of the International Neural Network Society. WCNN '93. World Congress on Neural Networks. Portland, Oregon. July 11- 15, 1993. Volume IV. Pgs. 71-74.
- Gimblett, H. R., Ball, G., Lopes, V., Zeigler, B., Marefat, M. & Sanders, B. Massively Parallel Simulations of Complex, Large Scale, High Resolution Ecosystem Models. Complex '94. Australian Conference on Complex Systems. University of Central Queensland, Rockhampton, Queensland, Australia. September 26-28, 1994.
- Meron, L, H. R. Gimblett, H. R. & C. Wissler. 1994. Geographical and Network Analysis for Planning and Design Applications. GIS/LIS '94. Phoenix, AZ.
- Deadman, P. J., R. D. Brown, and H. R. Gimblett. 1994. Modeling Rural Residential Settlement Pattern with cellular Automata. In: Sustainable Agriculture and the Conservation of Agro-Ecosystems. Proceedings of the International Workshop. National Institute of Agro-Environmental Sciences, Tsukuba, Japan. March 2-4, 1994. pp. 250-263.
- Kunzmann, M., Gimblett, H.R., & Bennett, P. S. The Development of Geographical Information (GIS) Using Global Positioning Systems (GPS) and Geolink Data Acquisition Software for Artificial Intelligence (AI) Vegetation Classification Models in Chiricahua National Monument. 4th International GPS/GIS Conference. Washington, D. C. May 9-10, 1994.
- Gimblett, H.R. & Ball, G. L. New Directions in Ecosystem Modeling. Multi-Agent Systems Conference. Santa Fe Institute. Santa Fe, NM. June 16-19, 1994.
- \_\_\_\_\_, Guisse, A., & Kroh, D. A Spatial Model for Assessing Conflicting Recreation Values in State Park Settings. Fifth International Symposium on Society and Resource Management. June 7-10, 1994.
- \_\_\_\_\_, Richards, M. & Itami, R. M. A Comparative Study to Determine the Efficiency and Reliability of Using Interactive, GIS-based Models of Recreation Opportunities in Multi-Level Forest Recreation Planning. Resource Technology '94. Melbourne. September 26-30, 1994. Melbourne, Australia.
- Ehrman, J., Yost, J., Marefat, M. M., & Gimblett, H. R. Intelligent Visualizations Agents and Management of Large Scale Ecosystem. Resource Technology '94. Toronto, Ontario, Canada. September 12-16, 1994.
- Deadman, P. & H. R. Gimblett. Merging Technologies: Linking Artificial Intelligence to Geographic Information Systems for Landscape Research and Education. Council of Educators in Landscape Architecture. Iowa State University. Ames, Iowa. September 9-11, 1995.
- Kaufman, A. & H. R. Gimblett. Benefits of Leisure and GIS: A tool for Exploring the Human Dimension of Ecosystem Management. Council of Educators in Landscape Architecture. Iowa State University. Ames, Iowa. September 9-11, 1995.
- Durnota, B., H. R. Gimblett, C. Langton. Objects, Agents and Alife in Ecological Modelling. The Tenth International Conference on State of the Art of Ecological Modelling. (ISEM'95). Beijing. China. August 11-15, 1995.



- Gimblett, H. R., M. T. Richards, R. M. Itami, R. J. Raulings. Using Interactive, GIS-Based Models of Recreation Opportunities for Multi-level Forest Recreation Planning. Geomatics '95. Ottawa, Ontario, Canada. June, 1995.
- Yuan, Y. & H. R. Gimblett. The Vista Scenic Estimation: The Application of Neural Networks and Geographic Information Systems. URISA. San Antonio, Texas. July, 1995.
- Kaufman, A. J., H. R. Gimblett & T. C. Daniel. Benefits of Leisure: A Tool for Exploring the Human Dimension of Ecosystem Management. The Sixth International Symposium on Society and Natural Resource Management. Social Behavior, Natural Resources, and the Environment. Conference. Penn State University. May 18-23, 1996.
- Gimblett, H. R., B. Durnota & R.M. Itami. Conflicts in Recreation Use in Natural Areas: A Complex Adaptive Systems Approach. Third Australian Complex Systems Conference. Charles Stuart University. Albury, Australia. July 14-18, 1996.
- Gimblett, H. R., R. M. Itami & D. Durnota. Some Practical Issues in Designing and Calibrating Artificial Human Agents. Workshop Comparing Reactive (ALife-ish) and Intentional Agents. Charles Stuart University. Albury, Australia. July 19, 1996.
- Durnota, B. & H. R. Gimblett. Emergence, Visualization & Autonomous Agent Formalisms in Natural Resource Management. Intelligent Decision Support Workshop. Fisherman Bend. Aeronautical and Maritime Research Laboratory. Victoria, Australia. May 30, 1996.
- Yulan, Y, Jiann-Min, Jeng, H. R. Gimblett, T. C. Daniel, D. Fesenmaier. An Integration of Geographic Information Systems and Artificial Neural Networks for the Estimation of Vista Scenic Beauty Preferences. The Sixth International Symposium on Society and Natural Resource Management. Social Behavior, Natural Resources, and the Environment. Conference. Penn State University. May 18-23, 1996.
- Durnota, B., H. R. Gimblett & R.M Itami. Software Architecture and Specification of a GIS and CAS - Based System for Human-Environment Modelling. Artificial Life,
- Gimblett, H. R., B. Durnota & R.M. Itami. Conflicts in Recreation Use in Natural Areas: A Complex Adaptive Systems Approach. Third Australian Complex Systems Conference. Charles Stuart University. Albury, Australia. July 14-18, 1996.
- Gimblett, H. R., R. M. Itami & D. Durnota. Issues in Designing and Calibrating Artificial Human Agents. Workshop Comparing Reactive (ALife-ish) and Intentional Agents. Charles Stuart University. Albury, Australia. July 19, 1996.
- Gimblett, H. R & R. M. Itami. Modelling the Spatial Dynamics and Social Interaction of Human Recreators Using GIS and Intelligent Agents. MODSIM 97 - International Congress on Modelling and Simulation. December 8-11, 1997. Hobart, Tasmania.
- Gimblett, H. R., R. M. Itami & B. Durnota. Simulating Human Movement Using Autonomous Agents in a GIS Spatial Framework. ASPRS/RT 97 Conference, Seattle WA. April, 1997.
- Durnota, B., H. R. Gimblett & R. M. Itami. The Complex Adaptive Systems Approach to Natural Resource Management. GIS 97' Vancouver, British Columbia, Canada. February, 1997.
- Gimblett, H. R. Wilderness Recreation and Associated Benefits of Leisure: Using Dynamic, Agent-Based Simulations for Monitoring Beneficial Outcomes. ASPRS/RT 97 Conference, Seattle WA. April, 1997.
- Gimblett, H. R. Using Spatially Explicit Intelligent Agents to Simulate Interactions and Negotiations among River Trips along the Colorado River in the Grand Canyon National Park. Paper/Seminar Presentation. University of Melbourne. Parkville, Australia. December 9. 1998.
- Gimblett, H. R. Simulating Conflicting Trail Use in Complex Wilderness Settings. Paper Presentation. 1998. National Trails Symposium. Tucson, Arizona. November 13-17, 1998
- Bishop, I. D. & H. R. Gimblett. Modelling Tourist Behaviour: Geographic Information Systems and Autonomous Agents. 1<sup>st</sup> International Scientific Congress on Tourism and Culture for Sustainable Development. Athens '98. May 19-21, 1998. Athens, Greece.
- Gimblett, H. R, R. M. Itami & M. Richards. A Complex Systems Approach to Simulating Human Behaviour Using Synthetic Landscapes. In Proceedings of Complexity 98' Conference. Sydney, Australia. November 30 – December 3, 1998. Pps. 188-209.
- Gimblett, H. R. & P. J. Deadman. Using Intelligent Agents and Complexity Theory to Modeling Individual Behaviour and Group Performance. In Proceedings of Effectively Managing Business Complexity Conference. Sydney, Australia. December 2 –4, 1998.
- Gimblett, H. R. Simulating Conflicting Trail Use in Complex Wilderness Settings. In Proceedings of

