

HYOWON BAN
1250 Bellflower Blvd.
Long Beach, CA 90840
Department of Geography
California State University, Long Beach
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EDUCATION

Ph.D., Geography, The Ohio State University, Columbus, OH, 2009
Dissertation Title: *Visualization of Urban Concepts in Two Directions of Thinking*
Advisor: Ola Ahlqvist, Department of Geography

Master of Arts, Geography, August 2001. Ewha Womans University, Seoul, Korea.

Bachelor of Arts, Geography, February 1999. Ewha Womans University, Seoul, Korea.

RESEARCH INTERESTS

Geographic Information Science

- Semantic Uncertainty
- Cyberinfrastructure
- Spatial Analytical Methods
- Spatial Analysis of Art Performance

Visual Analytics

- Large Spatio-Temporal Database
- Information Visualization
- Data with Narrative

Spatial Statistics

Geovisualization

- 2D/3D, Web-Based, Open-Source Interactive Visualization
- Virtual Reality/Animated Mapping

Urban Geography

- Urban Ontologies
- Exurbanization
- Participatory GIS

Remote Sensing

- Land-use Classification

PUBLICATIONS

Peer-Reviewed Journal Articles and Editorials

Ahlqvist, O. Harvey, F., Ban, H., Chen, W., Fontanella, S., Guo, M., and Singh, N. (2011). Making journal articles 'live': turning academic writing into scientific dialog. *GeoJournal*, DOI 10.1007/s10708-011-9431-9. (editorial).

Ahlqvist, O., Ban, H., Cressie, N., and Zuniga-Shaw, N. (2010). Statistical counterpoint: Knowledge discovery of choreographic information using spatio-temporal analysis and visualization. *Applied Geography*, doi:10.1016/j.apgeog.2010.03.006.

Ban, H. and Ahlqvist, O. (2010). User evaluation of a software interface for geovisualization and communication of uncertain urban ontologies. *Journal of Information Technology in Construction (ITcon)*, 15, 122-131, <http://www.itcon.org/2010/9>.

Ban, H. and Ahlqvist, O. (2009). Representing and Negotiating Uncertain Geospatial Concepts - Where are the exurban areas?. *Computers, Environment and Urban Systems*, 33, 233-246, doi:10.1016/j.compenvurbsys.2008.10.001.

Ahlqvist, O. and Ban, H. (2007). Categorical Measurement Semantics: A New Second Space for Geography. *Geography Compass*, 1(3), 536-555.

Kim, C., Sang, S., and Ban, H. (accepted). Exploring Job Centers by Occupation and Gender Using Accessibility: The Case Study of the Columbus MSA, *GeoJournal*.

Papers in Conference Proceedings (peer-reviewed)

Ban, H. (2011). Geographical Counterpoint of Spatio-Temporal Data, the Dance. In: *Proceedings of the 25th International Cartographic Conference*. International Cartographic Association, Paris, 2011, ISBN 978-1-907075-05-6, CO-211.

Ban, H. and Ahlqvist, O. (2009). User Evaluation of a Software Interface for Communication in Urban Ontologies. In: J. Teller; A.-F. Cutting-Decelle; R. Billen (Eds.) *Urban Ontologies for an Improved Communication in Urban Development Projects*. Les Editions de l'Université de Liège, Belgium, 2009, ISBN 978-2-87456-082-8, 1-11.

Ban, H. and Ahlqvist, O. (2008). Web-based Interactive Visualization of Uncertain Concepts in Urban Ontologies. In: J. Teller; C. Tweed; G. Rabino (Eds.) *Conceptual Models for Urban Practitioners*. Società Editrice Esculapio, Bologna, 2008, ISBN 88-7488-208-4, 57-68.

Ban, H. and Ahlqvist, O. (2007). Visualizing the Uncertainty of Urban Ontology Terms. *Studies in Computational Intelligence: Ontologies for Urban Development*, 61, 85-94.

