

Robert Spalding Newcomb

Areas of Expertise

IT and Media Arts Management
Process Analysis & Design
Budget Analysis & Modeling
Change Management
Operations and Systems Support
Dynamic Data Modeling/Dashboards
Business Intelligence
Network Architecture and Security
Risk Management
Project Life Cycle Management
Software Design & Development
Music Composition and Performance

Selected Tools

Programming - C, Java, Forth, Lisp, TAL, COBOL, VBA, MDX, HTML, DHTML, PHP, Several Assembly Languages, Fortran, Pascal, SQL, Perl
Methodologies - Waterfall, Agile, Scrum (**Certified Product Owner, 2009**), ITIL, Iterative, SDLC
OS/Hardware - MacOS, MS Windows, Linux, UNIX, Novell, IBM Mainframe, Tandem Non-Stop/Guardian OS
Database - Filemaker Pro, MS SQL Server, Oracle, PeopleSoft, MS Access, MySQL, Footprints, BMC Remedy, LDAP, ITSM, Jira, ServiceNow, Trello
Desktop - MS Office/Visio/Project, Sharepoint, Omnigraffle, Lotus
Reporting/Bi - Xcelsius, Voyager, Business Objects, SQL Developer, Tableau, M-Reports
Security - (**Certified by UM ITSS, 2006**) Arbor Peakflow X (NIDS), Snort, Checkpoint Virtual Firewall
Web - Adobe Dreamweaver, Fireworks, Flash, Drupal, Wordpress
Music Technology Software - Logic, Digital Performer, MaxMSP, Sibelius, Melodyne, Supercollider, Synclavier
XPL, HMSL, JMSL, JSyn
Video Content Management - Kaltura
Digital Signage - Four Winds Interactive
Imaging - ImageNow
Graphic Design - Adobe Photoshop, Illustrator, InDesign

Professional Experience

2013—Present **Associate Director, Digital Media Commons**, University of Michigan Library, Ann Arbor, MI
2008—2013 **Senior Business Systems Analyst**, University of Michigan Information and Technology Services, Ann Arbor, MI
2007—2008 **Program Manager for Business Information and Network Security**, University of Michigan School of Music, Theatre & Dance, Ann Arbor, MI
1998—2007 **Director of Information Technology**, University of Michigan School of Music, Theatre & Dance, Ann Arbor, MI
1997—1998 **Technical Coordinator for Computers, Networking and Information Management**, 1998 International Computer Music Conference, Ann Arbor, MI
1995—1998 **Computer Systems Consultant**, University of Michigan School of Music, Ann Arbor, MI
1999—Present **Principal**, Partial Music, LLC, Ann Arbor, MI

1995—1996 **Principal**, Networthy, Inc., State College, PA
 1994—1995 **Instructor**, Lebanon College, Lebanon, NH
 1992—1996 **Webmaster/Software Librarian**, The International Computer Music Association, Lebanon, NH, and Ann Arbor, MI
 1991—1995 **Software Beta Consultant**, NASA Ames Research Center, Moffett Field, CA
 1991—1999 **Principal**, Alfred & Rose Music, Hanover, NH and Ann Arbor, MI
 1990—1991 **Supervisor of Support Systems**, New England Digital Corp., Lebanon, NH
 1987—1989 **Systems Specialist**, Manufacturers Hanover Trust, New York, NY
 1985—1986 **Senior Programmer/Analyst**, COVIDEA/Chemical Bank, Jericho, NY
 1984—1991 **Principal**, Arsyn, Ltd., New York, NY and Hanover, NH
 1983—1985 **Programmer/Analyst**, SIAC/New York Stock Exchange, New York, NY
 1982—1983 **Programmer/Analyst**, Arnold Bernhard & Co., Inc., New York, NY
 1980—1981 **Operations Supervisor**, Health Information Systems, Inc., Brooklyn, NY
 1979—1980 **Computer Operator**, Public Relations Aids, Inc., New York, NY
 1977—1978 **Artist-in-Residence (CETA)** for the City of Atlanta, GA

Professional Experience (Detail)

Associate Director, Digital Media Commons (DMC)

• [University of Michigan Library, Digital Media Commons](#), Ann Arbor, MI, *November 2013—Present*