- National Trails Symposium. Tucson, Arizona. November 13-17, 1998.
- Itami R., H. R. Gimblett, R. Raulings, D. Zanon, G. MacLaren, K. Hirst & B. Durnota. 1999. RBSim: Using GIS-Agent simulations of recreation behavior to evaluate management scenarios. Aurisa 99 – The Spatial Information Association. Australasian & Regional Information Systems Conference. November 22-16, 1999.
- Gimblett, H. R., C. A. Roberts, T. C. Daniel, M. Ratliff, M. Mitner, R. Bogle, S. Cherry, D. Stallman, D. Kilbourne, R. Allred & Joanna Bieri. 1999. Simulating Rafting the Colorado River through Grand Canyon National Park: A Prototype River Management Tool. In Proceedings of 1999 Congress on Recreation and Resource Capacity. November 29 – December 2, 1999. SnowMass Village at Aspen, Colorado.
- Itami, R. M., H. R. Gimblett, R. Raulings, B. Durnota, D. Zanon, C. Hirst & G. MacLaren. 1999. RBSim II: Using GIS-Agent simulations of recreation behavior to evaluate management scenarios in Port Campbell National Park and Bay of Island National Park Victoria, Australia. In Proceedings of 1999 Congress on Recreation and Resource Capacity. November 29 – December 2, 1999. SnowMass Village at Aspen, Colorado.
- Hennessy, M., H. R. Gimblett, J. Lynch & G. Oldham. 1999. Evaluating and Simulating the Spatial Distribution of Recreation Use in the John Muir and Ansel Adams Wilderness Areas. In Proceedings of 1999 Congress on Recreation and Resource Capacity. November 29 – December 2, 1999. SnowMass Village at Aspen, Colorado.
- Roberts, C. A. & H. R. Gimblett. Modelling Complex Human/Environment Interactions: The Grand Canyon River Trip Simulator Project. Modelling Complex Systems Conference Montreal, Quebec, Canada. July 31-August 2, 2000.
- Itami, R. M. & H. R. Gimblett. Intelligent Recreation Agents in a Virtual GIS World. Complexity 2000 Conference. Dunedin, New Zealand. November 19-22, 2000
- Robert, C. & H. R. Gimblett, Computer Simulation for Rafting Traffic on the Colorado River. Proceedings of 5th Biennial Conference of Research on the Colorado Plateau, US Dept. Interior, U.S. Geological Survey. 2000.
- Gimblett, H. R. 2000. Using Agent-Based Simulations to Model Rafting Trips Along the Colorado River thru the Grand Canyon National Park: A Prototype River Management, Resource Planning and Educational Tool. Council of Educators in Landscape Architecture (CELA). Conference, Guelph, Ontario, Canada
- Gimblett, H. R., T. Daniel. & C. Roberts. 2000. Grand Canyon River Management: Simulating Rafting the Colorado River through Grand Canyon National Park Using Spatially Explicit Intelligent Agents. 4<sup>th</sup> International Conference on Integrating GIS and Environmental Modeling (GIS/EM4): Problems, Prospects and Research Needs, Banff, Alberta, Canada, September 2-8, 2000.
- Itami, R., G. MacLaren, K. Hirst, R. Raulings, R. Gimblett. 2000. RBSIM 2: Simulating Human Behavior in National Parks in Australia. 4<sup>th</sup> International Conference on Integrating GIS and Environmental Modeling (GIS/EM4): Problems, Prospects and Research Needs, Banff, Alberta, Canada, September 2-8, 2000.
- Gimblett, H. R. 2000. Achieving sustainability through Regional Planning: Merging Ecological and Human Values in a Simulation System. YIES International Seminar 2000: For Establishing Sustainable Regional Communities. Yamanashi Institute for Environmental Sciences. Fuji-Yoshida, Yamanashi, Japan. July 25<sup>th</sup> – 27<sup>th</sup>.
- Gimblett, H. R. Grand Canyon River Management: Simulating Rafting the Colorado River through Grand Canyon National Park Using Spatially Explicit Intelligent Agents. YIES International Seminar 2000: For Establishing Sustainable Regional Communities. Yamanashi Institute for Environmental Sciences. Fuji-Yoshida, Yamanashi, Japan. July 25<sup>th</sup> – 27<sup>th</sup>.
- Gimblett, H. R., T. Daniel & M. J. Meitner. 2000. An Individual-based Modeling Approach Simulating Recreation Use in Wilderness Settings. In: Cole, David N.; McCool, Stephen F. 2000. Proceedings: Wilderness Science in a Time of Change. Proc. RMRS-P-000. Ogden. UT; U.S. Department of Agriculture, Forest Science, Rocky Mountain Research Station.
- Gimblett, H. R., C. Roberts, T. Daniel, M. Ratliff, Linda Jalbert, Laurie Domler and Jennifer Burns. 2000. Simulating Rafting the Colorado River through Grand Canyon National Park: A Prototype River Management Tool. Creative Cooperation in Resource Management: Third Conference on Research & Resource Management in the Southwestern Deserts. May 16-18, 2000. Inn Suites Hotel, Tucson, Arizona