Abstracts (peer-reviewed)

Ban, H. (2006). 3D Visualization of the Semantic Uncertainty of Exurban Boundaries. *IFGIprints: Geographic Information Science*, 28, 223-228.

Other Publications

Sung, H.-H., Ryu, J., and Ban, H. (2002). A Study on the Geomorphological Characteristics of Environmental Management in Watershed. *Journal of the Korean Society for Geo-Spatial Information System*, 10(4), 17-30.

Ban, H. (2001). A Study on the Geomorphological Characteristics of Development and Flood Hazards in Watershed. *Nokwooheobo* (Thesis Series of the Department of Social Studies, Ewha Womans University), Seoul: Ewha Womans University Press.

WORK IN PROGRESS

Ban, H. Geovisualization of Spatio-Temporal Data of Art (draft), in preparation.

Ban, H., Ahlqvist, O., Zuniga-Shaw, N., and Cressie, N. Geographical Counterpoint of Choreographic Information - What Can Geography and Choreography Tell Each Other? (draft), in preparation.

Ban, H. Book review, The Exposed City, in preparation.

POSITIONS

Assistant Professor 2009-present
Department of Geography, The California State University, Long Beach Long Beach, CA

Graduate Teaching Associate 2006-2009
Department of Geography, The Ohio State University Columbus, OH

Graduate Research Associate 2005-2006
Center for Urban and Regional Analysis (CURA), Columbus, OH
The Ohio State University

Instructor/Technical Support Engineer/Assistant Manager 2002-2004
ESRI Korea, Inc. Seoul, Korea

Graduate Research Associate 1999-2001
Department of Social Studies, Ewha Womans University Seoul, Korea

Graduate Teaching Associate 2000
Department of Social Studies, Ewha Womans University Seoul, Korea

GIS Analyst/Programmer 1996-1998
Department of Social Studies, Ewha Womans University Seoul, Korea

GRANTS AND AWARDS

Travel Grant, 25th International Cartographic Conference, 2011.

UCGIS / ESRI Junior Scholar Award, University Consortium for Geographic Information Science (UCGIS) Summer Assembly, 2010.

Second Place Prize, Cyberinfrastructure Specialty Group Student Honors Paper Competition, The Association of American Geographers, 2009.

Pixoneer Scholarship Awards, 1st Pixoneer Scholarship Awards KAGES Meeting and Conference, Korean-American Association for Geospatial and Environmental Sciences (KAGES), 2009.

Second Place Prize, Cartography Specialty Group Student Honors Paper Competition, The Association of American Geographers, 2008.

EPI PhD Dissertation Proposal Summer Research Grants, The Environmental Policy Initiative (EPI), The Ohio State University, 2007.

Full Travel Grant, The COST C21 Conference, European Cooperation in the field of Scientific and Technical Research (COST) Office, European Science Foundation, 2009.

Full Travel Grant, 2nd COST C21 Workshop, European Cooperation in the field of Scientific and Technical Research (COST) Office, European Science Foundation, 2007.

Full Travel Grant, 1st COST C21 Workshop, European Cooperation in the field of Scientific and Technical Research (COST) Office, European Science Foundation, 2006.

INVITED LECTURES

Ban, H. (2011). Recent Trends and Future Prospective of GIS Research in Geography Discipline. Department of Social Studies, Ewha Womans University, 1, June, 2011, Seoul, Korea.

Ban, H. (2011). Visualization of Spatio-Temporal Information Represented as Art. Department of Social Studies, Ewha Womans University, 8, June, 2011, Seoul, Korea.

Ban, H. (2011). Visualization of Uncertain Urban Spatial Concept. Department of Geo-Informatics, University of Seoul, 14, June, 2011, Seoul, Korea.

INVITED PARTICIPATION AT WORKSHOPS AND CONFERENCES

Invited Participant, 25th International Cartographic Conference, 2011.

