

Curriculum Vitae

Notarization. I have read the following and certify that this *curriculum vitae* is a current and accurate statement of my professional record.

Signature  Date March 9, 2021

I. Personal Information

I.A. UID, Last Name, First Name, Middle Name, Contact Information

100786064
Kules, William (Bill) Michael
20 Hickory Avenue
Takoma Park, MD 20912
(301) 755-7982
wmk@umd.edu
<http://questionablepedagogy.com/>

I.B. Academic Appointments at UMD

7/20-present

Director, The iSchool iConsultancy Experiential Learning Program

8/18-present

Principal Lecturer, College of Information Studies
Director, Master of Science in Human-Computer Interaction (HCIM)

9/17-8/18

Director, Learning and Teaching Initiatives

9/16-7/18

Visiting Associate Professor, College of Information Studies

9/16-6/17

Faculty Fellow, Teaching and Learning Transformation Center

10/15-6/16

Visiting Associate Professor, Teaching and Learning Transformation Center

1/06-12/06, 1/16-8/16

Lecturer, College of Information Studies

I.C. Other Employment

8/06-8/16

Department of Library and Information Science
The Catholic University of America, Washington, DC
Associate Professor and Chair (8/13-8/16)

Associate Professor and Associate Dean for Research and Administration (8/12-7/13)

Assistant Professor (8/06-7/12)

Taught courses, conducted research, and provided academic and administrative leadership for the department, including program development, student recruitment, budget, course scheduling, hiring and mentoring. Led program through administrative re-organization. Led revision of outcomes assessment process. Established annual systematic planning and assessment (continuous improvement) process. Initiated preparations for cyclical professional accreditation review, expanding engagement with constituencies, including professional community, alumni and students. Led development of blended (hybrid) program of study in which courses are delivered via a combination of face-to-face and online course work.

8/98-12/08

Takoma Software, Inc., Takoma Park, MD
President

Consulted in the areas of need assessments, requirements analysis, user interface design, small-scale software development, and evaluation, with an emphasis on user-centered design and prototyping. In addition to hands-on programming in a variety of languages and environments, developed project proposals, budgets and schedules, manages projects, coordinating work with clients, vendors and other consultants. Taught short courses in web-database development, Java, JavaScript and other programming topics. Presented at client briefings and industry forums.

Selected software products and projects:

- Search engines: Designed and implemented full-text and fielded search features for C-SPAN web sites to support both novice and expert searching of video and text assets. Search results provided direct, time-coded access to recorded video.
- Multimedia: Incorporated streaming video into several web sites with timecoded and record-quality transcripts. Utilized Virage search features to enable users to jump to specific timepoints in video with to-the-second accuracy.
- Bibliographic database design: Designed bibliographic database for the scientific literature on spirituality and health.
- Web site evaluation and redesign: For the National Archives, conducted expert review of the Access to Archival Databases website producing a usability assessment and suggested design improvements (with Catherine Plaisant). Member of redesign team to implement suggested improvements. External usability review confirmed site improvements and redesigned site was successfully re-launched December, 2005.
- User interface design: For multiple clients, designed user interfaces for web and traditional GUI applications. Utilized a user-centered, iterative prototyping methodology incorporating task analysis and structured reviews to maximize usability.
- News gathering system - Requirements analysis and system design: Developed requirements specification to automate news gathering, production and web publishing operations for C-SPAN, a major public affairs broadcaster. Utilized

collaborative and contextual inquiry techniques to analyze business processes with management and end-users, then identified automation opportunities. Developed high level design for new system and led structured reviews of the requirements specification and RFP. Critiqued vendor responses.

- Web-database development: For multiple clients, developed databases, data-driven web sites and supporting utilities. Utilized Linux, Unix and MS-Windows operating systems, with Apache and IIS web servers, MS Access, MS SQL Server, MySQL, and Informix databases, Perl, PHP, VBScript, Java and JSP. Performed Section 508 accessibility remediation for government client.
- Security: Performed security reviews, worm/virus remediation, and firewall installation/configuration for clients.

3/95-8/98

Radio Dynamics Corp., Bethesda, MD
Vice President, Software Development

Led development team in the design and development of new software products for wireless telephony industry. Personally responsible for the design and implementation of Oracle and Informix relational databases. Developed Java and Perl-based web-database applications. Also developed Java, C, SQL and shell script utilities for data and system management on both NT and Unix platforms. Prepared client presentations, proposals, contracts, formal documentation (e.g. requirement and functional specifications).

Selected software products and projects:

- Spectrum sharing software for terrestrial and satellite/earth station communication links. This multi-machine system performs RF interference analysis between point-to-point microwave communication links as well as earth stations. Implements a web-based user interface, utilizing Java, Perl and C to access Oracle database. Database and web applications are hosted on Windows NT, with interface to Linux-based computation engine.
- Database to track deployment of unlicensed PCS devices and relocation of microwave links. Implemented a fully redundant system with up-to-the-minute data replication using Informix, C and 4GL (JYACC's JAM development tool) on a pair of Sun Sparcstations.
- Designed and implemented network for geographically distributed company, including internal LAN and WAN, T1 Internet link with firewall. Configured e-mail, DNS, SOCKS, ftp, telnet, etc. for Linux and Windows NT/95 systems.

8/91-3/95

Visa Interactive, Herndon, VA
Manager, MIS Software Development

Led team developing and supporting electronic bill payment system and software for telemarketing, customer service, accounting and other departments. Responsible for design specifications, scheduling, coding and coordination with clients and contractors. Projects included: Developing an interface to the Federal Reserve's Automated Clearing House (ACH) for a home bill payment service; developing a customer relationship management (CRM) system using Tcl/Tk and Informix; designing X.25-based layered

protocol supporting home banking service for PCs, screen-based telephones and telephone voice response systems.