- Lynch, J., H. R. Gimblett & M.B. Hennessey. 2000. Evaluating the Social and Ecological Impacts of Extensive Recreation Use in High Desert Wilderness Areas. Creative Cooperation in Resource Management: Third Conference on Research & Resource Management in the Southwestern Deserts. May 16-18, 2000. Inn Suites Hotel, Tucson, Arizona
- Swann, D., C. Schwalbe, R. Averill-Murray, T. Edwards, T. Esque, R. Gimblett, M. Goode, L. Harris, M. Briggs & N. Kline. 2000. Long-term Monitoring of Reptiles and Amphibians at Saguaro National Park and the Rincon Valley. Creative Cooperation in Resource Management: Third Conference on Research & Resource Management in the Southwestern Deserts. May 16-18, 2000. Inn Suites Hotel, Tucson, Arizona.
- Murdock, E., R. Mason, R. Gimblett. Region 5 Wilderness Recreation Use Monitoring. Human Dimensions of Natural Resources in the Western US Symposium. October 18-21, 2001, Alta, Wyoming.
- Lynch, J. & R. Gimblett. Wilderness Recreation Modeling in the Sierra Nevada. Human Dimensions of Natural Resources in the Western US Symposium. October 18-21, 2001, Alta, Wyoming.
- Murdock, E., R. Mason, R. Gimblett. Region 5 Wilderness Recreation Monitoring. Region 5 Recreation Engineering Conference. San Diego. December 5 thru 6, 2001.
- Itami, R., R. Raulings, G. MacLaren, K. Hirst, R. Gimblett, D. Zanon, P. Chladek. RBSim 2: Simulating the complex interactions between human movement and the outdoor recreation environment. Monitoring and Management of Visitor Flows in Recreational and Protected Areas Institute for Landscape Architecture and Landscape Management University of Agricultural Sciences, Vienna, Austria, 30 Jan – 02 Feb 2002.
- Gimblett, R., J. Lynch, T. Daniel, G. Oye & L. Ribes. Deriving Artificial Models of Visitors From Dispersed Patterns of Use in Sierra Nevada Wilderness. Monitoring and Management of Visitor Flows in Recreational and Protected Areas Institute for Landscape Architecture and Landscape Management University of Agricultural Sciences, Vienna, Austria, 30 Jan – 02 Feb 2002.
- Lynch, J. & H. R. Gimblett. A Spatial Model of Overnight Visitor Behavior in a Wilderness Area in Eastern Sierra Nevada. Monitoring and Management of Visitor Flows in Recreational and Protected Areas Institute for Landscape Architecture and Landscape Management University of Agricultural Sciences, Vienna, Austria, 30 Jan – 02 Feb 2002.
- Lynch, J. & H. R. Gimblett. Dispersed Recreation Use in the Sierra Nevada Wilderness: Using Spatially Explicit Intelligent Agents to Model Use Patterns over Time. Annual Meeting Association of American Geographers. March, 2002. Los Angeles, CA.
- Gimblett, H. R., J. Scholnick & S. Lace. Under the Cover of Night: Tracking Overnight Visitor Use in Ironwood Forest National Monument. Paper presented at the International Society and Natural Resources Conference. Keystone, Colorado. June 2-5, 2004.
- Gimblett, H. R., R. Itami, S. Cable & D. Cole. Monitoring Visitor Flows and Associated Backcountry Impacts in the Frank Church – River of No Return Wilderness. Paper presented at the International Society and Natural Resources Conference. Keystone, Colorado. June 2-5, 2004.
- Itami, R., S. Lawson & H. R. Gimblett. The Challenges and Benefits of Computer Simulation for Back Country Visitor Management. Paper presented at the International Society and Natural Resources Conference. Keystone, Colorado. June 2-5, 2004.
- Itami, R. & H. R. Gimblett. Agent-based models for Evaluating Dispersed Visitor Use in the Frank Church River of No Return Wilderness. Paper submitted to the 2004 World Conference on Natural Resource Modeling. Melbourne, Victoria Australia. December 12-15, 2004.
- Lawson, S., R. M. Itami, H. R. Gimblett & R. Manning. 2004. Monitoring and Managing Recreational Use in Backcountry Landscapes Using Computer-Based Simulation Modeling. A Paper presented at The Second International Conference on Monitoring and Management of Visitor Flows in Recreational and Protected Areas. June 16–20 2004. Arktikum, Rovaniemi, Finland.
- Nelson, R., S. Cable, R. Itami, R. Gimblett, D. Cole. Inventory, Monitoring and Simulating the Impacts from Dispersed Visitor Use in the Frank Church – River of No Return Wilderness. A Paper presented at "The Second International Conference on Monitoring and Management of Visitor Flows in Recreational and Protected Areas. June 16–20 2004. Arktikum, Rovaniemi, Finland.
- Sharp, C., R. Gimblett, R. Itami. Linking Visitor Flows and Patterns of Use with General Management Planning in Saguaro National Park. A Paper presented at "The Second International Conference on Monitoring and Management of Visitor Flows in Recreational and Protected Areas. June 16–20 2004. Arktikum, Rovaniemi, Finland

- Itami, R. & H. R. Gimblett. Agent-based models for Evaluating Dispersed Visitor Use in the Frank Church River of No Return Wilderness. A Paper presented at "The Second International Conference on Monitoring and Management of Visitor Flows in Recreational and Protected Areas. June 16–20, 2004. Arktikum, Rovaniemi, Finland.
- Sharp, C., H. R. Gimblett & M. Zimmerman. Visitor Monitoring and Simulation at Saguaro National Park. Paper presented at the Biodiversity and Management of the Madrean Archipelago II: Connecting Mountain Islands and Desert Seas. 5th Conference on Research and Resource Management in Southwestern Deserts. May 11-15 2004.
- Lawson, S., R. M. Itami, H. R. Gimblett & R. Manning. The Benefits and Challenges of Computer Simulation for Backcountry Recreation Management. Paper presented at the George Wright Society Meeting. March 2005.
- Gimblett, H. R., R. M. Itami, D. Zell & D. McVetty. Human Use & Travel Management Simulations in Canada's Mountain National Parks. Paper to be presented at the George Wright Society Meeting. March 2005.
- Nelson, R., C. Prew, C. Sharp, K. Brand & R. Gimblett. Misty Fjords National Monument Recreation Use Monitoring. Paper to be presented at The 8th World Wilderness Congress, Anchorage Alaska, September 2005.
- Itami, R., D. Zell, F. Grigel, R. Gimblett. Generating confidence intervals for spatial simulations determining the number of replications for spatial terminating simulations. MODSIM05. Melbourne, Australia December, 2005.
- R. Itami, L. Smith, G. MacLaren & R. Gimblett. Simulation Models Do Not Make Decisions! The case for simulation in the context of decision-making frameworks in the management of river traffic in Victoria, Australia. MODSIM05. Melbourne, Australia December, 2005.
- S. Lace, A. Poe, D. Crowley & R. Gimblett. Using Recreation Agent Simulation to Model Spring Black Bear Harvest in Prince William Sound, Alaska. Resource Management Tools and Geospatial Conference. April 18-22, 2005, Phoenix, Arizona. (abstract)
- Gimblett, H. R. Modelling 2005. Human-Landscape Interactions in Spatially Complex Settings: Where are we and where are we going? Keynote Address paper and presentation at International Congress of Modelling and Simulation (MODSIM05). Melbourne, Australia, December 12-15, 2005.
- Morris, S., H. R. Gimblett & K. Barnard. 2005. Probabilistic Travel Modeling using GPS. Paper presented at International Congress of Modelling and Simulation (MODSIM05). Melbourne, Australia, December 12-15, 2005.
- Poe, A., H. R. Gimblett, M. Goldstein & P. Guertin. Evaluating Spatiotemporal Interactions Between Winter Recreation And Wildlife Using Agent-Based Simulation Modeling On The Kenai Peninsula, Alaska. Paper presented at the Monitoring and Management of Visitor Flows in Recreational and Protected Areas Conference. September 13 – 17, 2006. University of Applied Sciences. Rapperswil, Switzerland.
- Lace, S., H. R. Gimblett & A. Poe. Simulating Spring Black Bear Hunting Activities In Prince William Sound, Alaska. Paper presented at the Monitoring and Management of Visitor Flows in Recreational and Protected Areas Conference. September 13 – 17, 2006. University of Applied Sciences. Rapperswil, Switzerland.
- Poe, A., H. R. Gimblett, M. Goldstein & P. Guertin. Evaluating Spatiotemporal Interactions Between Winter Recreation And Wildlife Using Agent-Based Simulation Modeling On The Kenai Peninsula, Alaska. Paper presented at the Wilderness Society Meeting, September, 2006. Anchorage, Alaska.
- Muhar A, H. Skov-Petersen & H. R. Gimblett. Session Chairs. Introduction - Simulating Recreational Behaviour - on Agents and Environment. Monitoring and Management of Visitor Flows in Recreational and Protected Areas Conference. September 13 – 17, 2006. University of Applied Sciences. Rapperswil, Switzerland.
- Gallaher, J., H. R. Gimblett & Yoon-Sung Jung. Ecotourism as a Social-ecological System: The Case of Santa Rosa National Park Costa Rica. Paper Presented at the American Anthropological Association Conference, November 19 – 23, 2008. San Francisco, CA.
- Skov-Petersen, H. & H. R. Gimblett. Management and communicative aspects of agent-based simulation models. The Fourth International Conference on Monitoring and Management of Visitor Flows in Recreational and Protected Areas Management for Protection and Sustainable Development Montecatini Terme (Tuscany, Italy) – 14-19 October 2008.