The DMC is the technology innovation hub for the Library, exploring emerging technologies for the purpose of advancing new methods of learning and teaching. Technologies include 3D Printing, Data Visualization, Motion Capture, Projection Mapping, state of the art Audio, Video and Electronic Music Studios, Instructional Design Labs, and Learning Analytics. I share responsibility with two co-directors for managing an operating budget of approximately \$4M, roughly half of this allocated to personnel – 25 full time staff and 40-50 student staff – and half to supporting technology innovation and program development. I co-manage the daily operations of the DMC within the finance and personnel areas, and work closely with our DMC service managers and staff in planning for future improvements within our lab and studio environments. I have collaborated with Library Finance to streamline the DMC financial accounts architecture and reporting, resulting in greater transparency and efficiency in budget related decision-making. Other areas of focus include change management through implementation of new project development processes; a complete overhaul of our web presence, integrating numerous social media and service specific identities into a DMC brand embedded within the Library web site framework; and expanding the communication and vocabulary within the Library to scale DMC innovations into broader applications on campus. From November 2014 until July 2015, I also held the role of **Interim Studios Manager**, leading audio and video production related artistic, technical, personnel and planning engagement. The DMC Studio Suite consists of a Video Studio, Audio Studio and two Electronic Music Studios. State of the art technology and mentoring by experienced industry veteran staff are available to the U-M community for performance arts, research and cross-disciplinary productions. I continue to coordinate productions, scheduling and student staffing in the studios.

Senior Business Systems Analyst

• [University of Michigan, Information and Technology Services](#), Ann Arbor, MI, *November 2008—November 2013*

Across numerous projects, I held roles as Lead Functional/Technical Analyst, Process Analyst, Project Manager, SME/Consultant. During a multi-year restructuring of Enterprise IT at UM, overall focus of all work was to improve design, scope and quality of existing core services as well as develop and support new products and services. As a member of the ITS Applications and Information Services group (Campus Community, Human Resources, Enabling Technologies, NextGen Michigan and Service Management teams), my project areas included the Enterprise Directory (M-Community) and Sponsor System, Identity Management, UM Emergency Alerts, Disaster Recovery and Business Continuity, Academic Unit Information System (AUIS), Space Utilization, Rackham PhD Continuous Enrollment, External Organizations, the Agile/Iterative Framework Design, Digital Signage, Video Content Management, Digital Imaging, BI Cube ETL Data Modeling and test tool design, HR Data Warehouse Business Objects reporting, BI Rapid Deployment, HR KPI initiatives, IT Rationalization, NextGen Desk Side Support, Operations and Availability Planning, and Service Management.

Program Manager for Business Information & Network Security

• [University of Michigan, School of Music, Theatre & Dance](#), Ann Arbor, MI, *September 2007—November 2008*

Management of the school's newly established Business Information and Network Security Initiatives. My work blended Business Intelligence methods research, data mining of administrative data architectures, and the design of financial projection and internal workflow modeling systems. Areas of focus included modeling of endowment and financial aid processes and overall revenue and cost trends, projection and management. I also served as IT Security Liaison/Coordinator for an environment that serves approximately 1100 students and 280 faculty and staff located in the Moore, Stearns, Walgreen, Hill, Power Center, Rackham, League, Burton Tower, Dance and Revelli buildings on the U-M Central, South and North campuses in Ann Arbor.

Director of Information Technology

• [University of Michigan, School of Music, Theatre & Dance](#), Ann Arbor, MI, *March 1998—August 2007*

Strategic leadership in technology planning and support for 200 faculty, 80 staff, and 1100 students located in ten buildings on two campuses. Supervision provided to four full-time IT staff and part-time student staff. Direct Report to the Office of the Dean. Budget - Design and manage annual infrastructure budget of approximately \$600,000 for Administrative and Instructional Technology hardware, software and technical support needs throughout the school. Personnel - Hiring, supervising and evaluating full time staff and work-study student staff. Network - 10 buildings, 36 network switches, 50 printers, 350 Macintosh computers, 25 PCs, 15 servers (Mac/Win). Additional responsibilities included: Labs - Support of six instructional/research labs, with 70 workstations, Vendor Relationships, Database Development, Resource Scheduling, Faculty/Staff Computing Accounts, Technical Lead and School Representative to university organizations, Web Sites, Desktop Support, IT Security Coordination and Administration.