9/89-8/91

Federal Reserve Board, Washington, DC
Information Systems Analyst

Maintained 300 node UNIX computer network, implementing the Research Division's first IP-based Internet connection. Designed and implemented a uniform windowing interface for the Research Division based on X11 R4, developing custom utilities for economists and research assistants. Audited network security, analyzed risks, recommended and implemented policy changes.

7/86-8/89

Digital Analysis Corporation, Reston, VA
Software Engineer

Designed, developed and documented tests for a B1 level secure implementation of UNIX by analyzing design specifications and kernel code. Led effort to design and develop commodities exchange system for bank certificates of deposit. Taught Unix shell programming training seminars.

I.D. Educational Background

Ph.D. Computer Science, University of Maryland at College Park, 2006
Advisor: Ben Shneiderman. Dissertation title: Supporting Exploratory Web Search with Meaningful and Stable Categorized Overviews

M.S. Computer Science, University of Maryland at College Park, 2002
Member Phi Kappa Phi Honor Society

B.A., Mathematics (Computer Science Concentration) and Physics, Colby College, 1986,
Graduated Cum Laude, with Distinction in Mathematics/Computer Science and
Distinction in Physics. Received Senior Mathematics Award. Elected to Sigma Pi Sigma
Honor Society (Physics)

I.E. Continuing Education

Include Sponsor/organization; title; location; date(s); type (forum, pre-conference, workshop, other)

EmbraceRace@UMD seminar series, UMD Office of Diversity and Inclusion, Spring 2019.

UMD ADVANCE Leadership Fellows Program, AY 2018-19.

Words of Engagement Intergroup Dialogue Program, UMD Office of Diversity and Inclusion, Summer 2018

Workshop on Integrating Social Justice Topics into CS1, 49th ACM Technical Symposium on Computer Science Education (SIGCSE), Baltimore, MD, February 23, 2018.

External Review Panel Training, American Library Association Annual Conference, Chicago, IL, June 23, 2017

Solutions in Action: Counteracting Divisiveness: A Faculty-Staff Summer Brown Bag Series, Office of Undergraduate Studies, College Park, MD, June 21-August 16, 2017

Becoming an Ally: Strategies for Responding to Bias, ADVANCE Program for Inclusive Excellence, College Park, MD, October 27, 2016

National SEED (Seeking Educational Equity and Diversity) Project, Wellesley Centers for Women, Wellesley College: SEED New Leaders Week. Seattle, WA, July 10-16, 2016 (<http://nationalseedproject.org/>)

Jubilee Anti-Racism Training, Unitarian Universalist Association. Washington, DC, January 15-17, 2016.

Digital Pedagogy Lab: Flipped Pedagogy. July 19-August 8, 2015 (<http://pushpullfork.com/2015/06/syllabus-for-the-flipped-classroom-at-hybrid-pedagogy-courses/>)

Harvard Graduate School of Education: The Future of Learning Institute. Boston, MA; July 27 – July 31, 2015. (<https://www.gse.harvard.edu/ppe/program/future-learning-institute-project-zero>)

I.F. Professional Certifications, Licenses, and Memberships

Senior Member, Association for Computing Machinery (ACM)
Member, American Society for Information Science & Technology (ASIS&T)
Member, Association for Library and Information Science Education (ALISE)
Member, International Association of Electrical and Electronics Engineers (IEEE)
Member, Special Interest Group on Computer-Human Interaction of the ACM (SIGCHI)
Member, Washington, DC Chapter of the Usability Professionals' Association (DC-UPA)
Member, American Library Association (ALA)

II. Research, Scholarly, Creative and/or Professional Activities

Note about publications:

- *In all references, my name is in bold.*
- *Authors are displayed as published. Authors are usually listed in order of decreasing contribution.*
- *Co-authors whose names are underlined indicate that the co-author was a student that I mentored.*

II.A. Books

II.A.1. Books Authored

[B1] Wilson, M., **Kules, W.**, Schraefel, M., and Shneiderman, B. (2010). *From Keyword Search to Exploration: Designing Visual Search Interfaces for the Web*, Monograph in *Foundations and Trends in Web Science*, <http://www.nowpublishers.com/web/>. Vol. 2: No 1, pp 1-97. <http://dx.doi.org/10.1561/1800000003>. ISBN: 978-1-60198-306-0

II.B. Refereed Journals

II.B.1. Refereed Journal Articles

[A6] Watkins, I., **Kules, B.**, Yuan, X., & Xie, B. (2014). "Heuristic evaluation of healthy eating apps for older adults." *Journal of Consumer Health on the Internet*.

[A5] **Kules, B.**, Capra, R. (2012). "Influence of Training and Stage of Search on Gaze Behavior in a Library Catalog Faceted Search Interface." *Journal of the American Society for Information Science and Technology*. 63(1): 114-138.

[A4] **Kules, B.**, McDaniel, J. (2010) "LIS Program Expectations of Incoming Student Technology Knowledge and Skills." *Journal of Education in Library and Information Science* 51(4): 222-232.

[A3] **Kules, B.**, Shneiderman, B. (2008). "Users can change their web search tactics: Design guidelines for categorized overviews." *Information Processing & Management*. 44(2): 463-484.

[A2] Shneiderman, B., Fischer, G., Czerwinski, M., Resnick, M., Myers, B., Candy, L., Edmonds, E., Eisenberg, M., Giaccardi, E., Hewett, T., Jennings, P., **Kules, B.**, Nakakoji, K., Nunamaker, J., Pausch, R., Selker, T. and Sylvan, E. (2005). "Creativity support tools: Report from a U.S. National Science Foundation sponsored workshop." *International Journal of Human-Computer Interaction*, 20 (2). 61-77.

[A1] **Kules, B.**, Kang, H., Plaisant, C., Rose, A. and Shneiderman, B. (2003). "Immediate Usability: A case study of public access design for a community photo library." *Interacting with Computers*, 16 (3), December 2004, 1171-1193.

