



*National Conference
November 15–17, 2007
Salt Lake City, UT*

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Dan Hosken, Chair
California State University, Northridge

Cynthia Gonzales
Texas State University-San Marcos

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ATMI Conference Schedule

National Conference
November 15–17, 2007
Salt Lake City, UT

The Association for Technology in Music Instruction is indebted to SoundTree, the education division of Korg USA, Inc. and Apple Computer for equipment made available for both the presentations and the ATMI lab. In addition, we would like to thank the University of Utah School of Music for their valuable assistance

ATMI 2007 CONFERENCE SCHEDULE

DAILY SCHEDULE AT A GLANCE

THURSDAY, NOVEMBER 15, IDAHO AND ARIZONA ROOMS			
8:30	Idaho	Francesca Arnone	<i>Using Recording Technology and Audio Streaming to Enhance Applied Teaching (30 min)</i>
9:00	Idaho	Loraine Sims	<i>Practical Applications for the Spectrogram in the Voice Studio: A Demonstration (30 min)</i>
9:15	Arizona	Susan Thomas	<i>Podcasting Field Experiences for Music Education Students (45 min)</i>
9:45	Idaho	Tim Smith	<i>Let BACH Help You Make Interactive Hypermedia Presentations Online (30 min)</i>
10:00	Arizona	Post, D. A. Williams	<i>Hands-On: Podcasting Basics (60 min)</i>
10:15	Idaho	Brent Yorgason	<i>Annotating Digital Scores and Audio for Pedagogy, Research, and the Creation of Multimedia Lessons (45 min)</i>
11:00	Idaho	Steven Kreinberg	<i>Using Adobe Acrobat Connect Professional to Create Online Media-rich Interactive Courses in Music (45 min)</i>
11:15	Arizona	David Michael Cottle	<i>Automated Concert and Rehearsal Recording, Archiving, and Distribution (45 min)</i>
12:00			LUNCH
1:00	Idaho	J. Snow, G. F. Litterst	<i>Transcending Geography: Utilizing the Yamaha Disklavier, iChat, and Remote Learning Possibilities in Piano Instruction and Teacher Training (45 min)</i>
1:00	Arizona	Thomas Rudolph	<i>Hands-On (Sponsored): Sibelius Rhythm Section and Percussion Notation (60 min)</i>
1:45	Idaho	R. Dammers, B. Appleby-Wineberg	<i>Can You Hear Me Now?: An Exploration of Online Trumpet Lessons (45 min)</i>
2:15	Arizona	D. B. Williams	<i>Hands-On: musicXML: The Lingua Franca for Sharing Music Notation Files? (60 min)</i>
2:45	Idaho	Melissa McCabe	<i>Collaborative Learning Online: Does it Really Work? Research Perspectives in Teaching and Learning Online (45 min)</i>
3:30	Idaho	Cyrus Ginwala	<i>Cognitive, Affective, and Psychomotor Learning Through Online Music Instruction (30 min)</i>
4:00	Arizona	D. Gonko, R. Johnson	<i>Hands-On: Creating Your Digital Portfolio (60 min)</i>
4:00	Idaho	E-Poster Session I	Don Bowyer, Aleck Brinkman, Leon W. Couch III, Cheryl Frazes Hill, Tomas Henriques, Margaret Kennedy-Dygas, Brian Kershner, Stanley C. Pelkey and Kenneth Smith, Robert Willey (60 min)
8:00	Idaho	Performances	Marie Grudzien, Rodney Oakes, Alan Lechusza, Christopher Barrick, Julia Nolan, Robert Pritchard (~90 min)

ATMI 2007 CONFERENCE SCHEDULE

DAILY SCHEDULE AT A GLANCE (continued)