Computer Systems Consultant

• [University of Michigan, School of Music, Theatre & Dance](#), Ann Arbor, MI, *August 1995—February 1998*

Essentially, this position is included within the previous position description. Immediate supervision was given by a faculty member, whose emphasis was on instructional music technology. Administrative growth and increased demands for coordination of instructional and administrative computing led to a promotion to Director, reporting directly to the Dean's Office, with input from the Music Technology Chair, with an increasingly highly visible role as representative of the School in technology related issues across the university.

Technical Coordinator for Computers, Networking and Information Management,

• **1998 International Computer Music Conference**, Ann Arbor, MI, *May 1997—October 1998*

Member of Program Committee for premier annual international conference, hosted by the University of Michigan in 1998. Responsible for developing data management system for accepting technical paper and music composition submissions for jury review and scoring, handling of all venue, equipment and personnel scheduling. Responsible for ICMC98 web site as well as all technical support during seven-day conference spanning 13 concerts, 5 demonstration sessions, 22 technical paper sessions held in several venues within four buildings. Provided supervision for 12 student and staff assistants.

Principal

• [Partial Music, LLC](#), Ann Arbor, MI, *August 1999—Present*

• [Alfred & Rose Music](#), Hanover, NH and Ann Arbor, MI, *February 1991—August 1999*

• [Arsyn, Ltd.](#), New York, NY and Hanover, NH, *June 1984—February 1991*

Creative activities include the production of compact discs of original improvisational and electronic computer-assisted music compositions, as well as concert performances. Ongoing research and development project is a music analysis and composition software system, described in *'Music In The Air: A Theoretical Model and Software System for Music Analysis and Composition;*, *Organised Sound*, (Cambridge University Press, UK), Volume 3/1, April 1998. Components of the system include analysis and classification of musical performance, algorithmic composition using mathematical models, and monitoring of natural-world non-musical phenomena as control mechanisms for compositional assembly. From 1994 through 1999, compositional work produced by the system

was presented at Computer Music conferences in the United States, England, Brazil, Greece and China. Original development tools included Macintosh object-oriented HMSL/Forth. Development tools are HMSL/Forth, Max/MSP, C and Java. Since 2004, published compositions and concert performances have included extensive focus on sitar in solo and ensemble settings, integrating traditional Indian Classical Music precepts with contemporary western compositional techniques and architectures.

Principal

• **Networthy, Inc., State College, PA, *May 1995—July 1996***

Co-Founder and Principal of company offering Internet Consulting and Development Services to businesses, industries, nonprofit organizations (education, government, others) to (1) establish/enhance presence in the Internet marketplace and (2) efficiently utilize Internet information and network delivery resources. Areas of special emphasis include marketing and advertising of services and products, multimedia database design and management, educational/tutorial applications, and information searches. Products and services were deliverable in 3 modes: (1) on network-accessible servers within local or wide area networks, (2) on CD-ROM, or (3) installable on desktop computers according to client specifications. Services included Analysis and Design of Internet Information, Hardware, and Software Requirements; Information & Market Research; Advertising; Customer Support; Databases; Education & Training.

Instructor

• **Lebanon College, Lebanon, NH, *September 1994—June 1995***

Taught introductory Macintosh computing courses in a continuing education environment at small community college.

Webmaster/Software Librarian

• **The International Computer Music Association (ICMA), Lebanon, NH, and Ann Arbor, MI, *1992—1996***

Project co-sponsored by Dartmouth College and the ICMA. Design, implementation and maintenance of Internet based library providing centralized information concerning non-commercial software relevant to computer music.

Supervisor of Support Systems

• **New England Digital Corp., Lebanon, NH, *January 1990—February 1991***

Primary responsibility in Customer Technical Support of Software used in state-of-the-art digital audio systems including SYNCLAVIER and POST-PRO products. Maintained extensive technical knowledge of product architecture, operational procedures and practical customer applications. Additional responsibilities included coordination of Software Re-Engineering projects, acting as an in-house beta site for new software products, performing data recovery for several types of storage media, design and implementation of a bug-tracking system as well as various internal support systems for the Support Services Department. Interfaces included all departments within home office, service and sales personnel within four domestic and two international offices, as well as direct customer contact worldwide. Database development was done using INFORMIX-4GL and SQL languages running under XENIX.