- Poe, A., C. E. Brown & H. R. Gimblett. Evaluating the Spatial and Temporal Patterns of Recreation Visitor and Subsistence Harvesters: Implications for User Experience and Coastal Land Managers. In: 5th International Conference on Monitoring and Management of Visitor Flows in Recreational and Protected Areas. MMV 2010. Wageningen, The Netherlands. 30th May – 3 June 2010.
- Gimblett, H. R., A. Poe & Sara D. Boario. Science-based Strategies for Managing Human Use and Sustainable Recreation in Coastal Environments in Prince William Sound Alaska. In: 5th International Conference on Monitoring and Management of Visitor Flows in Recreational and Protected Areas. MMV 2010. Wageningen, The Netherlands. 30th May – 3 June 2010.
- Itami, R., A. Poe & H. R. Gimblett. Evaluating visitor volumes and capacity with Stakeholders using a Level of Sustainable Activity (LSA) Approach. In: 5th International Conference on Monitoring and Management of Visitor Flows in Recreational and Protected Areas. MMV 2010. Wageningen, The Netherlands. 30th May – 3 June 2010.
- Gimblett, H. R. Session Organizer: Developing Science-based Strategies for the Management of Human Use and Sustainable Recreation in Coastal Environments: The Prince William Sound Framework. In: 5th International Conference on Monitoring and Management of Visitor Flows in Recreational and Protected Areas. MMV 2010. Wageningen, The Netherlands. 30th May – 3 June 2010.
- Scott, C., B. Morehouse, H. R. Gimblett, M. Pavao-Zuckerman, T. Meixner, K. Lansey, A. Castellanos, M. Rangel, José Luis Moreno, H. Skov-Petersen. Assessing Resilience of Arid Region Riparian Corridors: Ecohydrology and Decision-Making in United States – Mexico Transboundary Watersheds. Global Land Project – Open Science Meeting 2010.
- Scott, C., B. Morehouse, H. R. Gimblett, M. Pavao-Zuckerman, T. Meixner, K. Lansey, A. Castellanos, M. Rangel, José Luis Moreno, H. Skov-Petersen. Assessing Resilience of Arid Region Riparian Corridors: Ecohydrology and Decision-Making in United States – Mexico Transboundary Watersheds. Global Land Project – Open Science Meeting. October 17-19th 2010, Arizona State University, Tempe, Arizona, USA.
- Pope, A. & H. R. Gimblett. Linking Bayesian and Agent-Based Models to Simulate Complex Social-Ecological Systems in the Sonoran Desert. In Piantadosi, J., Anderssen, R.S. and Boland J. (eds) MODSIM2013, 20th International Congress on Modelling and Simulation. Modelling and Simulation Society of Australia and New Zealand, December 2013, pp. 2506–2512. ISBN: 978-0-9872143-3-1. www.mssanz.org.au/modsim2013/
- Scott, C., B. Morehouse, H. R. Gimblett, M. Pavao-Zuckerman, T. Meixner, K. Lansey, A. Castellanos, M. Rangel, José Luis Moreno, H. Skov-Petersen. Resilience in Riparian Corridors: Understanding Contributions of Ecohydrological Change and Social Process in System Collapse and Reorganization. Resilience 2010- second International Science and Policy Conference, Tempe, Arizona, USA. March 11-16, 2011. Arizona State University.
- Pope, A. & H. R. Gimblett. Linking Participatory, Bayesian, and Agent-based Modeling Techniques to Simulate Coupled Natural-Human System: A Case Study with Ranchers in Sonora, Mexico. The International Society for Ecological Modelling Global Conference 2016. 8-12 May 2016.
- Poe, A., R. Gimblett, R. Itami, M. Robards, D. Burn, T. Jones and D. Blahna. Quantifying distributions of vessel activity to address tourism and coastal management questions at multiple spatial scales. Coast Tourism Conference. Kona, Hawaii. November 2015.
- Blahna, D., A. Poe, C. Brown & R. Gimblett. Planning for Sustainable Human Uses of Large Scale Coastal Zones: Issued-based Planning in Prince William Sound. Coast Tourism Conference. Kona, Hawaii. November 2015.

### **Technical Reports**

- Gimblett, H. R. An Interpretative/Educational Landscape Development Plan for Casa Grande Ruins National Monument. National Park Service Report. 1993. 10pgs.
- \_\_\_\_\_, Recreation Modeling and Simulation. 1994. Report for U.S. Forest Service.
- Richards, M. D. Blahna, T. C. Daniel, H. R. Gimblett. Recreation Assessment of Forestlands for Ecosystem Management. Report to U.S. Forest Service, Rocky Mountain Experiment Station. Fort Collins, Colorado. Fall, 1995.
- Richards, M.T. & H. R. Gimblett. Recreation Assessment of Forestlands in Ecosystem Management: A Conceptual Model. U.S. Rocky Mountain Research Station Research Report. July, 1995.
- Gimblett, H.R. Riparian Ecosystem Assessment and Modeling of Rincon Creek: GIS and Conceptual

- Model. In: Monitoring Riparian Ecosystems: An Inventory of Riparian Habitat Along Rincon Creek Near Tucson, Arizona. Arizona Game and Fish Department. Heritage Project Number U94018. 1997.
- Gimblett, H.R. Huachuca Mountain Recreation and Associated Benefits of Leisure and Needs Assessment Study. Final Report. USDA Forest Service. Coronado National Forest. Sierra Vista Ranger District. Cooperative Agreement No. CGS-95-0035. May 1997.
- Harris, L. & H. R. Gimblett. Sierra Vista Vegetation Study. Final Report. City of Sierra Vista. Sierra Vista. Arizona. 1997.
- Richards, M., H. R. Gimblett & J. R. Behan. 1998. Computer Based Models for Recreation Management. Final Report. USDA Forest Service. Rocky Mountain Forest and Range Experiment Station. Cooperative Agreement No. 28-C4-829. 165pgs.
- Gimblett, H., J. Hoagland, E. Murdock, J. Neary, G. Oye & B. Ungari. 2002. Hawaii Trails Risk Assessment: Kauai and Oahu. Hawaii State Parks. Final Report.
- Gimblett, H.R. Modeling the Impacts of Recreation Visitation on Misty Fjords National Monument, Tongass National Forest. Final Report. U.S. Fish and Wildlife Service. December 2002.
- Briggs, M., W. Halverson, H.R. Gimblett, D. Lett & C. Gorman. Monitoring Riparian Ecosystems: A Second Inventory of Riparian Habitat Along Rincon Creek Near Tucson, Arizona. Final Report: Arizona Game and Fish Department. Heritage Project Number U98022. January 28, 2002.
- Gimblett, H.R. Spur Cross Conservation Area: Travel Simulation Modeling of Visitor Use. URS Corporation. 2003.
- Gimblett, H.R. & C. Sharp. Monitoring and Estimating Visitor Use at the Madrona Ranger Station and Surrounding Landscape. In: Restoring Sites and Expanding Wildlife Habitat Previously Impacted by Visitors at Madrona Ranger Station. Rincon Institute. Tucson, Arizona. 2004. 25pgs.
- Gimblett, H.R. Ironwood Forest National Monument Access, Travel Route Inventory and Visitor Use Study. Bureau of Land Management. Final Report. 2004. 147pgs.
- Gimblett, H.R. High Lakes Inventory, Monitoring and Simulation. Salmon-Challis National Forest. Final Report. 2004. 80pgs.
- Gimblett, H.R. Visitor Use Inventory, Monitoring and Recreation Impacts at Las Cienegas Conservation Area. Bureau of Land Management. Final Report. 2004. 114 pgs.
- Itami, R., S. Lawson, R. Gimblett, R. Manning & D. Cole. The Benefits and Challenges of Computer Simulation for Backcountry Recreation Management. National Park Service. Final Report, 2004. 30pgs.
- Gimblett, H. R. & R. M. Itami. Travel Simulation Modeling in Outdoor Recreation Settings: A Brief Overview. Final Report for the Pacific Northwest Research Station. 2004. 46pgs.
- Gimblett, H.R. Saguaro National Park Visitor Inventory, Monitoring and Simulation Modeling. Report prepared for National Park Service. 2004. 107pgs.
- Itami R. M. & H. R. Gimblett. Patterns of Human Use Simulation in Canada's Mountain Parks. Final Report for Parks Canada. March 18, 2005. 34pgs.
- Gimblett, H. R. & R. Nelson. Validation the Recreation Visitation Model for Misty Fjords National Monument: Balancing Increased Visitor Use and Wilderness Character. Final Report for the Ketchikan-Misty Fjords Ranger District. Tongass National Forest- Alaska Region. June, 2005. 45pgs.
- Gimblett, H. R. & S. Lace. Spring Black Bear Harvest Simulation Model in Prince William Sound, Alaska. Final Report for the Glacier Ranger District. Chugach National Forest, Alaska. August 2005. 40pgs.
- Risk Assessment Team. Evaluation of Warning Sign Placement. Report prepared for Department of Land and Natural Resources. State of Hawaii. August 2005. 35pgs.
- Nelson, R. & H.R. Gimblett. Potential Management Problems and Solutions for the Frank Church- River of No Return High Lakes Regions. Prepared for Salmon-Challis National Forest. June 2007.
- Gimblett, H. R., P. Wolfe, L. Kennedy, R. Itami & B. Garber-Yonts. Prince William Sound Human Use Study (PWSHUS). Report prepared for Glacier Ranger District, Chugach National Forest, Girdwood, Alaska. June 2007.
- Bradley, C., H. R. Gimblett & A. Elam. An Evaluation of Open Space Situations, Issues, Needs and Concerns in Arizona Using Components of the Growing Smarter Acts. Report prepared for Arizona State Parks. September, 2008.

