

Michael V. Holmes

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EDUCATION

Master of Landscape Architecture

North Carolina State University, 1998 - Raleigh, NC

Thesis: *Characterizing Development Patterns in Watauga County, North Carolina: A GIS Exploration of Spatial Data Types and Analysis Techniques*

Bachelor of Science, Ornamental Horticulture

Berry College, 1993 - Rome, GA

Fellow, Natural Resources Leadership Institute

North Carolina State University, 2004

Training in public participation, facilitation, conflict resolution, and collaborative problem solving focused around natural resources issues.

EXPERIENCE

Assistant Professor

Department of Horticulture and Landscape Architecture, Oklahoma State University

Courses include: ***Landscape Architectural Design I, Landscape Construction III: Materials and Methods, Landscape Architectural Design IV, Computer-Aided Design***, and **Peru Study Abroad Program**. [2004-present]

Research Associate, Design Research and Extension Program

College of Design, North Carolina State University

Research topics included: Landscape Assessment, GIS Spatial Analysis, Watershed Restoration, Low Impact Development and Design, Landuse Planning, Alternative Development Forms, Digital Technology in Landscape Architecture, Digital Imaging, 3D Modeling and Simulation. Manager tasks: Supervise approximately 6 graduate students per semester. Manage laboratory's hardware, software, service accounts, and website. [1998-2004]

Visiting Lecturer

Department of Landscape Architecture, North Carolina State University

Team-taught a five-week GIS module of ***Landscape Resource Management and Planning***, Fall 2003. Lecture topics include: Ecologically sensitive landscape planning, impact analysis, and GIS.

Taught Fall 2000 and team-taught ***Digital Design Media for Landscape Architecture***, Spring 2001. Lecture topics included: Digital drawing, digital imaging, photo simulation, 3D modeling, information design, presentation layout. Computer applications included: Adobe Photoshop, Adobe Illustrator, Form-Z, and Quark Express.

Research Assistant, Design Research Laboratory

College of Design, North Carolina State University

Research topics included: GIS Spatial Analysis, Conservation Design Techniques, Digital Imaging Techniques. [1997-1998]

HONORS & AWARDS

- *NC-APA 2002 Outstanding Planning Award*, Consultant on the Town of Cary's "Open Space and Historic Resources Plan."
- *ASLA Certificate of Honor*, 1997-98 for Excellence in the Study of Landscape Architecture.
- *ASLA National Student Design Competition Distinguished Graduate Team Research Award*, 1997, "A Juneau Century - 1946 to 2046."
- *Faculty Service Award 1997-98*, Department of Landscape Architecture, NC State University.
- *Outreach, Research and Extension Grant*, 1996-97, School of Design, NC State University.
- *Sigma Lambda Alpha*, Honor Society of Landscape Architecture.

SCHOLARSHIP & RESEARCH PROJECTS

Integrated Environmental Research and Education Site, Oklahoma State University Botanical Gardens. Coordinated multidiscipline team resulting in the development of site program and design. Site design includes integrated environmental practices such as bioretention, pervious pavement, green building technologies, and riparian corridor enhancement. Currently developing research teams and seeking funding. [2006- present]

Xeriscape Garden at Edmond's Community Park. Working with Edmond, OK city staff, local professionals, and extension faculty to design a xeriscape / water conservation demonstration garden. [2006 - present]

Stillwater Trail and Bikeway Master Plan. Facilitated a community design workshop, gaining public input on issues related to a comprehensive trails and bikeways system. Currently working with city staff and citizens as a member of the Stillwater Trail Taskforce to develop a trail and bikeway master plan. [2005 - present]

Oklahoma Frontier Drug Store and Museum's Apothecary Garden. Developed a planting plan that includes over 30 medicinal tree, shrub, and perennial species. The Apothecary Garden is dedicated to the cultivation and study of medicinal plants while serving as a park and garden for the downtown Historic District of Guthrie, OK. [2005-2006]