FRIDAY, NOVEMBER 16, IDAHO AND ARIZONA ROOMS			
8:00	Idaho	Jay Alan Jackson Andy Jaffe	<i>Facilitating Rhythm: An Interactive Tool for Practice and Composition (30 min)</i>
8:30	Idaho	Alan Kaschub	<i>Experiencing Rhythm Through Rap: Rap Composition and Recording as a Tool for Developing and Assessing Rhythmic Understanding (45 min)</i>
8:30	Arizona	Raymond Riley	<i>Hands-On: Podcasting Prowess for Music Educators (60 min)</i>
9:30	Arizona	Richard Sussman	<i>Basic Techniques of Scoring to Picture Using the Digital Audio/MIDI Sequencer and Quicktime Movies (60 min)</i>
9:30	Idaho	Bonnie Miksch	<i>Using Pictures to Compose: Gesture-oriented Pitch Mapping Techniques in Hyperupic (30 min)</i>
10:00	Idaho	Reginald Bain	<i>Teaching Tuning Theory with SuperCollider 3 (30 min)</i>
10:30	Ballroom	Robert J. Werner	Robert Trotter Lecture: <i>A Distinguished History: A Challenging Future</i>
11:30	Ballroom	Gil Weinberg	ATMI/CMS Plenary Address: <i>Extending the Musical Experience - from the Physical to the Digital... and Back</i>
12:30	Arizona Idaho Idaho Wyoming	Special Interest Groups (SIGs)	Music Lab Management (Arizona) Distance Education in Music (Idaho NE) Multimedia Development (on- and off-line) (Idaho SW) CAI Theory/Aural Skills (Wyoming)
1:30	Idaho	K. Walls, R. Lyda, J. Canfield, C. Burns	<i>Technology Reforming Music Teaching Through Comprehensive Musicianship (45 min)</i>
1:30	Arizona	Thomas Rudolph	Hands-on (Sponsored): <i>Hands-on Evaluation of Virtual Instruments (60 min)</i>
2:15	Idaho	K. Ng, B. Ong, O. Larkin, T. Koerselman	<i>Technology-enhanced Music Learning and Teaching: i-Maestro Framework and Gesture Support for the Violin Family (30 min)</i>
2:30	Arizona	Bruce H. Frazier	Hands-On: <i>Digital Video Basics for Musicians: Exploring Final Cut Pro (60 min)</i>
2:45	Idaho	Nico Schüler Elizabeth Lee	<i>Active Versus Passive Learning: On the Effectiveness of Student Tasks in the Online Teaching of Music Fundamentals (30 min)</i>
3:15	Idaho	Betty Anne Younker, Mary Simoni	<i>Teenaged Girls and Technology-Based Composition: Outreach, Products, and Reflections (45 min)</i>
4:00	Idaho	Robert Willey	<i>On Using Video Direction as an Application of the Study of Music Theory (30 min)</i>
3:45	Arizona	J. Snodgrass, S. Piagentini, F. Barry, B. Richard	<i>Beyond Paper and Pencil with "Exposition" – An Online, Customizable Assessment Tool for Music Theory (45 min)</i>
4:30	Arizona	Cynthia I. Gonzales	Hands-On: <i>Creating Interactive Listening Guides: A Workshop with iMovie and Flash (60 min)</i>
4:30	Idaho	E-poster Session II	Shane Anderson, Ryan Brown, Sanford Hinderlie, George F. Litterst, David R. Montano, Joo Won Park, Patricia Riley, Robert Willey

ATMI 2007 CONFERENCE SCHEDULE

DAILY SCHEDULE AT A GLANCE (continued)

SATURDAY, NOVEMBER 17, IDAHO AND ARIZONA ROOMS			
8:00	Idaho	Christopher Ariza	<i>Post-Ut: A Web-Based Ear Training System for Computer Musicians and Audio Engineers (30 min)</i>
8:00	Arizona	Sandi MacLeod	<i>Connecting Pre-service Educators with Grades 2–12 Music Composition Students in an Online Mentoring Field Experience (45 min)</i>
8:30	Idaho	Gary S. Karpinski Richard Kram	<i>Sight-Singing Anthology as Database: Developing a Trait-Based Search Tool for Aural Skills Instruction (45 min)</i>
8:45	Arizona	Scott D. Lipscomb	<i>Learning Through Music: Uses of Technology to Enhance Integration of Music Across the K–8 Curriculum (30 min)</i>
9:15	Arizona	Gena R. Greher	<i>Music and Multimedia: Bridging the Learning Gap for Music Teachers and Students At Risk (30 min)</i>
9:30	Idaho	Andrew M. Bliss Kerry O'Brien	<i>Technology for the Common Man: Skill Sets for the Educator, Conductor, and Performer (45 min)</i>
10:00	Arizona	Charles Menoche	<i>Hands-On: Using Computer Lab Management Tools to Improve Instruction and Learning (60 min)</i>
10:15	Idaho	Lisa Zdechlik	<i>The Design and Development of a Learning Object for the Study of a Musical Composition (45 min)</i>
11:00	Arizona Idaho Flagstaff Tucson	Special Interest Groups (SIGs)	Music Lab Management (Arizona) Distance Education in Music (Idaho) Multimedia Development (on- and off-line) (Flagstaff) CAI Theory/Aural Skills (Tucson)
12:00			LUNCH
1:00	Arizona	V. Keith Mason, Charles Menoche, Michael Nord, Richard Repp	Panel: <i>Operating and Maintaining a University Music Lab</i>
2:00	Idaho	Peter Webster David Brian Williams	<i>“Social Computing” and Music Teaching/Learning: Roots, Realities, and Reasoned Speculation (60 min)</i>
3:00	Idaho	James T. Frankel	<i>Extending the Classroom: Using Blogs to Promote Discourse With Music Education Students (45 min)</i>
3:45	Idaho	Nathan Wolek	<i>Pursuing NASM Approval for an Undergraduate Music Technology Degree (45 min)</i>
4:00	Arizona	Kimberly James	<i>Web 2.0 and Music Education: Tools for the Classroom and Studio (60 min)</i>
4:30	Idaho	Richard Repp	<i>Implementation of a University Music Technology Distance Learning Course (30 min)</i>
5:00	Idaho		ATMI Business Meeting
6:15			ATMI Fred Hofstetter “Memorial” Dinner