- Gimblett, H. R., A. J. Poe & R. M. Itami. 2010. Characterizing the Spatial Distribution of Subsistence and Non-Subsistence use in Prince William Sound, Alaska. Report prepared for Exxon Valdez Trustee Council, Anchorage, Alaska. 95pgs.
- Poe, A. J., H. R. Gimblett & M. Burcham. 2010. Evaluating the Subsistence Service Recovery: Spatial and Temporal Characterization of Prince William Sound Subsistence Harvest Activities, *Exxon Valdez Oil Spill Restoration Project Final Report*. USDA Forest Service, Chugach National Forest, Anchorage, Alaska. 60pgs.
- Sharp, C. & H. R. Gimblett. Analysis Of Remote Sensing Imagery And Geospatial Data For Identifying Off-Road Vehicle Tracks And Foot Trails In Organ Pipe Cactus National Monument. Organ Pipe National Monument. Grant Administered Through The Desert Southwest Cooperative Ecosystem Studies Unit – University Of Arizona. Cooperative Agreement. Final Report. 2010.
- Fuentes, R., L. Haynes, H. R. Gimblett. 2011. Analysis of Mountain Lion Movements for Critical Landscape Linkages near Oracle Junction, Arizona. Final Report Submitted to Arizona Game and Fish Department. December 2011.
- Leslie, C., K. Hockett, B. Meldrum, E. Murdock, H. Gimblett, S. Lawson, and B. Kiser. 2012. Mariposa Grove Visitor Use and Transportation Assessment. National Park Service, El Portal, California; University of Arizona, Tucson, Arizona; and Resource Systems Group, White River Junction, Vermont. 2013.
- Murdock, E., R. Itami, & R. Gimblett. Devils Postpile National Monument Visitor Behavior Model and Travel Simulation. Report prepared for Devils Postpile National Monument. 2013. 43 pgs.
- Neils, A., C. Bugbee, S. Anderson, R. Gimblett, M. Culver. 2015. Arizona Jaguar and Ocelot Conservation Education Project: K-12 Education Plan, Educational Materials, and Examples of Curricula. Final Completion Report for Interagency Agreement Number G13AC00222.
- Reynolds E., R. Gimblett, S. Malusa. 2015. Development and Implementation of a Citizen Science Program for Jaguar Monitoring. Report submitted to United States Fish and Wildlife Service. Arizona Ecological Services Office. Tucson, Arizona. August 2015. 50 pgs.
- Gimblett, H. R. and C. Scott. Freeing the White Salmon River: Dam removal, climate change, fish, and rafting on a tribal sacred river. Report prepared for Exploratory Grants, Institute of the Environment. 2015. 27pgs.
- Lawson, S. & R. Gimblett. Transportation and User Capacity Assessment for Sequoia and King’s Canyon National Parks. Report prepared for the National Park Service 2015.
- Jones, T. A. Poe and H. R. Gimblett. 2018. Bering Sea Community Engagement and Simulation Scenario Development. Report prepared for the National Park Service.
- Gimblett, H. R. Verde River Recreation Flow Study. 2018 - 2019. Draft report prepared for U.S. Forest Service. Southwestern Regional Office. Albuquerque, NM.
- Gimblett H. R. White Salmon River Recreation Monitoring Study. Fall 2018. Report prepared for National Oceanic and Atmospheric Administration (NOAA).
- Gimblett H. R. White Salmon River Recreation Long-Term Monitoring Study 2014-2018. Comparative Report prepared for National Oceanic and Atmospheric Administration (NOAA). Fall 2018.
- Gimblett, H. R. Fossil Creek Recreation Flow Study. 2018 - 2020. Draft report prepared for U.S. Forest Service. Southwestern Regional Office. Albuquerque, NM.
- Christenson, D., R. Gimblett, J. Heffelfinger and B. Blum. Behavioral Responses of Desert Bighorn Sheep to Backcountry Visitor Use. Final Report. Arizona Game and Fish Department Heritage Fund. April 2018.

### **Other Publications**

- Gimblett H.R., Experiential Environmental Management: A Humanistic Approach to the Visualization of the Artificial Reality Using Dynamic Ecosystem Models. ARID ATTITUDE: Newsletter of the University of Arizona Landscape Architecture Program. Part 1 - Volume I, Issue 3 & Part 2 Volume I, Issue 4. 1993.
- \_\_\_\_\_, Greenway Open Space Corridor Study: A Cooperative Research Effort Between the City of Indianapolis, Ball State University and the National Park Service. HORIZONS American Society of Landscape Architects. Ball State University Student Chapter Newsletter. 1993.
- \_\_\_\_\_, Educational Landscape Interpretation at Casa Grande National Monument. Bajada: Joining Research and Management. Volume 2, Issue 2. April, 1993. Pgs. 8-9.

## Symposia

- Harris, L. K. and Gimblett, H.R. Human Impacted Wildlife Assessment using Geographic Information Systems (GIS): A Case Study. Proceedings of Third Symposium on Social Science in Resource Management. Texas A&M University, College Station, Texas. 1990.
- Gimblett, H.R. and Ball, G. L. Multi-Objective Management in Hoosier National Forest. Paper Proceedings of GIS '92 Symposium. Vancouver, British Columbia. 1992.