Green Level, NC: Developing a Vision through Community Participation. Facilitated a series of nine community workshops / meetings, where over 100 community members participated in issues identification and consensus building exercises. Project resulted in the development and acceptance of a community vision. Funded by National Park Service and Town of Cary. [2003]

Randolph County, NC: Protecting Rural Character and Open Space by Clustering Development. Developed conceptual design and photo-simulations of conventional and cluster development to demonstrate techniques of rural character and open space protection. Facilitated public education workshop for public officials, landowners, and developers. Funded by NC Cooperative Extension. [2002-2003]

Water Quality and Quantity Impacts of Urban Form: A Comparative Analysis of New Urban and Low-Density Development. Compared stormwater runoff impacts of new urban development to conventional low-density development. Methods included written survey, case studies, alternative design prototypes, and water quality/quantity modeling. Funded by Water Research Resource Institute. [2001-2003]

SCHOLARSHIP & RESEARCH PROJECTS *continued*

Pettiford Creek Watershed Assessment: Urban Stormwater BMP Location, Selection and Implication in Closed Shellfish Waters. Developed and administered site-survey documenting potential impact to water quality. Identified locations of potential impact and opportunities for locating mitigation using GIS analysis. Funded by EPA-319. [2001-2003]

Cary, NC: Walnut Street Corridor Conversion. Developed conceptual designs and photo simulations of corridor conversion from residential to commercial. Town planners used the photo-realistic images to facilitate discussions between town council, developers, and citizens. [2002]

Goose Creek Watershed: Alternative Development Scenarios. Facilitated mapping workshop and developed photo-simulations of alternative development, to demonstrate watershed protection using landuse planning and site design techniques. Funded by Watershed Education for Communities and Local Officials. [2002]

Visual Sensitivity of Thunder Hill, NC. Identified, using a viewshed mapping analysis, potential visual impact of the NC321 road widening and realignment project to the Blue Ridge Parkway's Thunder Hill Overlook. [2001]

How Real is Real? The Potential Impact of Virtual Reality on the Development of Spatial Visualization Skills. Examined impact of virtual reality on design students' evaluative judgments. Compared survey responses to physical site and flat-screen computer animation simulation. [2001]

Scenic and Historic District Viewshed Analysis and Build-out Visualizations, Cary, NC. Identified scenic resources associated with rural historic districts of Carpenter Crossroads and Green Level, NC using viewshed mapping analysis. Visualized conventional and conservation build-out scenarios using photo-realistic digital imaging techniques. Funded by Town of Cary. [2000-2001]

How Do Emerging Digital Representation Tools Change our Design Judgments and Results? A Comparison of Virtual and Drawn Realities. Examined the impact of virtual reality on design professionals' evaluative judgments, compared survey responses to conventional plan, section, perspective drawings with survey responses to immersive computer generated walk-through simulations. [2000]

Landscape Design Workshop, Andrews Middle School. Facilitated design workshop for seventh grade 4H program, visualizing student's ideas for a science garden. Workshop introduced students to the field of landscape architecture, the design process and digital imaging techniques. [2000]

Murphy, NC: Downtown Revitalization Charrette. Provided design and technical support to landscape architecture students during three-day community charrette. Developed real-time walk-through 3D simulation of student designs. [2000]

Cary, NC: Downtown Area Visualization Project. Produced digital images simulating alternative land use/design scenarios for Cary's Town Center. Photo-realistic images were part of a participatory planning process. Funded by Town of Cary. [2000]

Developing 3D Computer Modeling Techniques for Immersive Virtual Reality Simulations in the VisionDome. Developed techniques and protocols for 3D computer modeling, immersive real-time simulation, and computer animations in the VisionDome, a virtual reality theatre. [1999-2002]