II.B.2. Other

[O2] **Kules, B.** (2012). "Learning to Take a Learner's Perspective". *The Journal of Interactive Technology and Pedagogy*.

[O1] **Kules, B.**, Capra, R. (2009). "Designing Exploratory Search Tasks for ISSS Evaluation." Sidebar in *IEEE Computer* 42(3): 46.

II.C. Published Conference Proceedings

II.C.1. Refereed Conference Papers, Presentations, and Posters with Published Proceedings

[RC15] Holtzblatt, K., **Kules, B.** (2017) "Using games for good to address diversity in high tech. In Proceedings of the 2017 CHI Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA '17). ACM, New York, NY, USA, 1338-1341.

[RC14] Lieutenant, E., **Kules, B.** (2016) "Analysis of LIS Student Engagement in Systematic Program Planning: Preliminary Results." In *iConference 2016 Proceedings* (Philadelphia, PA, March 20-23, 2016).

[RC13] **Kules, B.** (2016) "Computational thinking is critical thinking: Connecting to university discourse, goals and learning outcomes." Poster in *Proceedings of the Annual Meeting of the American Society for Information Science & Technology (ASIST 2016)* (Copenhagen, Denmark, October 14-18, 2016). 53(1), 1-6.

[RC12] Lieutenant, E., **Kules, B.** (2016) "Are iSchools More Adaptable Than Library Schools? Analysis of LIS Student Engagement in Programmatic Changes and Improvements." Poster in *iConference 2016 Proceedings* (Philadelphia, PA, March 20-23, 2016).

[R11] Mcgrath, K., **Kules, B.**, and Fitzpatrick, C. (2011). "FRBR and Facets Provide Flexible, Work-Centric Access to Items in Library Collections." In *Proceeding of the 11th Annual International ACM/IEEE Joint Conference on Digital Libraries (JCDL 2011)*. ACM, New York, NY, USA, 49-52.

[RC10] **Kules, B.**, Xie, B. (2011). "Older adults searching for health information in MedlinePlus – An exploratory study of faceted online search interfaces". In *Proceedings of the Annual Meeting of the American Society for Information Science & Technology (ASIST 2011)*. October 9-13, 2011, New Orleans, LA.

[RC9] **Kules, B.**, Capra, R. (2010). "The Influence of Search Stage on Gaze Behavior in a Faceted Search Interface." Poster in *Proceedings of the Annual Meeting of the American Society for Information Science & Technology (ASIST 2010)*. (Pittsburgh, PA, October 22-27, 2010), 419-420.

[RC8] **Kules, B.**, Capra, R., Banta, M., Sierra, T. (2009). "What Do Exploratory Searchers Look at in a Faceted Search Interface?" In *Proceedings of the 9th ACM/IEEE-CS Joint Conference on Digital Libraries (Austin, TX, June 15 - 19, 2009)*. JCDL 2009. ACM Press, New York, NY. 313-322.

[RC7] Hsieh-Yee, H., Choi, Y., **Kules, B.** (2007) "Searching for books and images in an OPAC: Effects of LCSH, TOC and subject domain." Poster in *Proceedings of the Annual Meeting of the American Society for Information Science and Technology (ASIST 2007)* (Milwaukee, MI, October 19-24, 2007).

[RC6] Choi, Y., Hsieh-Yee, I., **Kules, B.** (2007) "Retrieval effectiveness of table of contents and subject headings." Poster in *Proceedings of the 7th ACM/IEEE-CS Joint Conference on Digital Libraries (Vancouver, BC, Canada, June 18 - 23, 2007)*. JCDL '07. ACM Press, New York, NY. 103-104.

[RC5] **Kules, B.**, Kustanowitz, J. and Shneiderman, B. (2006). "Categorizing web search results into meaningful and stable categories using Fast-Feature techniques." In *Proceedings of the 6th ACM/IEEE-CS Joint Conference on Digital Libraries (Chapel Hill, NC, June 11-15, 2006)*. 210-219.

[RC4] **Kules, B.**, Shneiderman, B. (2005). "Categorized graphical overviews for Web search results: An exploratory study using U.S. government agencies as a meaningful and stable structure." In *Proceedings of the Third Annual Workshop on HCI Research in MIS, December 2004, Washington, DC*. 20-24.

[RC3] **Kules, B.**, Shneiderman, B., Plaisant, C. (2003). "Data exploration with paired hierarchical visualizations: Initial designs of PairTrees." In *Proceedings of the Digital Government Research Conference*, 255-260.

[RC2] **Kules, B.**, Shneiderman, B. (2003). "Designing a metadata-driven visual information browser for federal statistics." In *Proceedings of the Digital Government Research Conference*, 117-122.

[RC1] Christian, K., **Kules, B.**, Shneiderman, B., and Youssef, A. (2000). "A comparison of voice controlled and mouse controlled Web browsing." In *Proceedings of the ACM Conference on Assistive Technologies, (ASSETS 2000)*, ACM Press, New York. 72-79

II.D. Conferences, Workshops, and Talks

II.D.1. Invited Talks

[IT7] "Can we actually teach student to be critical thinkers? (Yes!)" UMD Teaching and Learning Transformation Center Workshop, November 21, 2016.

[IT6] "Improving Our Understanding of Faceted Search Tool Use Through Eye Tracking: What Do Searchers Look At – And When?" Human Factors Ergonomics Society, Potomac Chapter, July 28, 2011.

[IT5] "Gaze Behavior of Academic and Health Information Seekers When Using Faceted Search Interfaces." Rutgers University, School of Communication and Information, February 15, 2011.

[IT4] "Gaze behavior with faceted search interfaces in academic and health domains." Presentation at the First DC-Area IR Experts Meeting (DIRE 2010) (College Park, MD November 1, 2010).

[IT3] "What Do Exploratory Searchers Look at in a Faceted Search Interface?" Microsoft Research, October 24, 2008.