Invited Participant, COST Action C21 Conference. "User Evaluation of a Software Interface for Communication in Urban Ontologies", 2009.

Invited Participant, 2nd Workshop of COST Action C21. "Urban Ontologies for an Improved Communication in Urban Civil Engineering Projects", 2007.

Invited Participant, 1st Workshop of COST Action C21. "Ontologies for Urban Development: Interfacing Urban Information Systems", 2006.

Invited Participant, Geographic Information Science: 4th International Conference, GIScience, 2006.

PRESENTATIONS

Ban, H. (2011). Geographical Counterpoint of Spatio-Temporal Data, the Dance. 25th International Cartographic Conference, 3-8, July, 2011, Paris, France.

- Ban, H. and Ahlqvist, O. (2011). Geographical Counterpoint: Understanding Choreographic Information Using Spatio-Temporal Analysis and Geovisualization. 107th Annual Meeting of The Association of American Geographers, 12-16, April, 2011, Seattle, WA, U.S.A.
- Ban, H. and Ahlqvist, O. (2010). Representing and negotiating uncertain geospatial concepts. 2010 UCGIS Summer Assembly, 15-16, June, 2010, Hilton Head Island, SC, U.S.A.
- Ban, H. and Ahlqvist, O. (2010). Multi-group user evaluation of interactive geovisualization tool for communication of uncertain urban ontologies. 106th Annual Meeting of The Association of American Geographers, 14-18, April, 2010, Washington, D.C., U.S.A.
- Ban, H. (2009). Art and Science Together Again: What Do Geography and Choreography Tell Each Other?. 105th Annual Meeting of The Association of American Geographers, 22-27, March, 2009, Las Vegas, NV, U.S.A.
- Ban, H. and Ahlqvist, O. (2009). Representing and Negotiating Uncertain Exurban Concepts with User Evaluation. 105th Annual Meeting of The Association of American Geographers, 22-27, March, 2009, Las Vegas, NV, U.S.A.
- Ban, H. and Ahlqvist, O. (2009, presented by Ahlqvist, O.). User Evaluation of a Software Interface for Communication in Urban Ontologies. COST Action C21 Conference, "Ontologies for urban development: Future development of urban ontologies", 9-10, March, 2009, Université de Liège, Belgium.
- Ban, H. (2008). Web-based Interactive Visualization of Different Definitions of Exurban Areas. 104th Annual Meeting of The Association of American Geographers, 15-19, April, 2008, Boston, MA, U.S.A.
- Ban, H. and Ahlqvist, O. (2007). Web-based Interactive Visualization of Uncertain Concepts in Urban Ontologies. 2nd Workshop of COST Action C21. "Urban Ontologies for an improved communication in urban civil engineering projects", 17-18, October, 2007, Castello del Valentino, Torino, Italy.
- Ban, H. (2007). Visualizing Difference and Similarity between Definitions of Exurban Areas. 103rd Annual Meeting of The Association of American Geographers, 16-21, April, 2007, San Francisco, CA, U.S.A.
- Ban, H. and Ahlqvist, O. (2006). Visualizing the Uncertainty of Urban Ontology Terms. 1st Workshop of COST Action C21. "Ontologies for Urban Development: Interfacing Urban Information Systems", 6-7, November, 2006, University of Geneva, Switzerland.
- Ban, H. (2006). 3D Visualization of the Semantic Uncertainty of Exurban Boundaries. Geographic Information Science: 4th International Conference, GIScience 2006, 20-23, September, 2006, Münster, Germany.
- Ban, H. (2006). Visualizing Different Definitions of Exurban Areas. 102nd Annual Meeting of The Association of American Geographers, 7-11, March, 2006, Chicago, IL, U.S.A.