Systems Specialist

• **Manufacturers Hanover Trust, New York, NY, *May 1987—May 1989***

Involved in all technical aspects of Videotext Home Banking system subsequently marketed as part of the PRODIGY product. Primary responsibilities involved supporting the banking functionality of an on-line system, trouble-shooting, and training of junior staff members. Project Leader in the conversion of a multiple-network architecture into a single-network system, and also in a complete overhaul of software library organization and code/database quality control and standardization. Additionally, acted as technical interface and support for in-house User Group throughout development, implementation and installation of projects. TANDEM hardware, TAL and COBOL/PATHWAY software based on a cloned ACI ATM switch.

Senior Programmer/Analyst

• COVIDEA /Chemical Bank, Jericho, NY, *April 1985—December 1986*

Team leader in application development of Home Banking and Videotext Gateway Software, marketed as the PRONTO product. Responsible for the creation of System Requirements for Product Development Group, functional and detail design specifications, scheduling, development, and implementation. Primary environment was TANDEM COBOL/PATHWAY with secondary use of TAL.

Programmer/Analyst

• SIAC/New York Stock Exchange, New York, NY, *February 1983—February 1985*

Member of six-person team responsible for life cycle development of precedent-setting securities Program-Trading system in a TANDEM/TAL multi-tasking, on-line, communications environment. Duties included functional specification, documentation, detailed module design, coding of multi-tasking processes, script-writing, testing, integration cycles, on-line debugging and full implementation. Involvement in database definition, system sizing and throughput balancing.

Programmer/Analyst

• Arnold Bernhard & Co., Inc., New York, NY, *January 1982—February 1983*

Responsible for the design and implementation of new Operations Pathway system involving conversion of IBM BAL, Fortran IV and COBOL modules to TANDEM Fortran 77 and COBOL. Team member involved in design and development of Pathway system for use by 100 securities analysts. Developed several TAL utilities for use in application development.

Operations Supervisor

• Health Information Systems, Inc., Brooklyn, NY, *May 1980—October 1981*

Responsible for giving demos of software to users and training and supervising four operators, as well as all operations activities for a company specializing in accounting software for nursing homes and small hospitals. Hardware was QANTEL microcomputers. Programming language was QICBASIC.

Computer Operator

• Public Relations Aids, Inc., New York, NY, *May 1979—May 1980*

Responsibilities included data entry, proofing of input parameters and output reports, as well as all operations duties for a company providing publicity services based on a computerized system of custom mailing lists. Hardware was an IBM 360/30 DOS mainframe.

Artist-in-Residence (Federal CETA Grant)

• City of Atlanta, GA, *July 1977—July 1978*

Developed an arts/music program for inner city high school dropouts returning to school at Street Academy B. Worked as musician for experimental dance theatre troupe, composing and performing original acoustic and electronic music.

Selected Music Composition, Performance

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| 2016 | Guest Soloist (Sitar) in James Aikman's world premiere of ' <i>Peacemakers</i> ', a nearly 90 minute major work for orchestra, soloists, adult and youth choirs, and narrator, with multimedia by Mike Halerz, presented by the Indianapolis Chamber Orchestra as part of the annual Artsfest celebration at Butler University. |
| 2016 | Dreams On Queue (guitar, sitar, laptop) Premiere at Kerrytown Concert House, Ann Arbor, MI |
| 2015 | Grammars in Progress (guitar, sitar, laptop) Premiere at Kerrytown Concert House, Ann Arbor, MI |