SCHOLARSHIP & RESEARCH PROJECTS continued

Land Use Change and Its Effects on Bacterial Contamination of Shellfish Resources, Jumping Run Creek. Developed a landuse change spatial database, measured change to land cover and related it to bacterial loading rates. Analyzed changes in vegetative clearing, ditching, and impervious surface areas over a thirty year period. Results informed watershed restoration efforts. Funded by EPA-319. [1999-2000]

Parcel Prioritization for the Blue Ridge Parkway's Scenic Conservation Effort, Watauga County, NC. Prioritized parcels for the Blue Ridge Parkway's scenic corridor conservation efforts. Methods included a GIS analysis of development trends, land values, and visual sensitivity. Funded by Conservation Trust for North Carolina. [1998-1999]

New Bern, NC: Visioning Streetscapes and Neighborhoods. Produced digital images simulating alternative concepts for streetscape and neighbor enhancements. Funded by City of New Bern. [1999]

Smithfield, NC: Visioning Streetscapes Visualization Project. Produced digital images simulating streetscape enhancements. Funded by City of Smithfield. [1999]

Triangle J: Council of Governments, NC: Alternative Development Scenarios for River Corridors Protection. Developed conceptual designs and photo simulations of conventional and open space subdivisions on three sites along the Neuse River. [1998]

Landscape for Learning Master Plan and Entrance Courtyard, R.N. Harris Elementary School. Facilitated a participatory design process resulting in a campus master plan and elementary student's constructing an entrance courtyard. Developed and taught three semesters of design/construction electives. Contact time: two hours per week, Grades: K-5th. [1997-1998]

Chavis Heights Children's Community Garden. Developed and led environmental/design education program for a public housing after school program. Contact time: two hours per week, Grades: 1st-4th Funded by College of Design Outreach Grant. [1996-1997]

SERVICE LEARNING CLASS PROJECTS

Oklahoma Gardening: Connector Walkway, Hands-On Design/Build Project, Oklahoma State University Botanical Gardens, *LA 4894: Construction 3*, Fall 2006 (Funding: In-kind Donation, \$12,700)

Lily Rural Acreage Site Plan, Enid, OK, *LA 3314: Design 1*, Fall 2006. (Funding: \$650)

Outdoor Classroom for Forty Students, Hands-On Design/Build Project, Oklahoma State University Botanical Gardens,, *LA 4894: Construction 3*, Fall 2006.

Historic Dale Residential Design, Guthrie, OK, *LA 3314: Design 1*, Fall 2006. (Funding: \$600)

Stillwater Creek Corridor Study and Master Plan, Stillwater, OK, *LA 4424: Design 4*, Spring, 2006. (Funding: \$1,500)

Centennial Park Master Plan, Ardmore Main Street Authority, Ardmore, OK, *LA 4424: Design 4*, Spring, 2006. (Funding: \$850)

SERVICE LEARNING CLASS PROJECTS continued

Schellenberg Rural Development Master Plan, LA 3314: *Design 1*, Fall 2005. (Funding: \$500)

Oklahoma Gardening: Entrance Walk, Plaza, and Fence, Hands-On Design/Build Project, Oklahoma State University Botanical Gardens, LA 4894: *Construction 3*, Fall 2005 (Funding: In-kind Donation, \$9,000)

Oak Park Community Master Plan, Guthrie Housing Authority, Guthrie, OK, LA 4424: *Design 4*, Spring 2005. (Funding: \$1,200)

Burger Residential Design, Stillwater, OK, LA 3314: *Design 1*, Fall 2004. (Funding: \$600)

Trellis Walkway, Hands-On Design/Build Project, Oklahoma State University Botanical Gardens, LA 4894: *Construction 3*, Fall 2004 (Funding: In-kind Donation, \$4,000)

OUTSIDE PROFESSIONAL DESIGN CONSULTING PROJECTS

New Beginnings: Residential Housing for Abused Woman, Alva, OK. Developed landscape design and planting plan. [June to November 2006]

Court of Oklahoma at North Western Oklahoma State University, Alva, OK. Developed landscape design and planting plan. [April to September 2006]

Trillium Education Garden and National Trillium Collections Gardens, Huntsville Botanical Gardens, Huntsville, AL. Served as a consultant on design and planting plan. Huntsville, AL. [May and August 2006.]