Ban, H. (2005). A Study on the Geomorphological Characteristics of Development and Flood Hazards in Watershed using Geographic Information System: Northwest region in Yongin city, Republic of Korea. 101th Annual Meeting of The Association of American Geographers, 5-9, April, 2005, Denver, CO, U.S.A.

EXHIBITIONS OR SHOWS

Synchronous Objects, Reproduced. 2010 International Symposium on Electronic Art (ISEA2010 RUHR), 20–29 August, 2010, Dortmund, Essen and Duisburg, Germany (participant of the project team).

Synchronous Objects for One Flat Thing, reproduced. The 36th International Conference and Exhibition on Computer Graphics and Interactive Techniques (SIGGRAPH'09): The Information Aesthetics Showcase Exhibition, 4-6 August, 2009, Ernest N. Morial Convention Center, New Orleans, Louisiana, U.S.A. (participant of the project team).

Charles Helm/Wexner Center for the Arts. Object designer. William Forsythe: Transfigurations. Sponsored by: National Endowment for the Arts, New England Foundation for the Arts, Battelle Endowment for Technology and Human Affairs, Wexner Center for the Arts, Columbus, Ohio, USA. April 02, 2009 - July 26, 2009. wexarts.org.

William Forsythe Symposium: Choreographic Objects. 1 April, 2009, Wexner Center for the Arts (panel and participant of the project team).

MULTIMEDIA, DATABASES, AND WEBSITES

Ban, H., creator. (2009). pinu (program for identification and negotiation of uncertain concept definitions). Internet. Advanced Computing Center for the Arts and Design, The Ohio State University. <http://accad.osu.edu/~hban/pinu>.

Ban, H., Cressie, N., and Ahlqvist, O., creator. (2009). Statistical counterpoint. Internet. The Ohio State University, The Forsythe Company, The Forsythe Foundation, OSU Office of Research, Rotterdamse Dansacademie/Codarts, Tanzplan Deutschland. <http://synchronousobjects.osu.edu/content.html#/statisticalCounterpoint>.

Ahlqvist, O. and Ban, H., co-creator. (2009). Movement Density. The Ohio State University, The Forsythe Company, The Forsythe Foundation, OSU Office of Research, Rotterdamse Dansacademie/Codarts, Tanzplan Deutschland. <http://synchronousobjects.osu.edu/content.html#/movementDensity>.

COURSES TAUGHT

GEOG 380 Map Interpretation and Analysis, California State University, Long Beach, Fall 2009, Spring 2010, Fall 2010, Spring 2011, Fall 2011.

GEOG 482 Map Design Presentation and GIS, California State University, Long Beach, Fall 2009, Fall 2010, Fall 2011.

GEOG 484/584 Advanced Concepts in Presentation Cartography, California State University, Long Beach, Spring 2010, Spring 2011.

GEOG 488/588 Advanced Topics in Geographic Information Science, California State University, Long Beach, Spring 2010, Fall 2011.

GEOG 497 Directed Studies, California State University, Long Beach, Spring 2011.

GEOG 697 Directed Studies, California State University, Long Beach, Spring 2011.

TEACHING EXPERIENCE

Geography 200 World Regional Geography, Teaching assistant and Guest lecturer, The Ohio State University, Winter 2008, Autumn 2006.

Geography 580 Elements of Cartography, Lab instructor and Guest lecturer, The Ohio State University, Autumn 2008, Spring 2009.

Geography 597.01 World Urbanization, Lab instructor, The Ohio State University, Autumn 2007, Spring 2007.

Geography 607 Fundamentals of Geographic Information Systems, Lab instructor and Guest lecturer, The Ohio State University, Spring 2008.

Geography 680 Numerical Cartography, Lab instructor, The Ohio State University, Winter 2007 / Guest lecturer, Spring 2008.

Geography 685 Intermediate Geographical Information Systems, Lab instructor and Guest lecturer, The Ohio State University, Winter 2009 / Guest lab instructor, Spring 2007.