ATMI 2007 CONFERENCE SCHEDULE

November 15–17, 2007

Salt Lake City, UT

DAILY SCHEDULE

THURSDAY, November 15

8:30 a.m.–9:30 a.m.

Idaho

ATMI Session: Technology in the Applied Studio

Session Chair: Dan Hosken (California State University, Northridge)

Using Recording Technology and Audio Streaming to Enhance Applied Teaching

Francesca Arnone (West Virginia University-Morgantown)

Practical Applications for the Spectrogram in the Voice Studio: A Demonstration

Loraine Sims (Louisiana State University)

9:15 a.m.–11:00 a.m.

Arizona

ATMI Session: Podcasting Experiences and Workshop

Session Chair: Charles Menoche (Central Connecticut State University)

Paper: *Podcasting Field Experiences for Music Education Students*

Susan Thomas (University of Rhode Island)

Workshop: *Podcasting Basics*

J. Brian Post (Humboldt State University)

David A. Williams (University of South Florida)

9:45 a.m.–11:45 a.m.

Idaho

ATMI Session: Tech Tools for Multimedia

Session Chair: Rocky Reuter (Capital University)

Let BACH Help You Make Interactive Hypermedia Presentations Online

Tim Smith (Northern Arizona University)

*Annotating Digital Scores and Audio for Pedagogy, Research, and the Creation of
Multimedia Lessons*

Brent Yorgason (Marietta College)

*Using Adobe Acrobat Connect Professional to Create Online Media-rich Interactive
Courses in Music*

Steven Kreinberg (Temple University)

11:15 a.m.–12:00 noon

Arizona

ATMI Session: Automated Concert Recording

Session Chair: Charles Menoche (Central Connecticut State University)

Automated Concert and Rehearsal Recording, Archiving, and Distribution

David Michael Cottle (University of Utah)

THURSDAY, November 15 (cont.)**1:00 p.m.–2:30 p.m.****Idaho****ATMI Session: Applied Instruction at a Distance**

Session Chair: Rocky Reuter (Capital University)

Transcending Geography: Utilizing the Yamaha Disklavier, iChat, and Remote Learning Possibilities in Piano Instruction and Teacher Training

Jennifer Snow (University of California-Los Angeles)

George F. Litterst (Private Piano Teacher, Yamaha Consultant)

Can You Hear Me Now?: An Exploration of Online Trumpet Lessons

Rick Dammers (Rowan University)

Bryan Appleby-Wineberg (Rowan University)

1:00 p.m.–2:00 p.m.**Arizona****ATMI Session: Sponsored Workshop (SoundTree/Korg USA, Inc.)**

Session Chair: Cynthia I. Gonzales (Texas State University-San Marcos)

Sibelius Rhythm Section and Percussion Notation

Thomas Rudolph (University of the Arts)

2:15 p.m.–3:15 p.m.**Arizona****ATMI Session: XML, Notation, and Music Scanning**

Session Chair: Cynthia I. Gonzales (Texas State University-San Marcos)

Workshop: *musicXML: The Lingua Franca for Sharing Music Notation Files?*

David Brian Williams (Illinois State University, Emeritus)

2:45 p.m.–4:00 p.m.**Idaho****ATMI Session: Research into Online Teaching**

Session Chair: Jane Kuehne (Auburn University)

Collaborative Learning Online: Does it Really Work? Research Perspectives in Teaching and Learning Online

Melissa McCabe (University of Missouri-Kansas City)

Cognitive, Affective, and Psychomotor Learning Through Online Music Instruction

Cyrus Ginwala (San Francisco State University)

4:00 p.m.–5:00 p.m.**Arizona****ATMI Session: Digital Portfolio Workshop**

Session Chair: Rocky Reuter (Capital University)

Creating Your Digital Portfolio

Daniel Gonko (Cullowhee, North Carolina)

Robert C. Johnson (Western Carolina University)

THURSDAY, November 15 (cont.)**4:00 p.m.–5:00 p.m.****Idaho****ATMI E-Poster Session I***Computer-Assisted Instruction in a General Music Classroom with Only One Computer*

Don Bowyer (University of Alabama-Huntsville)