[IT2] "Improving the Search Experience with Categorized Overviews." NFAIS Annual Conference, February 2006.

[IT1] "Theory of Information Visualization Tools." George Washington University/National Security Agency Seminar on Information Visualization, May 2000.

II.D.2. Refereed Presentations

[RP11] **Kules, B.** (2020) "Starting, growing and institutionalizing consulting-based experiential learning programs." Presentation at the Lilly International Conference on Evidence-Based Teaching and Learning (Bethesda, MD, May 28-30, 2020).

[RP10] **Kules, B.** (2018) "Coding with a critical lens: A developing computer programming curriculum for diversity and equity." Paper presented at the Annual Conference of the Association for Library and Information Science Educators (ALISE 2018) (Denver, CO, February 6-9, 2018).

[RP9] **Kules, B.** (2017) "Critiquing culture, bias and equity in introductory computer programming courses." Presentation at the Lilly International Conference on Evidence-Based Teaching and Learning (Bethesda, MD, June 1-4, 2017).

[RP8] **Kules, B.** and Nichols, A.L. (2017) "Enhancing critical thinking across disciplines: Building learning communities and resources." Presentation at the Lilly International Conference on Evidence-Based Teaching and Learning (Bethesda, MD, June 1-4, 2017).

[RP7] Nichols, A.L., and **Kules, B.** (2017) "Integrate Critical Thinking into Your Course Assignments and Assessments." Presentation at the Innovations in Teaching and Learning Conference (College Park, MD, May 12, 2017).

[RP6] **Kules, B.** (2017) "Teaching JavaScript as Social Justice: Interrogating Culture, Bias and Equity in an Introductory Programming Course." Paper presented at the Annual Conference of the Association for Library and Information Science Educators (ALISE 2017) (Atlanta, GA, January 17-20, 2017).

[RP5] **Kules, B.** (2016). "Teaching JavaScript as Social Justice: Interrogating Culture, Bias and Equity in an Introductory Programming Course". Presentation at the Conference on Inclusion and Diversity in Library and Information Science (CIDLIS 2016) (College Park, MD, October 21, 2016).

[RP4] **Kules, B.** (2016) "Enhancing Student Critical Thinking: Developing Institutional Consistency with Hybrid Instructional Support." Presentation at the Lilly International Conference on Evidence-Based Teaching and Learning (Bethesda, MD, June 2-5, 2016).

[RP3] Lieutenant, E., **Kules, B.** (2016) "LIS Student Engagement in Systematic Program Planning: Inclusion, Impact, and Innovation." Paper presented at the Annual Conference of the Association for Library and Information Science Educators (ALISE 2016) (Boston, MA, January 5-8, 2016).

[RP2] **Kules, B.** (2010) "Investigating Gaze Behavior in Faceted Search Interfaces for Library Catalogs." Paper presented at the Annual Conference of the Association for Library and Information Science Educators (ALISE 2010) (Boston, MA, January 12-15, 2010).

[RP1] **Kules, B.**, McDaniel, J. (2010) "LIS Program Expectations of Incoming Student Technology Knowledge and Skills." Paper presented at the Annual Conference of the Association for Library and Information Science Educators (ALISE 2010) (Boston, MA, January 12-15, 2010).

Winner of Best Conference Paper Award

II.D.3. Refereed Workshop Papers

[RWP4] Capra, R., **Kules, B.**, (2009) "Faceted Search for Library Catalogs: Developing Grounded Tasks and Analyzing Eye-Tracking Data." Paper presented at the SIGIR 2009 Workshop: Understanding the user – Logging and interpreting user interactions in IR (Boston, MA USA, July 23, 2009).

[RWP3] **Kules, B.**, Capra, R. (October 2008) "Creating Exploratory Tasks for a Faceted Search Interface." Presentation at the Second Workshop on Human-Computer Interaction and Information Retrieval (HCIR 2008) (Redmond, WA, October 23, 2008).

[RWP2] **Kules, B.** (2006) "Methods for evaluating changes in search tactics induced by exploratory search systems." Presentation at the ACM SIGIR 2006 Workshop on Evaluating Exploratory Search Systems (Seattle, WA, August 11, 2006).

[RWP1] **Kules, B.**, Shneiderman, B. (2005). "Categorized graphical overviews for Web search results: An exploratory study using U.S. government agencies as a meaningful and stable structure." Paper presented at the Third Annual Workshop on HCI Research in MIS (Washington, DC, December, 2004).

II.D.4. Refereed Posters

[RPO4] **Kules, B.**, Capra, R. (2010) "Transaction Log Analysis of User Actions in a Faceted Library Catalog Interface." Poster at the Fourth Workshop on Human-Computer Interaction and Information Retrieval (HCIR 2010) (New Brunswick, NJ, August 22, 2010).

[RPO3] **Kules, B.**, Capra, R. (2009) "Designing Exploratory Search Tasks for User Studies of Information Seeking Support Systems." Poster presented at the 9th ACM/IEEE-CS Joint Conference on Digital Libraries, JCDL 2009 (Austin, TX, June 15 - 19, 2009).

[RPO2] **Kules, B.**, McDaniel, J., Banta, M. (2009). "LIS Program Expectations of Incoming Student Competencies with Information and Communications Technology." Poster presented at the Annual Conference of the Association for Library and Information Science Education (ALISE 2009).

[RPO1] **Kules, B.** (2007) "Mapping the design space of faceted search interfaces." Poster presented at the Workshop on Human-Computer Interaction and Information Retrieval (HCIR 2007).

II.D.5. Refereed Panels

[RPA3] Latham, D., Miller, K., Johnson, C., **Kules, B.** (2017) "Promoting Community Engagement and Social Responsibility through Innovative Teaching." Panel at the Association for Library and Information Science Annual Meeting (ALISE 2017), Atlanta, GA, January 17-20, 2017.