## Grants and Contracts Won

### Federal

- United States Forest Service. Cooperative Agreement with Ball State University. Perceptions of Shoreline Vegetation along the Chicago River: Examining the Effects of Naturalness and Context. Funding \$6500. Duration 09/01/88 - 09/01/89. (90%). Co-PI.
- United States Forest Service. Technology Transfer, Landscape Classification and Enhancement of the Visual Management System. Funding \$25,000. Duration 09/01/88-09/01/90. (25%). Co-PI.
- National Park Service. Cooperative Agreement with Coop Unit/University of Arizona. Coronado National Forest. Pusch Ridge Database. Funding \$22,400/yr. Co-PI. Duration 04/01/90- 04/01/92. (5%). Co-PI.
- National Science Foundation Undergraduate Faculty Enhancement Program. Fractals in Geology. Ball University. Funding \$10,000.00. Duration 01/01/90- 09/01/90. (33.3%). Co-PI.
- National Park Service. Cooperative Agreement. Spatial Model Development for the Selection and Prioritization of Greenway Corridors within the City of Indianapolis. Funding \$4,000. Duration 11/31/91-01/31/93. (80%). P.I.
- National Park Service. Educational Landscape Interpretation at Casa Grande Ruins National Monument. Funding \$2,375. Duration. 12/16/92- 02/28/93. (50%). P.I.
- United States Geological Survey. Analysis of Digital Elevation Model Data for Watershed Delineation in the Grand Canyon. Funding \$1,051. Duration 11/22/93 -11/31/94. (5%). PI.
- Cooperative Forest Service/Extension Workshop. U.S.D.A. Forest Service Applications Interface Workshop on Recreation Opportunities Spectrum and Visual Resource Management Northern Arizona University. Funded by the Renewable Resources Extension Act. \$500. Duration 11/09/93 -11/11/93. (100%). P.I.
- National Science Foundation - High Performance Computing and Communications Program. Massively Parallel Simulation of Large Scale, High Resolution Ecosystem Models. Co-Investigator - \$900,000. 08/01/93 - 07/31/96. (10%). Co-PI.
- United States Forest Service. Southwest Forest Service Consortium Grant. Study Plan for Recreation Modeling. Funding \$10,000 .Duration 07/01/93 - 02/01/94. Yr 2. or 5. General Project title: Decision Support System for Southwest Forests. (100%).
- U.S. Navy/NPS-CPSU/UA. Geographical Information Systems (GIS) Deployment and Development, Pt. Mugu, California. Co-PI. Duration 1993-1997. Funding \$410,000.
- United States Forest Service Southwest Study. Richards, M.T. & Gimblett, H.R. A Computer Based Recreation Model for Ecosystem Management. Duration 7/1/94 - 9/1/97 (3 yrs.). Funding \$65,000. (50%) Co-PI.
- United States Forest Service. Southwest Study. Daniel, T. C., Gimblett, H.R. & Marsh, S. Scenic Vista Modeling in Dixie National Forest. Duration 7/1/94 1- 9/1/97 (3yrs.). Funding \$75,000. Co-PI.
- National Park Service. Cooperative Agreement for Cultural Landscape Inventory. Duration 1 yr. Funding \$21,500.
- U.S.D.A. Forest Service. Challenge Cost-Share Agreement. East Huachuca Mountains Visitor Survey. Duration 09/28/95 - 12/31/96. Funding \$27,100.00. PI.
- University of Melbourne, School of Graduate Studies Travelling Scholarships. \$500.00.
- Australian Artificial Intelligence Institute. Emergence, Spatial Visualization and Autonomous Agent Formalisms in Natural Resource Management. Cooperative Research and Multiagent Software Agreement. Software. PI. Duration 3/1/96 - 3/1/98. Funding \$25,000.
- National Park Service. Grand Canyon National Park. Intelligent Agent Model for Simulating and Evaluating River Raft Scheduling Scenarios for the Grand Canyon National Park. Duration 1yr. Funding \$27,038.
- USDA Forest Service. Inyo National Forest. Challenge Cost-Share Agreement – Evaluating the Spatial



- Distribution of Recreation Use in the John Muir and Ansel Adams Wilderness Areas. PI. Duration 5/3/99 – 8/30/2000. Funding \$58,776.
- National Park Service. Grand Canyon National Park. Challenge Cost-Share Agreement. Intelligent Agent Model for Simulating and Evaluating River Raft Scheduling Scenarios for the Grand Canyon National Park. Duration 1yr. (1999). Funding \$3,000. (30%).
- USDA Forest Service. Wilderness Recreation Use Monitoring, Evaluation and Simulation in the Pacific South West Region. Duration July 1, 2000 – July 1, 2001. Funding \$25,000. (30%).
- Access Fund Climbing Preservation Grants Program. Inventory and Monitoring of Rock Climber Use of Wilderness Areas. Duration 1 yr. Funding \$5,000. Co-Investigator)
- Bureau of Land Management. Establishing a Monitoring Program for Visitor Use and Associated Impacts in Las Cienegas National Conservation Area. Duration 2yrs. Funding \$129,793.
- Bureau of Land Management. Ironwood Forest National Monument Access and Travel Route Inventory and Recreation Use Study. Duration 2yrs. Funding \$161,000.
- U.S. Fish & Wildlife Service (USFWS). Modeling the Impacts of Recreation Visitation on Wildlife Populations in Misty Fjords National Monument, Tongass National Forest. Duration 6mths. Funding \$20,000.
- USDA Forest Service. Wilderness Recreation Use Monitoring, Evaluation and Simulation in the Pacific South West Region. Duration July 1, 2000 – July 1, 2001. Funding \$25,000. (30%).
- National Park Service. Recreation Use Simulation. Duration Oct 1, 2002 – June 1, 2006. Funding \$110,000.
- Tongass National Forest. Validating the Recreation Visitation Model for Misty Fjords National Monument: Balancing Increased Visitor Use and Wilderness Character. Duration: June 7, 2004-May 31, 2005. Funding. \$31,637.44.
- Chugach National Forest. Bear Harvesting Simulation Model. Duration September 1, 2004 – June 30, 2005. Funding \$12,000.
- Pacific Northwest Research Station. RBSim: A Workshop on Multi-agent Simulation of Outdoor Recreation. Duration: March 31, 2004 – June 30, 2004. Funding \$9,500.
- National Park Service. Recreation Use Simulation. Duration: Oct 1, 2002 – June 1, 2006. Funding \$110,000.
- Gimblett, H.R. & R. Itami. High Lakes Inventory, Monitoring and Simulation. U.S. Forest Service. Salmon-Challis National Forest – Frank Church Wilderness of No Return, Idaho- Phase I. Duration 1 yr. Funding \$20,000. 2003.
- Gimblett, H.R. & R. Itami. High Lakes Inventory, Monitoring and Simulation. U.S. Forest Service. Salmon-Challis National Forest – Frank Church Wilderness of No Return, Idaho – Phase II. Duration 6 mths. Funding \$5,000. 2004
- Gimblett, H. R. Travel Models as Input to Wilderness Recreation Planning. USDA Forest Service Rocky Mountain Research Station. Duration 1 yr. Funding \$20,000. 2004.
- Gimblett, H.R. A Workshop on Multi-Agent Simulation of Outdoor Recreation. USDA Forest Service Pacific Northwest Research Station. Duration 1 yr. Funding \$12,000.
- Gimblett, H.R. Madrona Pools Recreation Synthesis. Duration 2 mths. Funding \$5,000. 2004.
- Gimblett, H.R. Restore Sites and Expand Wildlife Habitat Previously Impacted by Visitors. National Park Service CCIT Program. Duration 2 yrs. Funding \$40,043. 2003-2005.
- Department of Defense (DoD). Developing a Plan of Action for Managing the Proposed Expansion Process in Yuma Proving Grounds. 2006. PI's: Randy Gimblett & Brock Tunnicliff. Duration 3 yr. Funding \$1,559,705.
- Poe, A & H. R. Gimblett. Spatial and Temporal Characterization of PWS Subsistence Harvest Activities. 2006. Funding Source. Exxon Valdez Oil Spill (EVOS) Trustee Council. Duration 3yrs. Funding \$85,040.
- Gimblett, H. R. Evaluation of PWS User Experience. Funding Source. Exxon Valdez Oil Spill (EVOS) Trustee Council. 2006. Duration 3yrs. Funding \$164,700.
- Herrmann, S., T. Park, M. Baro, H. R. Gimblett. National Science Foundation. 'Desertification' or 'Greening'? Human-Environment Relationships in the Face of Climate Variability: Case Studies in Mauritania and Senegal. Duration 3yrs. Funding \$400,000.
- Gimblett, H. R. & C. Sharp. Verification And Analysis Of Remote Sensing In Imagery Identifying Off-Road Vehicle Tracks And Foot Trails In Organ Pipe Cactus National Monument. National Park