Introduction to ArcGIS, ESRI Korea, Inc., 2002-2004, Instructor.

Introduction to ArcIMS, ESRI Korea, Inc., 2002-2004, Instructor.

Concepts of GIS and the application, Ewha Womans University, 2000, Lab instructor.

Introduction to Cartography, Ewha Womans University, 1998, Guest lab instructor.

RESEARCH EXPERIENCE

Geographic Applications and Statistical Counterpoint of Synchronous Objects project, The Forsythe Company and The Advanced Computing Center for the Arts and Design (ACCAD), The Ohio State University, 2008-2009.

Supervisors: Ola Ahlqvist, Department of Geography; Maria Palazzi, ACCAD; Norah Zuniga-Shaw, Department of Dance, ACCAD; Noel Cressie, Department of Statistics.

Interactive 3D Visualization of Uncertainty in Exurban Spaces and Concepts, Department of Geography, The Ohio State University, 2007.

Supervisor: Ola Ahlqvist, Department of Geography.

Multiscale Exurban Land Markets in Ohio, Graduate Research Associate, Center for Urban and Regional Analysis (CURA), The Ohio State University, 2005-2006.

Supervisor: Darla Munroe, Department of Geography.

Web-based Student Lodging Information System around Ewha Womans University II, Graduate Research Associate, Department of Social Studies, Ewha Womans University, 2001.

Supervisor: Hyo-Hyun Sung, Department of Social Studies.

Virtual Ideal-Space System around Ewha Womans University, Graduate Research Associate, Department of Social Studies, Ewha Womans University, 2000.

Supervisor: Hyo-Hyun Sung.

Commercial Information System around Ewha Womans University, Graduate Research Associate, Department of Social Studies, Ewha Womans University, 2000.

Supervisor: Hyo-Hyun Sung.

Information System for Buddhist Temple in Korea, Department of Social Studies, Graduate Research Associate, Ewha Womans University and Department of Geography Education, Dongguk University, 1999.

Supervisor: Hyo-Hyun Sung.

Development of a Web-site for Middle school students' Education, Graduate Research Associate, Korea Education & Research Information Services and Ewha Womans University, 1999. Supervisor: Hyo-Hyun Sung.

Study of Standard Model and Synthetic Program Development for Social Environmental Curriculum, Research Assistant, Department of Social Studies, Ewha Womans University, 1999. Supervisor: Hyo-Hyun Sung.

Study on the Series of GIS Case Studies, Research Assistant, Department of Social Studies, Ewha Womans University, 1999. Supervisor: Hyo-Hyun Sung.

Standardization of Terminology of Geography Information, Research Assistant, Department of Social Studies, Ewha Womans University, 1999.

Supervisor: Hyo-Hyun Sung.

Web-based Student Lodging Information System around Ewha Womans University I, Research Assistant, Department of Social Studies, Ewha Womans University, 1999.

Supervisor: Hyo-Hyun Sung.

Cultural Information Management System of Electronic Cultural Atlas Initiative (ECAI) Korea, Research Assistant, Ministry of Culture & Tourism Republic of Korea and Department of Social Studies, Ewha Womans University, 1997.

Supervisor: Hyo-Hyun Sung.

Student Lodging Information System around Ewha Womans University, Research Assistant, Department of Social Studies, Ewha Womans University, 1997.
Supervisor: Hyo-Hyun Sung.

Development of Department Website, Programmer and webmaster, Department of Social Studies, Ewha Womans University, 1997.
Supervisor: Hyo-Hyun Sung.

Digital Seoul: Making a Digitalized Topographical Map in Seoul Area, Research Assistant, Department of Social Studies, Ewha Womans University, 1996.
Supervisor: Hyo-Hyun Sung.

Development of a Model for Educational Information Using GIS, Research Assistant, The Global Youth Network and Department of Social Studies, Ewha Womans University, 1996. Supervisor: Hyo-Hyun Sung.