[RPA2] **Kules, B.**, Tangirala, S. and Gardner, E. (2016) "Enhancing Student Critical Thinking with Scalable and Flexible Hybrid Instructional Support." Panel at the Innovations in Teaching and Learning Conference (College Park, MD, April 29, 2016).

[RPA1] **Kules, B.**, McGrath, K., Conley, V., Cooper, L., Scruggs, S., and Wolf, N. (2011) "Exploring the Design of a Faceted Search Interface for a FRBRized Movie Catalog". SLIS Symposium 2011: Bridging the Spectrum, Catholic University, Washington DC, February 25, 2011.

II.D.6. Non-Refereed Presentations

[NRP4] **Kules, B.** (2018) "Practical HCIM programs: Insights from our graduates." CHI Bird 2018 Workshop, Atlanta, GA, March 30, 2018.

[NRP3] **Kules, B.** (2018) "Coding diversity: Examining culture, diversity and bias in an introductory computer programming course." Diversity in Computing Summit, College Park, MD, March 2, 2018.

[NRP2] **Kules, B.** (2010) "Exploring the information needs of DTIC end-users." Presentation at the Defense Technical Information Center Annual Conference (DTIC 2010) (Alexandria, VA, March 24, 2010).

[NRP1] **Kules, B.** (2005) "Supporting creativity with search tools." Presentation at the National Science Foundation Workshop on Creativity Support Tools (June 13-14, 2005, Washington, DC).

II.E. Professional and Extension Publications

II.E.1. Reports and Non-Refereed Monographs

[M8] **Kules, B.** (2010) "Investigation of Exploratory Information Needs and Information-Seeking Scenarios of DTIC End-Users." Produced under contract for the Defense Technical Information Center.

[M7] **Kules, B.** (2008) "Greater Yellowstone Science Learning Center Website Evaluation." Produced under contract for the U.S. National Park Service.

[M6] Smith, J., **Kules, B.** (2007) "Toward a design space for categorized overviews of search results." Technical Report, School of Library and Information Science, The Catholic University of America.

[M5] White, R.W, **Kules, B.** and Bederson, B.B (2006) "Exploratory search interfaces: Categorization, clustering and beyond." *SIGIR Forum*, 32, 2. 52-56.

[M4] **Kules, B.**, and Plaisant, C. (2004) "Expert Review of the National Archives Access to Archival Data (AAD) Web Site." Produced under contract for the U.S. National Archives.

[M3] **Kules, B.** (2000). "C-SPAN Programming and Scheduling Database Project: Requirements Specification." Produced under contract for C-SPAN.

[M2] **Kules, B.** (1999). "C-SPAN Programming and Scheduling Database Project: Current Practices." Produced under contract for C-SPAN.

[M1] Shneiderman, B., Kang, H., **Kules, B.**, Plaisant, C., Rose, A., and Rucheir, R. (2002). "A photo history of SIGCHI: Evolution of design from personal to public." *ACM Interactions*, 9, 3: 17-23.

II.F. Sponsored Research and Programs – Administered by the Office of Research Administration (ORA)

II.F.1. Grants

[G2] "Investigating Gaze Behavior in Faceted Search Interfaces for Library Catalogs," Online Computer Library Center/Association for Library and Information Science Education (OCLC/ALISE) 2009 Research Grant Award, (\$15,000), 1/2009-12/2009. Principal investigator.

[G1] "Faceted Search Interfaces for Library Catalogs – Pilot Study," The Catholic University of America, (\$3,420), 4/2008-10/2008. Principal investigator.

II.F.2. Contracts

[C1] "Investigation of Exploratory Information Needs and Information-seeking Scenarios of DTIC End-users," Defense Technical Information Center (\$15,000), 6/2009 – 2/2010. Principal investigator.

II.G. Research Fellowships, Prizes and Awards

America Online Fellowship in Human-Computer Interaction, (\$38,000/year), 7/2003-7/2004. Renewed 7/2004-7/2005. Renewed (8/2005-12/2005).

II.H. Gifts, and Funded Research not administered by ORA

[OG2] "Preparing Students for Success in Online, Distributed Work Teams." PI, UMD Teaching Innovation Grant (\$27,700), Summer 2020. Principal investigator.

[OG1] "Pilot Survey to Investigate Student Understanding of Diversity and Equity Issues in Technology-Related Courses." PI, UMD Fearless Teaching Research Seed Grant (\$2,000), November 2017 – June 2018. Principal investigator.

III. Teaching, Extension, Mentoring, and Advising

III.A. Courses Taught

Includes courses taught since 2012.

Spring 2021

HCIM Capstone Project (INST 776) – 25 students
User Experience Strategy Workshop (INST 369G) – 9 students

Fall 2020

HCIM Capstone Preparation (INST 775) – 25 students

Spring 2020

HCIM Capstone Project (INST 776) – 27 students

Fall 2019

HCIM Capstone Preparation (INST 775) – 27 students

Spring 2019

HCIM Capstone Project (INST 776) – 22 students

Fall 2018

HCIM Capstone Preparation (INST 775) – 22 students

User Experience Research Methods – 31 students

Spring 2018

Introduction to Programming for Information Science (INST 126) – 58 students

HCIM Capstone Project (INST 776) – 12 students

Independent study – Ashley Batugo – *Instructional design*

Independent study – Stephany Argueta, Bryan Dubon – *Academic Peer Mentors for INST 126*

Fall 2017

Introduction to Programming for Information Science (INST 126) – 57 students

HCIM Capstone Project (INST 776) – 12 students

Independent study – Ashley Batugo, Morgan Castle, Steve Dubon – *Academic Peer Mentors for INST 126*

Spring 2017

Introduction to Programming for Information Science (INST 126) – 40 students

Object-Oriented Programming (INST 326) – 23 students

HCIM Capstone Project (INST 776) – 19 students

Fall 2016

Object-Oriented Programming (INST 326) – 13 students

Introduction to Programming for the Information Professional (INST 630) – 9 students