City of Stillwater Monument Sign and Landscape Visualization Project, Developed design concept and photo realistic simulation. Stillwater, OK [February and March 2006]

Genoff Residence, Bixby, OK. Developed landscape design and planting plan. [August to December 2005]

Lamanski Residence, Raleigh, NC. Developed and implemented landscape design and planting plan. [March to May, 2004]

PUBLICATIONS

Ramage, Scott, F., Michael Holmes. "A Case Study in the Use of Photo-Simulation in Local Planning" *Carolina Planning: The Planning Journal of the Southeast*. Spring/Summer 2004 Vol. 29, No.2; pg. 30-47.

Berke, Philip R., Nancy White, Dan Line, Michael Holmes, Joe McDonald, Kat Oury, Rhonda Ryznar. 2003. "Greening Development to Protect Watersheds: Is New Urbanism the Answer?" *Journal of American Planning Association*. Autumn 2003. Vol. 69, Issue 4; pg. 397-413. [REFEREDED]

PUBLICATIONS continued

Hasenmyer, Michael, Michael Holmes, Arthur Rice, James Tomlinson. 2002. "Discovering the Impact of the Emerging Virtual World on Landscape Architectural Design" *Proceedings: American Society of Landscape Architects' Annual Conference*, San Jose, CA. October 18-22, 2002.

White, Nancy M., with contributions by: Michael Holmes, S. Rhue, J. Massey and K. Oury. 2002. *Protecting Estuarine Water Quality Through Design*. North Carolina Sea Grant, UNC-SG-01-13.

Tomlinson, James D., Michael Holmes, Arthur Rice. 2002. "Digital Representation Tools Impact on the Design Decision Process." *Proceedings: Design and Decision Support Systems in Architecture and Urban Planning*. Ellecom, Netherlands, July 7-10, 2002.

Holmes, Michael V., Arthur Rice, James Tomlinson. 2002. "A Comparison of Realities: Will Emerging Digital Representation Tools Change our Design Judgments and Results?" *Council of Educators of Landscape Architects' Annual Conference Proceedings*, Guelph, Canada, August 3-5, 2000.

Holmes, Michael V., Arthur Rice, James Tomlinson. 2001. "Will Emerging Digital Representation Tools Change our Design Judgments and Results? A Comparison of Realities." *Research By Design International Conference Proceedings*, Delft, Netherlands, November 1-3, 2000.

PROFESSIONAL PRESENTATIONS

Conference on Urban Protection: Helping Communities Grow Naturally, Oklahoma City, OK. February 8, 2007. "Planning to Be Green: OSU Botanical Garden's Integrated Research and Education Site Design."

Oklahoma Gardening Ambassadors Program: June 28, 2006. "Using Hardscape Surfaces in the Landscape."

Featured Speaker, Arbor Day Program and Conference, Alva OK, March 28th 2006. "Designing With Trees."

Gallery Exhibition: ReDiscover, ReThink, ReDesign Landscape Architecture: A National Cross Section of Landscape Architecture, The Union Gallery, University of Maryland, March 2006. "Centennial Park, Ardmore OK" (included student work).

Oklahoma Gardening Ambassadors Program: March 25, 2005. "Residential Landscapes Design: Form and Function."

North Carolina Chapter of American Planning Association's Annual Conference, September 24, 2004. "Planning Amid Conflict at the Urban-Rural Fringe."

North Carolina Chapter of American Planning Association's Annual Conference, September 23, 2004. "Using Pixels Instead of Pencils: Techniques and Recommendation for Computer Visualization."