Service And Desert Southwest Cooperative Ecosystem Studies Unit – University Of Arizona. Duration 2 yr. Funding \$47,006.40.

Gimblett, H. R. D. Swan and R. Pinto. Cattle grazing and ecological history of Saguaro National Park. National Park Service Desert Southwest CESU. Duration 6 mths. Funding \$11,045.

Gimblett, H. R. Vulture Mountain Recreation Area Master Plan. EPG Consultants. Funding. \$7,536.50.

Gimblett, H. R. Sustainable Wildlands: A Prince William Sound Case Study of Science-based Strategies for Managing Human Use – Funding for New Book. Exxon Valdez Oil Spill (EVOS) Trustee Council. Duration 1 yrs. Phase I - Funding \$30,000.

Cascott, C., B. Morehouse, T. Meixner, H. R. Gimblett, M. Pavao-Zuckerman, & K. Lansley National Science Foundation. Dynamics of Coupled Natural And Human Systems. Strengthening Resilience of Arid Region Riparian Corridors: Ecohydrology and Decision-Making in the Sonora and San Pedro Watersheds. Duration 5 years. Funding \$1,400,000.

Cambridge Systematics Team (UofA). National Park Service Blanket Purchase Agreement for Nationwide Transportation Planning and Related Visitor Services in U.S. National Parks. National Park Service. Duration 5yrs. Funding \$5,000,000.

National Park Service Desert Southwest CESU. H. R. Gimblett. Visitor Use and Resource Impacts Model Development And Simulation To Inform The Devils Postpile National Monument General Management Plan.. Duration 2 yrs. Funding \$76,078.

Koprowski, J., R. Gimblett, L. Haynes. Mountain Lions and Critical Landscape Linkages. Arizona Game and Fish Department - Wildlife Conservation Fund (WCF). Phase I - Duration 2 yrs. \$146,325.

Koprowski, J., R. Gimblett, L. Haynes. Mountain Lions and Critical Landscape Linkages. Arizona Game and Fish Department - Wildlife Conservation Fund (WCF). Phase II - Duration 1 yr. \$15,325.

National Park Service. Complete Transportation and User Capacity Assessment for Sequoia and Kings Canyon National Parks. Duration 2 yrs. Funding \$400,000. 2011.

National Park Service. Visitor Use And Resource Impacts Model Development And Simulation To Inform The Devils Postpile National Monument General Management Plan. Duration 1 yr. Funding \$76,078. 2011.

National Park Service. Visitor Use Assessment To Inform The Mariposa Grove Environmental Impact Statement. Duration 1 yr. Funding \$67,860. 2011.

Exxon Valdez Oil Spill (EVOS) Trustee Council. H. R. Gimblett. Sustainable Wildlands: A Prince William Sound Case Study of Science-based Strategies for Managing Human Use – Funding for New Book.. Duration 1 yrs. Phase II - Funding. \$40,000. 2011.

Fish and Wildlife Service. M. Culver & H. R. Gimblett. Camera Trap Data Storage and Analysis. Duration 2 years. Funding. \$90,000. 2011.

National Science Foundation, C. Scott, B. Morehouse, T. Meixner, R. Gimblett, M. Pavao-Zuckerman, & K. Lansley. Supplement. Strengthening Resilience of Arid Region Riparian Corridors: Ecohydrology and Decision-Making in the Sonora and San Pedro Watersheds. Duration 3 years. Funding \$66,447.000.

Game and Fish Heritage Fund. Classrooms to Canyons: Teaching core curriculum through a small-mammal study. Duration 2yrs. Funding \$17,298.

Game and Fish Heritage Fund. Field Trip Grant for Sabino Canyon, Coronado National Forest. Duration 1yr. Funding \$4,423.

Fish and Wildlife Service. Develop and Implement a Citizen Science Program for Jaguar Monitoring, Develop and Conduct Education and Outreach on Jaguar Conservation. Duration 2 yrs. Funding \$231,870. Co PI.

Arizona State Forestry. Urban & Community Forestry Unit. Development of an Urban Forest Health Module for the Integrated Urban Forest Resource Inventory (Urban FRI). Duration 1 year. Funding \$11,412.18. PI.

Arizona State Forestry Division. Integrated Urban Forest Resource Inventory. Duration 3 yrs. Funding \$120,000.00. Co PI.

U.S. Forest Service. Sky Islands Children's Forest (SICF). Duration 1 yr. Funding \$48,628. 2013.

Water, Environmental and Energy Solutions (WEES) Graduate Student Support grant. Strengthening Resilience of Arid Region Riparian Corridors: Ecohydrology and Decision-Making in the Sonora & SanPedro Wathersheds. Funding \$2,000.

- Cambridge Systematics Team (UofA). National Park Service Blanket Purchase Agreement for Nationwide Transportation Planning and Related Visitor Services in U.S. National Parks. National Park Service. Duration 5yrs. Funding \$2,000,000 - 5,000,000. 2013-2020.
- National Park Service, Western Arctic National Parklands. The Impacts of Climate Change and Increased Commercial shipping in the Bering Sea on contaminant risk and local communities. Cooperative Grant (Tahzay Jones (NPS), Douglas Burn (FWS), Aaron Poe (FWS), Martin Robards (WCS), Randy Gimblett (UofA), Robert Itami - Geodimensions). Duration 2 yrs. \$250,000. (Contracting in Progress).
- United States Department of Agriculture Hatch Grant. Van Leeuwen, W., J. Buizer, G. Garfin, R. Gimblett, S. Marsh, D. Moore, B. Smith, C. Wissler, M. Crimmins. Geospatial, Biophysical and Environmental Research and Development for Natural Resource. Duration 10/01/2017 to 09/30/2022.
- U.S. Forest Service. Defining median river flows are appropriate to sustain high quality recreation experience opportunities on the Verde River. Duration 2 years. Funding \$50,000. 2017-2019.
- U.S. Forest Service. Fossil Creek Wild and Scenic River, Scenic and Recreation Values and River Flow. Duration 2 years. Funding \$50,000. 2018-2020.