HCIM Capstone Preparation (INST 775) – 19 students

Spring 2016

Introduction to Programming for the Information Professional (INST 630) – 27 students

At The Catholic University of America:

Spring 2015

Database Management (LSC 654, blended format) – 7 students

Fall 2014

Library and Information Science Practicum (LSC 695A) – 5 students

Spring 2014

Health Information Technology Practicum (HIT 878) – 5 students

Fall 2013

Programming for Web Applications (LSC 753/HIT 778) – 9 students

Spring 2013

User Interface Design and Evaluation (LSC 525) – 7 students

Fall 2012

Programming for Web Applications (LSC 753) – 21 students

Spring 2012

Information Systems in Libraries and Information Centers (LSC 555) – 11 students

User Interface Design and Evaluation (LSC 875) – 8 students

III.B. Teaching Innovations

III.B.1. Major Programs Established

2019-present – Founding director of the iSchool iConsultancy, which provides experiential learning opportunities through authentic, consulting-based projects with external clients in capstone courses for undergraduate and Master’s students. Built long-term partner relationships, acquired projects, and provided instructional and project management support. During the Spring 2021 semester, the iConsultancy is managing 60 projects with over 40 clients involving 300 students. Since its founding, the iConsultancy has managed __ projects involving __ students

At The Catholic University of America:

2011-2012 – Led the development and launch of Online and Weekend Learning (OWL) blended learning curriculum

2009 – Developed Information Architecture concentration within the MSLIS degree program.

III.B.2. Instructional Workshops and Seminars Established

2020-present – Co-founder and co-facilitator of the Anti-Racist Teaching Seminar (ARTS), a faculty learning community that supports faculty and doctoral students to embed anti-racist/anti-oppressive learning outcomes and activities into their courses.

2017 – Facilitated *Learning and Teaching Coffee Hours*, to promote sharing of instructional practices and concerns within the iSchool

2016-2017 – Developed and led Critical Thinking Learning Communities, semester-long seminars to support teaching of critical thinking skills (Spring 2016: 12 participants; Spring 2017: 20 participants)

At The Catholic University of America:

2009-2012 – Developed and led professional development seminars on blended learning for full-time and adjunct faculty beginning to teach online and blended courses

III.B.3. Course or Curriculum Development

Spring 2021 – Created and taught new 1-credit course, User Experience Strategy Workshop, responding to need for students to have more understanding of how UX impacts business strategy.

Fall 2020-Spring 2021 – Redesigned HCIM Capstone to conduct projects in sprints, using an Agile methodology.

Summer 2020 – Led team of instructors and GAs revising INST490 to teach distributed (online) team practices.

Spring 2020-present – Lead instructor for INST490 Integrated Capstone for Information Science. Coordinated planning and delivery with other instructors. Gathered feedback for ongoing curricular development. Mentored new instructors.

2019 – Led HCIM new curriculum development, including: new core course (INST711 Interaction Design Studio); new elective Visual Design, new elective HTML/CSS (offered summer online); six(6) new 1-credit HCIM electives (Makerspace, Portfolio Development Workshop, Participatory Design Research Practicum, Research Through Design, UX Analysis of Emerging Technologies and Discontinuous Innovations, HCI Professional Preparation Seminar). Developed 3-year course sequence for part-time students. Reviewed and revised INST711 Interaction Design Studio and INST702 Advanced Usability Testing

Fall 2018 – Developed and launched User Experience Research Methods course

Spring 2018 – Led adoption of new 1-credit lab section and new learning objectives for INST 126 (Introduction to Programming for Information Science) by Undergraduate Program Committee to include computational thinking and the social and organizational context of programming. Adapted materials and activities to support large (50+) classes, including use of clickers and pair programming. As lead instructor for INST126/326, coordinated and mentored other instructors.

2017-2018 – Redesigned, launched and refined HCIM Capstone with team-based projects to more effectively prepare students for industry.

2017-2018 – Led research, planning and facilitation for new HCIM program vision, in collaboration with Karen Holtzblatt. Research included comparative program analysis and contextual interviews of alumni from UMD and other HCI programs. Visioning sessions conducted during Spring.

2017-2018 - Lead instructor for INST126/326 programming courses - Coordinated planning and delivery with other instructors. Gathered feedback for ongoing curricular development. Worked with Undergraduate Committee to successful approval of INST 126 learning outcome around equity and diversity. Mentored instructors to help them apply these teaching methods and to address equity & diversity issues in their classrooms.

Fall 2017 – Led design and approval by HCIM Program Committee of new core course, User Experience (UX) Research Methods.

Fall 2017 – Adapted INST 126 (Introduction to Programming for Information Science) for delivery in TERP Classrooms. Revised material on critical perspectives on programming.

Fall 2017 – Analyzed job market data for BSIS. Presented to Undergraduate Program Committee to inform ongoing curricular development.

Spring 2017 – Developed new undergraduate course, INST 126 (Introduction to Programming for Information Science), based on an active learning and inclusive pedagogy approach that incorporates diverse, critical perspectives on programming.

Fall 2016 – Spring 2017 – Piloted team-based project for HCIM Capstone (INST 775/776).

Fall 2016 – Developed new undergraduate course, INST 326 (Object Oriented Programming), based on an active learning and inclusive pedagogy approach that incorporates diverse, critical perspectives on programming.

Spring 2016 – Added diversity and inclusion module to INST 630 (Introduction to Programming for the Information Professional).

At The Catholic University of America:

2014 – Major revisions to Practicum (LSC 695A) to align with program learning objectives and improve reflective practice (praxis) elements

2011 – Reviewed technology content of mid-level graduate courses and recommended improvements

2009 – Major revisions to Information Architecture and Web Design (LSC 610), including revising for blended delivery

2007 & 2009 – Major revisions to Information Systems in Libraries and Information Centers (LSC 555)

2008 – Developed and delivered blended offering of Information Systems in Libraries and Information Centers (LSC 555)

2007 – Developed and taught new course “User Interface Design and Evaluation”

III.B.4. Teaching Modules

2016 – Developed “Thinking about Your Thinking” Critical Thinking modules – Cross-disciplinary online modules and instructor resources to support the teaching of critical thinking.