Oklahoma State University, Department of Horticulture and Landscape Architecture, April 5, 2004. "Design Decisions: Understanding Their Effects."

West Virginia University, Landscape Architecture Program, February 11, 2004. "Low Impact Development: Designing for Integrated Onsite Stormwater Management."

West Virginia University, Landscape Architecture Program, February 10, 2004. "Water Quality and Quality Impacts of Urban Form: A Comparative Analysis of New Urban and Low Density Developments."

North Carolina Division of Water Quality's Non-point Stormwater Workshop: Controlling Microbial Pollution in your Community, Manteo, NC, November 13, 2003. "Watershed Assessment and Planning."

Council of Educators of Landscape Architects' Annual Conference, Charleston, SC, September 24-27, 2003. "Digital Photo Manipulation's Role in Participatory Design and Planning Processes: Case Study Evaluations."

Colorado State University, Department of Horticulture and Landscape Architecture, April 25, 2003. "Community Based Participatory Visioning and Master Planning, Green Level, NC."

North Dakota State University, Department of Architecture and Landscape Architecture, April 22, 2003. "Identification and Protection of Scenic Corridor Resources, Green Level, NC."

College of Design Research Symposium, NC State University, Raleigh, NC, April 17, 2002. "Land Use Change Analysis: Identifying Indicators to Support Watershed Based Restoration."

Southeastern Lakes Management Conference, Winston Salem, NC, March 18 - 20, 2002. "Southern Village: A Case Study in the Water Quality Benefits of Compact Development."

Water Resource Research Institute's Seminar Series, Raleigh, NC, November 26, 2001. "Southern Village: A Case Study in the Water Quality Benefits of Compact Development."

Canadian Society of Landscape Architects' Annual Conference, Montreal, Canada September 21-23, 2001. "The Emerging Impact of Virtual Reality on Landscape Architectural Design."

Council of Educators of Landscape Architects' Annual Conference, San Luis Obispo, CA, August 9-11 2001. "How Real is Real? The Potential Impact of Virtual Reality on the Development of Spatial Visualization Skills."

Council of Educators of Landscape Architects' Annual Conference, Guelph, Canada, August 3-5, 2000. "How do Emerging Digital Representation Tools Change our Design Judgments and Results: A Comparison of Virtual and Drawn Realities?"

Water Resource Research Institute Conference, Raleigh, NC, March 30, 2000. "Development of Land Use Change Indicators to Support Watershed Restoration of Shellfish Resources Impacted by Fecal Coliform Contamination."

GUEST LECTURES

- "Low-Impact Development: Stormwater Design Strategies." OK State University, *LA 3984: Construction I*. 10/06.
- "Faculty Members Are Humans Too." OK State University, *AG 1011: Orientation*. 9/06.
- "Residential and Public Landscapes." OK State University, *HORT 1013: Introduction to Horticulture*. 02/06
- Tour: "Significant Landscape Architectural Sites of Oklahoma City." Universidad Peruana De Ciencias Aplicadas, *Studio Exchange Program*. 02/06.
- "Constructed Wetland Design." OK State University, *LA 3894: Construction II*. 01/06.
- "LID: An Integrated Approach to Stormwater Design." OK State University, *LA 3984: Construction I*. 11/05.
- "Residential and Public Landscapes." OK State University, *HORT 1013: Introduction to Horticulture*. 03/05
- "Topography and Landform." OK State University, *LA 3984: Construction I*. 09/04.
- "Analysis and Simulation Techniques for Landscape Management." NC State University, *LAR 512: Landscape Resource Management*, 11/03.
- "Digital Simulation Methods." NC State University, *DDN 795: Research Methods in Design*, 04/03.
- "Using Photo-Simulation Techniques to Visualize Land Use Issues." NC State University, *LAR 411: Digital Design Media for Landscape Architecture*, 03/02.
- "Immersive and Interactive Visualizations using Geographic Information Systems." NC State University, *NR 533: Application Issues in Geographic Information Systems*, 12/01.
- "Analysis and Simulation Techniques for Landscape Management." NC State University, *LAR 512: Landscape Resource Management*, 11/01.
- "Visual Simulation Methods." NC State University, *DDN 795: Research Methods in Design*, 11/01.
- "How Virtual Reality Can Effect Design Decision Making." NC State University, *DDN Seminar Series*, 10/01.
- "Immersive Visualization Tools and Techniques." NC State, *LAR 400: Studio*, 04/01.
- "GIS and Spatial Modeling." NC State University, *LAR 512: Landscape Resource Management*, 11/00.
- "Blue Ridge Parkway's Scenic Conservation Effort." NC State University, *LAR 445: American Parkways and Estates*, 03/00.
- "Real-time Interactive Models using VRML." NC State University, *ID 400: Studio*, 01/00.
- "GIS and Spatial Modeling" NC State University, *LAR 512: Landscape Resource Management*, 11/99.
- "Using the VisionDome to Display Form Z Models." NC State University, *ARC 292*, 11/99.
- "Real-time Interactive Models using VRML." NC State University, *ARC 292*, 10/99.
- "Digital Graphic & Advanced Visualization Techniques." NC State University, *LAR 510: Landscape Graphics*, 07/99.

