

# Carol M. Lushbough

## Contact Information

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## Professional Preparation

Westmar College	Mathematics	1968-1972
University of South Dakota	Mathematics	M.A. 1987
University of South Dakota	Computer Science	M.A. 1991

## Appointments

1997 – Present	Assistant Professor of Computer Science, University of South Dakota
1997 – 2003	Principal Software Engineer, VisualMetrics Corp.
1994 – 1997	Senior Software Engineer, Gateway 2000
1985 – 1994	Associate Professor of Computer Science, Westmar University
1985 – 1994	Computer Science Program Director, Westmar University
1987 – 1991	Software Computer Consultant for the Business Research Bureau, University of South Dakota
1982 – 1985	Computer Center Director, Westmar College

## Publications & Poster Sessions

Brendel, V., Dong, Q., Lushbough, C. “Plant Genome Database and Analysis Tools”, NSF 7th Annual Plant Genome Research Program Awardee Meeting, 2004

Lushbough, C.L., Distributed Information Systems as a Service, Proceedings of the 2004 American Society for Engineering Education Annual Conference & Exposition, Copyright 2004, American Society for Engineering Education

Smart, Mathew, Lushbough, Carol; “QTool. Achieving Interoperability Between Heterogeneous Relational Databases in a Federated Database.”; Graduate Research Assistant; NSF Grant - “ISGA-PGR: PlantGDB – Plant Genome Database and Analysis Tools”, 2004 Nebraska EPSCoR State Conference on Bioinformatics and Biomedical Computing, Nebraska EPSCoR

Du, Xing Ming, Lushbough, Carol; “Metadata Mapping for Federated Biological Databases, Implemented through J2EE architecture”; Graduate Research Assistant; NSF Grant - “ISGA-PGR: PlantGDB – Plant Genome Database and Analysis Tools””, 2004 Nebraska EPSCoR State Conference on Bioinformatics and Biomedical Computing, Nebraska EPSCoR

Brendel, V., Dong, Q., Lushbough, C. “Plant Genome Database and Analysis Tools”, NSF Plant Genome Research Program Annual Awardee Meeting, 2003

## Synergistic Activities

Co-Bioinformatics Core Director of South Dakota Biomedical Research Infrastructure Network (BRIN) supported by National Institutes of Health (NIH) National Center for Research Resources (NCR) Institutional Development Award (IDeA) program

Contributing developer to internet software:

- Mata Hari, Internet search tool, Copyright by TheWebTools Company 1998
- BrightPlanet™, a provider of business solutions for searching, monitoring and managing the vast amounts of surface and Deep-Web™ Internet content, 1998 - 2001

System Architect and lead developer on bioinformatic software:

- BioStream, Bioinformatics tool, Funded by National Institute of Health in collaboration with Iowa State University, 1999 – 2002
- BioExtract Server, Bioinformatics Internet application, Funded by National Institute of Health in collaboration with Iowa State University, 2001 – 2003
- FieldStream Database, Bioinformatics proprietary database, VisualMetrics Corp., 1998 – 2001
- NATIONAL HUMAN GENOME RESEARCH INSTITUTE Grant number 1R43HG001850-01  
Project Title: HIGH EFFICIENCY GENOME INFORMATICS DATA SYSTEM, PI- Bergman, M., \$99,995, 1999
- NATIONAL HUMAN GENOME RESEARCH INSTITUTE Grant number 2R44HG001850-03  
Project Title: AN INTEGRATED FIELD STREAM BIOINFORMATICS DATA SYSTEM, PI- Bergman, M., \$304,600, 2001

“South Dakota Biomedical Research Infrastructure Network”, NIH P20 RR016479 A, September 1, 2001 – June 30, 2004, PI Goodman, Barbara, V., Co-Bioinformatics Core Director Lushbough, C.M., Total award for 3 years: \$2,314,655.00, 12 month 33% time annually.

### **Collaborators and Other Affiliations**

- Collaborators: Volker Brendel (Iowa State University).
- Graduate-Scholar Sponsor: Vayomi Wijeratne, M.S. (Univ. of South Dakota); Brent Anderson, M.S. (Univ. of South Dakota); Jonathan Smith, M.S. (Univ. of South Dakota); Toby Anderson, M.S. (Univ. of South Dakota)

### **Current and Pending Support**

“ISGA: PlantGDB – Plant Genome Database and Analysis Tools”, NSF Grant, NSF DBI-0321600, January 1, 2004 – December 31, 2005, PI Brendel, V., Co-PI Lushbough, C.M., Total anticipated USD portion award for 2 years: \$347,781.00, 12 month 50% time annually.

“IDeA Networks of Biomedical Research Excellence”, NIH P20 RR016479 P, July 1, 2004 – June 30, 2009, PI Goodman, Barbara, V., Co-Bioinformatics Core Director Lushbough, C.M., Total anticipated award for 5 years: \$12,500,000, 12 month 33% time annually.