III.B.5. Other

2008-2010 – Developed research-based “Baseline Technical Requirements for SLIS Students” and associated advising and support materials to help entering students understand technical skills needed to be successful in the Masters program.

III.C. Advising: Research or Clinical
III.C.1. Master’s

Thesis advisor:

(in progress) – Pamela Duffy - *A Model for Anti-Racism (Bias) Instruction in Undergraduate Technology Design Courses*
2020 – Shannon Fitzgerald – *Student Experiences with Diversity and Inclusion in Technology Design Courses*

Thesis committee member:

(in progress) – Arif Kabir - *Memorizing the Sacred in the Digital Age*

Independent study:

Summer 2019 – Shannon Fitzgerald – *Helping Students Recognize How Their Implicit Biases Affect Technology Designs*
Spring 2017 - Rebecca Annis, Christopher Robeck - *Using Games for Good to Address Diversity in High Tech*
Spring 2015 - Elizabeth Lieutenant - *Critical Perspectives in Library and Information Studies*
2011 - Kathleen Brennan - *Investigation of Gaze Behavior based upon Cognitive Function in faceted Search Interfaces for Library Catalogs*
2011 - Lianne Cooper - *Information Architecture: An Investigation of the History and Evolution of Two Communities of Professional Practice*
2008 - Kristen Frederiksen - *JavaScript and Ajax programming*
2006 - Jonathan Smith - *Designing search user interfaces with PHP*

III.C.2. Doctoral

Member, dissertation committee, Kristine Rogers, University of Maryland College Park (Doug Oard, chair), 2019-present

Member, dissertation committee, Zahra Ashktorab, University of Maryland College Park (Jennifer Golbeck and Jessica Vitak, chairs), 2017

At the Catholic University of America:

Member, dissertation committee, Xi Niu , University of North Carolina Chapel Hill (Brad Hemminger, chair), 2010-2012

Member, dissertation committee, Haozhen Zhou, Drexel University (Xia Lin, chair), 2011-2013

Secretary, dissertation defense, Tabitha Harper, The Catholic University of America (John Convey, chair), 2014

Secretary, dissertation defense, Michael Hickman, The Catholic University of America, 2014

III.D. Mentorship

III.D.1. Junior Faculty

2020-21

Dr. Ursula Gorham-Oscilowski
Dr. Galina Madjaroff Reitz
Dr. Mohammad Fazelpour (Dept of Mechanical Engineering)

2019-20

Dr. Philip Piety
Ken Heger

2018

Dr. Chris Antoun

2012-2015

Dr. Sung Un Kim, granted tenure 2016
Dr. Renate Chancellor, pre-tenure
Dr. Sue Yeon Syn, pre-tenure
Dr. Jane Zhang, pre-tenure

III.D.2. Other

2017-2018 – First year mentor for Dr. Christopher Antoun
2018-present – Mentored adjuncts and teaching graduate students for INST 126/326 programming courses

III.E. Advising: Other than Directed Research

III.E.1. Master's

2006-2015

Advised 15-30 students each semester as their primary advisor for Masters program

III.E.2. Other Advising Activities

Faculty Advisor, Association of Research Libraries (ARL) Fellows, 2007

III.F. Professional and Extension Education

III.F.1. Guest Lectures

“Technology Design and Digital Learners.” EDUC 6703-10 (Museum Audiences), George Washington University, Washington, DC, November 29, 2016.

“Introduction to Design Thinking.” CS 111 (Introduction to Computers with Software Applications), Loyola University Maryland, Baltimore, MD, April 27, 2016.

“Critical Reflections on Technology.” LIS 3267 (Introduction to Information Science), Florida State University, March 24, 2016.

“Critical Reflections on Technology.” LSC 557 (The Information Professions in Society), The Catholic University of America, May 27, 2014.

“Impacts of Technology.” LSC 557 (The Information Professions in Society), The Catholic University of America, November 13, 2007.

III.G. Contribution to Learning Outcomes Assessment

2020 – For the HCIM program, led development of new program learning outcomes and assessment rubrics.

At The Catholic University of America:

2014 – Led development of comprehensive plan for student outcomes assessment, systematic program evaluation and planning; developed policy and procedures for annual cycle of data collection, analysis and decision-making.

2014 – Led development and analysis of student, alumni, and employer surveys aligned with program learning outcomes; yielded recommendations for program improvement.

2014 – Produced *Major Assessment Findings and Curricular Improvements – 2008-2013*, a five-year analysis of learning outcomes, retention and progression rates, milestones (e.g. completion comprehensive exams) and degree completion.

III.H. Teaching Awards

2018 – iSchool Program Innovation Award - This award recognizes instructional faculty who have made exceptional and innovative contributions to the college's curricula and programs.

IV. Service and Outreach

IV.A. Editorships, Editorial Boards, and Reviewing Activities

IV.A.1. Editorships

Guest co-editor – *Information & Processing Management*, Special Issue on Human-Computer Information Retrieval (September 2013), 49(5)

Guest co-editor: Supporting Exploratory Search: A Special Section of the Communications of the ACM, April 2006. Ryen W. White, Bill Kules, Steven Drucker, and m.c. schraefel [sic] (Eds.) *Communications of the ACM (CACM)* 49(4).