WORKSHOP AND CONFERENCES

- American Society of Landscape Architects Annual Conference, October 6-9, 2006.
- Oklahoma Chapter of the American Society of Landscape Architect's Annual Conference, September 23, 2006.
- CASNR Teaching Excellence Retreat. Jan. 5, 2006.
- Oklahoma Chapter of the American Society of Landscape Architect's Annual Conference, December 3, 2005.
- OSU-ITLLE, "Starting & Maintaining Your Teaching Portfolio" Nov. 8, 2005.

WORKSHOP AND CONFERENCES *continued*

- CASNR Teaching Effectiveness Workshop, Aug. 18, 2005.
- North Carolina Chapter of the American Planning Association's Annual Conference, September 22-24, 2004.
- Oklahoma Chapter of the American Society of Landscape Architect's Annual Conference, September 18, 2004.
- CASNR Teaching Effectiveness Workshop: Aug. 19, 2004.

DEPARTMENTAL SERVICE AND ACTIVITIES

- Coordinator, Exhibition Gallery, [2006 - present]
- Committee Member, Oklahoma State University Botanical Gardens, [2004-present]
- Studio Facilities Manager, Responsible for Landscape Architecture Studios, Desks, Stools, and Lockers. [2004 to present]
- Club Advisor, Student Chapter of American Society of Landscape Architects, [2004 to present]
- Organizer, Stillwater Country Club Courtyard Design, Stillwater, OK, *ASLA Student Chapter Fundraiser*, [Spring 2006]. Raised \$500.00
- Design Consultant, Oklahoma Gardening Deck Project. [Fall 2006]

UNIVERSITY SERVICE AND ACTIVITIES

- Grandparent University, Oklahoma State University. "Landscape Design 101", One day of curriculum developed and delivered to alumni and their legacy grandchildren. June 2006
- Jury Member, "Stillwater Children's Museum Project" Architecture Department, OK State University, February 2006.

PROFESSIONAL SERVICE AND ACTIVITIES

- Secretary, Oklahoma Chapter, American Society of Landscape Architects. [2006 – present]
- Website Developer, Oklahoma Chapter, American Society of Landscape Architects. [2006 – present]
- Co-Chairman, 2005 Annual Meeting Committee, Oklahoma Chapter, American Society of Landscape Architects. [Fall 2005]

PROFESSIONAL AFFILIATIONS

- Member, American Society of Landscape Architects (ASLA)
- Member, Council of Educators in Landscape Architectures (CELA)
- Member, North American Colleges and Teachers of Agriculture (NACTA)
- Member, Oklahoma Academy of Science (OAS)