- 2014 **Evolve** (sitar, electronics) with Christina Sears Etter (dance), Grace Chung (tabla), Premiere at *Dance in the Mitten Festival*, Riverside Arts Center, Ypsilanti, MI
- 2013 **Light of Life – A Summer Solstice Concert** (guitar, sitar, electronics) with James Aikman (keyboard), Ken Kozora (percussions, flutes), Premiere at U-M Matthaei Botanical Gardens, Ann Arbor, MI
- 2013 **Matrices** (guitar, electronics) with People Dancing dance group, Premiere at Vitosha Guest Haus, Ann Arbor, MI
- 2012 **Possible Futures** (guitar, sitar) with Steve Rush, James Aikman, Premiere at Kerrytown Concert House, Ann Arbor, MI
- 2012 **Dragonfly** (guitar), Premiere at Kerrytown Concert House, Ann Arbor, MI
- 2012 **To the Passage of Time** (guitar) with James Aikman (keyboard), Premiere at Kerrytown Concert House, Ann Arbor, MI
- 2011 **Seeking the Center** (guitar), Premiere at Kerrytown Concert House, Ann Arbor, MI
- 2011 **Quiet Stone** (sitar), Premiere at Kerrytown Concert House, Ann Arbor, MI
- 2011 **Balkan Threads** (guitar), Premiere at Kerrytown Concert House, Ann Arbor, MI
- 2007 **In the Grace of Suspension** (sitar), Premiere at Kerrytown Concert House, Ann Arbor, MI
- 2007 **Light of Life** (sitar), Premiere at Kerrytown Concert House, Ann Arbor, MI
- 2007 **Connecting the Dots** (guitar), Premiere at Kerrytown Concert House, Ann Arbor, MI
- 2006 **Tsunami**, Dance Drama score, Premiere at Cafe Cultural, Rio de Janeiro, Brazil
- 2006 **Germination** (sitar, guitar), with Dan Piccolo (percussion/tabla), Premiere at Ann Arbor School of Yoga, Ann Arbor, MI
- 2005 **Leaving Varanasi** (sitar), Premiere at Canterbury House, Ann Arbor, MI
- 2005 **Tour of India w/Stephen Rush**, Kolkata, Delhi, Chennai, and Varanasi, India
- 2004 **Native Planting**, Premiere at Russa Yog Studio, Ann Arbor, MI
- 2003 **Data Transfer - Guitar Music for Carillon**, Ann Arbor, MI
- 2003 **String Theory - First Draft**, Premiere at Kerrytown Concert House
- 2002 **Almost Unplugged**, Premiere at Kerrytown Concert House
- 2002 **Passage**, Premiere at Kerrytown Concert House
- 2001 **Raga in Seven Parts Plus**, Premiere at Canterbury House
- 1999 **Substratum**, 1999 International Computer Music Conference (ICMC), Beijing, China
- 1998 **Linguistics of Change**, 1998 ICMC, University of Michigan, Ann Arbor, MI
- 1997 **Run the Mountain**, 1997 ICMC, Aristotle University, Thessaloniki, Greece
- 1994—1995 **Daydreams of an Orange Cat**
- The Society for Electro-Acoustic Music in the United States (SEAMUS) 1995 National Conference, Ithaca College, Ithaca, NY
 - International New Music Festival, National University, San Diego, CA
 - Society of Composers, Inc. (SCI) Region V 1994 Conference, University of Louisville, Louisville, KY
 - 10th anniversary of SEAMUS, Dartmouth College, Hanover, NH
 - 10th anniversary of SEAMUS, Middlebury College, Middlebury, VT
 - 'The First Brazilian Symposium on Computer Music', Caxambu, Minas Gerais, Brazil
 - SCI Region I '1994 Festival of New American Music', Bates College, Lewiston, ME
 - 'Dartmouth Festival of New Musics', Dartmouth College, Hanover, NH
 - 'Annex Plus Friends', Northern Illinois University, Dekalb, IL
 - 'Leaving the 20th Century—Ideas and Visions for New Musics', Bretton Hall College, University of Leeds, Leeds, England
 - 'Three Concerts of Studio Music', Clark University, Worcester, MA
- 1994 **Data Dance**, SEAMUS, University of Wisconsin at Milwaukee, Milwaukee, WI
- 1992 **Term Ten**, 'Sound Unsound', Dartmouth College, Hanover, NH
- 1990 **Empty Spaces**, American Dance Theatre of the Deaf, Triplex Theater, NY, NY
- 1987 **Cactus Falls**, Dance score, Gowanus Arts Exchange, Brooklyn, NY
- 1978 **Creation**, First Spoleto Festival, Charlestown, SC