IV.A.2. Reviewing Activities for Journals and Presses

- Synthesis Lectures on Information Concepts, Retrieval, and Services, 2011
- American Medical Informatics Association Annual Symposium 2011
- Journal of Education for Library and Information Science (JELIS), 2010
- IEEE Transactions on Visualization and Computer Graphics, 2010
- Information Visualization, 2010
- Information Processing and Management, 2008
- Journal of the American Society for Information Science & Technology, 2007-2008
- Encyclopedia of Computer Science and Engineering, 2007

IV.A.3. Reviewing Activities for Agencies and Foundations

- Grant Proposal Reviewer, National Science Foundation, Division of Information and Intelligent Systems, 2013

IV.A.4. Reviewing Activities for Conferences

- IEEE Information Visualization Conference 2009 (IEEE InfoVis)
- IEEE Information Visualization Conference 2008 (IEEE InfoVis)

IV.B. Committees, Professional & Campus Service

IV.B.1. Campus Service – Department

At The Catholic University of America:

Chair, Accreditation Steering Committee, 2013-2015

Representative, LIS Alumni Board, 2013-2015

Chair, LIS Advisory Board, 2014-2015

Chair, LIS Curriculum Committee, 2013-2015

Chair, LIS Admissions Committee, 2013-2015

Member, LIS Blended Learning Committee, 2014-2015

Chair, LIS Blended Learning Committee, 2013-2014

Member, LIS Curriculum Committee, 2012-2013

IV.B.2. Campus Service – College

Chair, Human-Computer Interaction Master's Program Committee, 2018-present

Member, Development Committee, 2019-present

Member, Facilities Design Committee, 2019-present

Chair, Ad Hoc Committee to Revise PTK Policies and Procedures, Spring 2019

Member, Strategic Planning Committee, 2018-2019

Member, Ad Hoc Committee on Professional Track Faculty Support, Spring 2018

Member, College Advisory Committee, 2017-2019

Member, Undergraduate Program Committee, 2016-2018

Member, Human-Computer Interaction Master's Program Committee, 2016-2018

Member, Human-Computer Interaction Faculty Search Committee, 2016-17

At The Catholic University of America:

Member, School of Arts and Sciences Academic Council, 2013-15

Chair, SLIS Blended Learning Planning Committee, 2009-2012

Chair, SLIS Admissions Committee, 2012-2013

Representative, LIS Alumni Board, 2012-2013

Chair, SLIS Technology Committee, 2007-2011

Chair, SLIS Facilities Committee, 2008-2009

Co-chair, SLIS Committee on Accreditation (COA) Standard VI (Facilities) Committee, 2007-2009

Member, SLIS Curriculum Committee, 2007-2013

Member, Faculty Search Committee, 2011-2012

Member, SLIS Strategic Planning Committee, 2010-2012

Member, SLIS Symposium Committee, 2008-2012

Member, SLIS Awards Committee, 2008-2012

Member, Rovelstad Scholarship Committee, 2008-2012

Member, SLIS COA Standard II (Curriculum) Committee, 2007-2009

Member, SLIS COA Standard III (Faculty) Committee, 2007-2008

Member, SLIS Committee on Failing Grades, 2006-2007

IV.B.3. Campus Service – University

Member, University Senate, 2020-present

Co-founder and co-facilitator, Experiential Learning Working Group, 2021-present

At The Catholic University of America:

Chair, Academic Senate Committee on Educational Policy, 2013-2015

Member, University Academic Senate, 2011-2015

Member, University Graduate Board, 2013-2015

Member, Online Education Advisory Committee, 2015

Member, University Council on Teacher Education, 2012-2015

Member, Academic Senate Committee on Educational Policy, 2011- 2013

Member, CUA Press Director Search Committee, 2010

Co-convener, Online Education @ CUA, 2010-2012

Member, University Library Facilities Planning Committee, 2008-2009

IV.B.4. Offices and Committee Memberships

Chair, ASIS&T Outstanding Information Science Teacher of the Year Award Jury, 2017-2018

Co-chair, ASIS&T Education and Professional Advancement Committee, 2015-2017

Chair, ASIS&T/Thomson Reuters Information Science Teacher of the Year Award Jury, 2015-2016

Member, ASIS&T Education and Professional Advancement Committee, 2014-present

IV.B.5. Leadership Roles in Meetings and Conferences

Co-chair, Sixth Workshop on Human-Computer Interaction and Information Retrieval (HCIR 2012). October 4-5, 2012, IBM Research, Cambridge, MA.

Co-chair, Posters/demos committee, The ACM/IEEE Joint Conference on Digital Libraries (JCDL 2012). June 10-14, Washington, DC.

Co-chair, Fifth Workshop on Human-Computer Information Retrieval (HCIR 2011), Google, Inc., October 20, 2011.

Co-chair, Fourth Workshop on Human-Computer Information Retrieval (HCIR 2010), Rutgers University, August 21, 2010.

Co-chair, Third Workshop on Human-Computer Information Retrieval (HCIR 2009), The Catholic University of America, October 23, 2009.

Chair, Program Committee, Second Workshop on Human-Computer Information Retrieval (HCIR 2008)

Member, Program Committee, ACM/IEEE Joint Conference on Digital Libraries (JCDL 2008)

Member, Program Committee, ACM SIGCHI 2007 Workshop on Exploratory Search Evaluation

Member, Program committee, SIGIR 2006 Workshop on Evaluating Exploratory Search Systems, August 2006

Co-organizer, Workshop on Exploratory Search Interfaces: Clustering, Categorization and Beyond, June 2005

IV.B.6. Other Non-University Committees, Memberships, Panels, etc.

Member, External Review Panel, American Library Association Committee on Accreditation, 2017

IV.C. Media Contributions

IV.C.1. Blogs

Questionable Pedagogy, <http://questionablepedagogy.com>. 2015

IV.D. Community & Other Service

Facilitator, Parent SEED (Seeking Educational Equity and Diversity) Seminar, The Edmund Burke School, Washington, DC. September 2016-June 2018.

Co-facilitator, White Allies Study and Reflection Group, All Souls Church, Unitarian, Washington, DC. March-April 2015.