SERVICE

Peer Reviews

International Journal of Applied Geospatial Research, 2011 (manuscript).

GeoJournal, 2011 (manuscript).

Cartography and Geographic Information Science (CaGIS), 2009 (manuscript).

Department of Geography, California State University, Long Beach

Member of Diversity/Equity Working Group (Fall 2011).

Member of Geospatial Techniques Committee (Fall 2010 to present).

Member of Graduate Research Committee (Fall 2009 to present).

Member of Department RTP Revisions Committee (Spring 2010 - Fall 2010).

California State University, Long Beach

Advisor, Korean International Student Association at CSULB (CSULB KISA, 2011).

<http://www.facebook.com/csulb.kisa>

External Organization

Representative of California State University System, 2010 UCGIS Summer Assembly.

Member of Board of Directors and Webmaster, Korean-American Association for Geospatial and Environmental Sciences (KAGES), 2011, <http://www.kages.org/kagesweb/>

Award committee, Pixoneer Scholarship Awards, Korean-American Association for Geospatial and Environmental Sciences (KAGES), 2010 to present.

ADMINISTRATIVE EXPERIENCE

Mentor, Mentorship Program for New Graduate Students, Geography Graduate Organization (GGO), Department of Geography, The Ohio State University, 2008-2009.

Volunteer, Student Recruitment Weekend, Department of Geography, The Ohio State University, 2007-2009.

Homepage Consultant, Geography Graduate Organization (GGO), Department of Geography, The Ohio State University, 2005-2006.

Assistant Manager in Technical Support of ESRI products, ESRI Korea, Inc., 2001-2004.

Product Manager of ArcWeb Services, ESRI Korea, Inc., 2003-2004.

Graduate Technical Associate, GIS Laboratory, Department of Social Studies, Ewha Womans University, 1999- 2001.

PROFESSIONAL SOCIETIES

Member of Korean-American Scientists and Engineers Association (KSEA), 2011-present.

Member of California Faculty Association (CFA, <http://www.calfac.org>), 2009-present.

Member of California Map Society (CMS, <http://californiamapsociety.org/>), 2009-present.

Member, Korean-American Association for Geospatial and Environmental Sciences (KAGES), 2009-present.

Member of Cyber Infrastructure Specialty Group (CISG), AAG, 2008-present.

Member of Cartography Specialty Group (CSG), AAG, 2006-present.

Member of the Association of American Geographers (AAG), 2004-present.

SKILLS

GIS & Remote Sensing (RS) Software

GIS Software: ArcGIS, ArcInfo Workstation, ArcScene, ArcView, ArcIMS, ArcPad, ArcPad Studio, MapObjects, ArcObjects, ArcGIS Server, ArcWeb Services, ArcSDE, IDRISI, MapInfo Professional, MapXtreme, MapX, Auto CAD

RS Software: ERDAS Imagine, ER Mapper, IDRISI, ICube

Geovisualization Hardware

GeoWall Set

Virtual-Environment Development Software

Virtools, Google Earth, Google Sketchup

Statistics/Visual Analyticis Software

R, RGGobi, GGobi, WinBugs, SPSS, GeoDa, GeoViz Toolkit

GPS Hardware

Trimble GPS, Garmin GPS

Mobile Hardware for field work with GPS

PDA, Tablet PC

Development Languages

ActionScript, ASP, JSP, HTML, VRML, XML, KML, GML, Visual Basic

Web Development Software

Flash, Dream Weaver, FrontPage, HotDog, Namo Web Editor

Computer Graphics Software

Adobe Photoshop, Adobe Illustrator, Adobe Premier, Adobe AfterEffects, Corel Paint Shop Pro, Autodesk Maya, CamStudio, Windows Movie Maker

Database Management System

Oracle, SQL, MS Access

Others

MicroSoft Office, Windows, Linux, Unix, MS-DOS

(Last updated on September 28th, 2011)