Publication, Music Production

- 2016 Production, re-mastering and publishing of **Dreams On Queue**, a CD of original music, originally released as an LP in 1985 in New York City.
- 2015 Production and publishing of **Confluence of Elders – New Sitar Music for the 21st Century**, a CD of original music
- 2013 Production and publishing of **Light of Life – A Summer Solstice Concert**, a DVD/CD/BluRay of original music, in collaboration with **James Aikman** and **Ken Kozora**, and video artist, **Mike Halerz**
- 2013 Production and publishing of **To the Passage of Time**, a CD of original music, in collaboration with **James Aikman**
- 2013 Review of CD release, '**Here (and there)**' by **Jeri-Mae G. Astolfi (piano) Innova (846)** in the 'Array' journal of the International Computer Music Association (solo piano, fixed media and live electronics)
- 2010 '**Partial Music: In Search of a Symmetrical Integrity Within Motivation, Form and Semantics Through Music Analysis, Composition and Improvisational Performance**', *Symmetry: Art and Science*, Gmuend, Austria (*Accepted, then withdrawn prior to publication*)
- 2010 Music Soundtrack for **Breath-Centered Yoga with Leslie Kaminoff**, a yoga instructional DVD published by Human Kinetics.
- 2008 Production and publishing of **Anastasia of the Gardens**, a double CD of original electronic studio and computer based music composed during 1988-1997
- 2007 Production and publishing of **Undiscovered**, a CD of original music, recorded live in concert
- 2004 Production and publishing of **Native Planting**, a CD of original music
- 2000 Production and publishing of **Synopsis**, a CD of original music
- 1998 '**Music In The Air: A Theoretical Model and Software System for Music Analysis and Composition**', Organised Sound, (Cambridge University Press, UK), Volume 3/1, April 1998
- 1994 Soundtrack for **Transform Yoga**, a yoga instructional series
- 1991 Production and publishing of **On Time**, a CD of original music
- 1990 Soundtrack for **Vinyasa—Yoga Movement with Breath and Music**
- 1986 Production and publishing of **Dreams on Queue**, an LP of original music

Interviews, Articles, Awards

- 2017 **Guest Speaker**, U-M School of Music, Theatre & Dance, Musicology 407/507, American Experimental Music (April 2017)
- 2015 **Music Web Express 3000**, interview and two CD/DVD reviews by Robert Silverstein
- 2011 **Music Web Express 3000**, interview and three CD reviews by Robert Silverstein
- 2009 **Living Music**, interview by Rania M. Masri, American Music Institute research project
- 2007 **Living Music**, interview by Andrew Kotarba, American Music Institute research project
- 2005—2006 **Deep Listeners**, took part as a subject and interviewee in award winning research project
- 2005 Guest of **US Embassy American Center, India**, for workshop/concert tour of India
- 2002—2005 Winner of **ASCAP Standard Music Special Award**
- 1995—1996 Winner of **ASCAP Standard Music Special Award**
- 1995 **Air & Space** (May), a publication of **The Smithsonian**
- 1994 **AfterTouch** (Vol. 7/8), interview by Charles J. Priolo, entitled **Depth of Perception**
- 1991 **WFUV-FM** in New York City devoted a two-hour interview to the album **On Time**

Music Teachers

- 2006 Pandit Kamal Mishra, Sitar, Flushing, NY
- 2005 Pandit Narendra Mishra, Sitar, Varanasi, India
- 2001—2002 Dr. Rajan Sachdeva, Sitar, Ann Arbor, MI
- 1989—1993 Phil Burk and Larry Polansky, Forth/HMSL, San Rafael, CA and Hanover, NH
- 1986 Bill Conners, Jazz Theory, Improvisation, Guitar, New York, NY
- 1977—1978 John Sutherland, Classical Guitar Technique, Atlanta, GA
- 1976—1977 Nelson Amos, Classical Guitar Technique, Ann Arbor, MI
- 1972—1977 Cory (Sea) Mullen, Jazz Theory, Improvisation, Guitar, Ann Arbor, MI

Related Interests

Certified Yoga Instructor

- Russayog Studios and Retreats, Ann Arbor, MI., *May 2012 – May 2015*

Provide private and group class instruction in a rope based yoga discipline, founded by Jasprit and Teresa Singh, focusing on developing core strength, mental and physical balance, and flexibility, using breath as a basis for increasing mindfulness and overall wellness. Completed a 200-hour certification process during 2011-2012.