### State

- Indiana State Agriculture Department. Profit Potentials for Rural Indiana: Economic Development of Rural and Agricultural Land Resources. Henry County, Indiana. Funding \$3000. Duration 09/01/88 - 05/01/89. (40%). Co-PI.
- Ball State University. Internal Funding. Office of Research. Development of Decision-Support Prototype using Neural Networks. Funding \$1,500. Duration 05/01/90 - 09/01/90. (100%).PI.
- Ball State University - Internal Summer Grant. Neural Network Decision Support System for Natural Resource Planning. Funding \$8,250. Duration 04/01/91 -10/01/91. (100%). PI.
- Energy Fellowship Grant. Ball State University. Dynamic Spatial Ecosystem Modeling. Funding \$8,000. Duration 09/01/91- 04/01/92. (100%). PI.
- City of Richmond GIS Demonstration Project. June. 1991. Funding \$13,000. Duration 04/01/91 - 11/01/91. (30%). Co-PI.
- Indiana Department of Natural Resources. Division of Outdoor Recreation. Cooperative Project with DNR and City of Anderson. Spatial Model Development for Definition of a Resource Management Strategy for Mounds State Park. Funding \$26,610. Duration 09/31/91 -12/31/93. (75%). P.I.
- Office of Ecology and Planning in Hermosillo. Coastal Development Guidelines for Northern Sonora. Funding. \$6,000. Joint Project with Architecture and Planning. Duration 12/15/92 - 12/15/93. (8%). Co-PI.
- Provost's Initiative Grant. Ball State University. Generalized Ecosystem Modeling Using Spatial Dynamic Emergent Hierarchies. Funding \$7,000. Duration 05/01/92 - 09/01/92. (100%). PI.
- Pima County. Cienega Creek Project. McGann & Associates. Technical Assistance in Construction of GIS Database. Funding \$35,000. Duration: 09/01/93 - 09/01/95. (5%).Co-PI.
- Arizona Game and Fish Heritage Grant. Rocking K Resource Study. Environmental Consultants (Harris). Funding \$60,000. Duration 07/01/93- 07/01/95 (12%- \$5,000). Co-PI.
- Arizona Agricultural Experiment Station. Advanced Resource Technology for National Resource Management and Environmental Assessment. Co-PI. Duration 1993-1996. Funding \$5,800.
- Instructional Computing Grant Program. University of Arizona. Helping to Outfit a Computer-aided Design Lab. Funding \$14,820. 1995. Co-PI.
- Arizona Game and Fish Heritage Grant. An Inventory of Riparian Habitat Along Rincon Creek. Duration 2 yrs. Duration 1994 -1996. Funding \$79,830. Co-PI.
- College of Agriculture. Multimedia and Landscape History: CD-ROM Development for Teaching Environmental Change over Time. PI. H.R. Gimblett & E. H. Zube. Duration 1 yr. Funding \$3,500.00.
- College of Agriculture. Faculty Teaching Enhancement Program. Educational Enhancement Through Technology: Combining Global Positioning Systems (GPS) with Spatial Modeling for automated data collection, analysis and assessment. PI. H.R. Gimblett. Duration 6 mths. Funding \$1,350.

Arizona Agricultural Experiment Station Project Grant. Advanced Resource Technology for Natural Resource Management and Environmental Assessment. Guertin, D.P, G.L. Ball & H.R. Gimblett. Duration: 7/96-5/99. Funding \$123,000.

Provost's Instructional Computing Grant Program. University of Arizona. New Learning Environments and Technologies. Funding \$8,000. 1997. Co-PI.

Provost's Instructional Computing Grant Program. University of Arizona. Using Campus Infrastructure Data in Instructional Applications. Funding \$15,000. 1998. Co-PI.

Arizona Game and Fish Heritage Grant. Rincon Creek Riparian Habitat Inventory and Analysis. Duration 08/01/98 – 08/01/2000. Funding \$48,500. (Co-PI) (33%).

Agriculture Experiment Station Grant. Spatially-Explicit Simulation Modeling of River Trips on the Colorado River Using Intelligent Agents. Duration 07/01/98 – 07/01/200. Funding \$26,922.

University of Arizona. Provost's Instructional Grant. Using Campus Infrastructure Data in Instructional Applications. Duration 1yr. Funding \$15,000. 1999.

Northern Arizona University. Internal Grant. Linking ROS with Arc View for Classroom Use. Duration 6 mths. Funding \$3,000.

Parks Victoria, Australia. Visitor Management Project for Port Campbell National Park and Bay of Islands Coastal Reserve. Cooperators - Bob Itami, Rob Raulings, Dino Zanon, Glen MacLaren, Kathleen Hirst, Bohdan Durnota. Duration September 1999 – December 2000. Funding \$165,000.

University of Arizona. Provost's Instructional Grant. Using Campus Infrastructure Data in Instructional Applications. 1999. Funding \$15,000. (5%). R. McCarther, T. Daniel, M. Mitner.

National Learning Environments. Using integrated technology to Build Learning Middleware. Duration 1yr. Funding \$24,000. 1999-2000.

Agriculture Experiment Station Grant. The Social Impacts of Urban Growth on Adjoining Public Lands. (New). Duration 07/01/2001 – 07/01/2004. Funding \$45,000.

McIntyre Stennis. Modeling the Spatial and Temporal Distribution of Human Use in the Forest Environments. (Renewal). Duration 3yrs. Funding. \$45,000.

Sonoran Institute. Identification and Mapping of Resource Values of the Missing Link Area in Southern Arizona. Duration. 6mths. Funding \$10,000. 2001-2002.

Arizona Game and Fish Heritage Grant. Rincon Creek Riparian Habitat Inventory and Analysis. 1998 – 2001. Funding \$48,500.(30%) Bill Halverson & Mark Briggs. (2) graduate (2) Undergraduates.

Arizona Agricultural Experiment Station Project Grant. Advanced Resource Technology for Natural Resource Management and Environmental Assessment. (Renewal) Wissler, Guertin, & Gimblett. 2001. Funding \$30,000 (25%) (graduate student).

Gimblett, H.R. & C. Bradley. Foundation Information for Improvement of Arizona State Parks Growing Smarter Grants Program and Land Conservation Efforts Based on Past County Growing Smarter Compliance Results: User and Land Manager Needs Assessment, and Spatial Analysis Mapping. Funding Source. Arizona State Parks. Duration 2 yrs. Funding \$126,871. 2007,

Gimblett, H. R. A Vision For Innovative And Alternative Management Strategies Of The Rafael State Natural Area. Arizona State Parks. Duration 6 mths. Funding \$10,000. 2008.

Koprowski, J., R. Gimblett, L. Haynes. Mountain Lions and Critical Landscape Linkages. Arizona Game and Fish Department - Wildlife Conservation Fund (WCF). Duration 2 yrs. \$146,325.

Koprowski, J., R. Gimblett, L. Haynes. Mountain Lions and Critical Landscape Linkages. Arizona Game and Fish Department - Wildlife Conservation Fund (WCF). Phase II - Duration 1 yr. \$15,325.

Christianson, D., R. Gimblett & B. Blum. Assessment of Human Use and Recreation on Recently Released Bighorn Sheep in the Pusch Ridge Wilderness Area, Arizona. Duration 2 years. Funding \$59,684. Funded March 2015.

Gimblett, H. R & C. Scott. Freeing the White Salmon River: Dam removal, climate change, fish, and rafting on a tribal sacred river. IE Faculty Exploratory Grant. Duration 1 year. Funding \$9,996.

## **Industry**

Intergraph Corporation Equipment Grant. 1992. Co-PI. Funding \$150,000. (50%).

Intergraph Corporation Software Grant. Ball, G. L. & Gimblett, H.R. Fall, 1994. Funding \$1,000,000. Co-PI. (50%).

SouthWest Tucson Electric Power Project. Dan Elder Associates. Duration 1 yr. Funding \$6,400.

City of Globe. Mountain Park Trail Design. Duration. 6 mths. Funding \$6,200.