Hearing Atonal Context – An Integrated Approach Using Interactive Multimedia and Web-Based Dictation Drills

Aleck Brinkman (Temple University)

Developing and Using CAI Applications to Teach Species Counterpoint

Leon W. Couch III (Converse College)

How to Design A Digital Portfolio for A Music Education Program

Cheryl Frazes Hill (Chicago College of Performing Arts)

The META-EVI - New Performance Paths with an Electronic Wind Controller

Tomas Henriques (University of Lisbon, Portugal)

The VoxBook Project: Multi-Media, Multi-Campus, Collaborative Database for Solo Voice

Margaret Kennedy-Dygas (Hope College)

Atonal Dictation—Extending MacGamut

Brian Kershner (Central Connecticut State University)

Building better Support for Student Success when Using Technology in Music History Courses

Stanley C. Pelkey and Kenneth Smith (Western Michigan University)

Creating a Podcast of Enhanced Episodes

Robert Willey (University of Louisiana-Lafayette)

8:00 p.m.–9:30 p.m.**Idaho****Concert of Works By ATMI Performers and Composers**

Session Chair: Dan Hosken (California State University, Northridge)

Dreams and Disasters: Natural or Not Marie Grudzien (University of Utah Alumna)*Fandango* Rodney Oakes (Los Angeles Harbor College)*The Plack Bage* Alan Lechusza*Video Made the Radio Star* Christopher Barrick (University of Nebraska-Lincoln)*Strength* Julia Nolan and Robert Pritchard (University of British Columbia)

FRIDAY, November 16**8:00 a.m.–9:15 a.m.****Idaho****ATMI Session: Technology and Rhythmic Understanding**

Session Chair: Charles Menoche (Central Connecticut State University)

Facilitating Rhythm: An Interactive Tool for Practice and Composition

Jay Alan Jackson (Rochester Institute of Technology)

Andy Jaffe (Williams College)

*Experiencing Rhythm Through Rap: Rap Composition and Recording as a Tool for
Developing and Assessing Rhythmic Understanding*

Alan Kaschub (University of Southern Maine)

8:30 a.m.–10:30 a.m.**Arizona****ATMI Session: Podcasting and Scoring to Picture**

Session Chair: David Brian Williams (Illinois State University Emeritus)

Workshop: *Podcasting Prowess for Music Educators*

Raymond Riley (Alma College)

Paper: *Basic Techniques of Scoring to Picture Using the Digital Audio/MIDI Sequencer
and Quicktime Movies*

Richard Sussman (Manhattan School of Music)

9:30 a.m.–10:30 a.m.**Idaho****ATMI Session: Software for Composition and Theory**

Session Chair: Charles Menoche (Central Connecticut State University)

Using Pictures to Compose: Gesture-oriented Pitch Mapping Techniques in Hyperupic

Bonnie Miksch (Portland State University)

Theory Skills: Other

Teaching Tuning Theory with SuperCollider 3

Reginald Bain (University of South Carolina-Columbia)

10:30 a.m.–11:25 a.m.**Ballroom A-B****Robert Trotter Lecture: Title TBA**

Session Chair: Kathleen Lamkin (University of La Verne)

Welcoming Remarks: Daniel Sher (President, NASM)

2007 Trotter Lecture: Robert J. Werner (University of Cincinnati)

11:30 a.m.–12:25 p.m.**Ballroom A-B****ATMI/CMS Plenary Address**

Session Chair: Scott Lipscomb (University of Minnesota - Twin Cities)

Extending the Musical Experience - from the Physical to the Digital... and Back

Gil Weinberg (Georgia Institute of Technology)

FRIDAY, November 16 (cont.)**12:30 p.m.–1:25 p.m.****ATMI Special Interest Groups**

Music Lab Management

Arizona

Moderator: Charles Menoche (Central Connecticut State University)

Distance Education in Music

Idaho NE

Moderator: Jane Kuehne (Auburn University)

Multimedia Development (on- and off-line)

Idaho SW

Moderator: Scott Lipscomb (University of Minnesota - Twin Cities)

CAI Theory/Aural Skills

Moderator: Susan Piagentini (Northwestern University)

Wyoming**1:30 p.m.–2:45 p.m.****Idaho****ATMI Session: Technology-Based Musicianship and Violin Instruction**

Session Chair: Jane Kuehne (Auburn University)

Technology Reforming Music Teaching Through Comprehensive Musicianship

Kimberly C. Walls (Auburn University)

Robert Lyda (Auburn University)

Jennifer Canfield (Auburn University)

Claire Burns (Auburn University)

Technology-enhanced Music Learning and Teaching: i-Maestro Framework and Gesture Support for the Violin Family

Kia Ng (ICSRiM - University of Leeds)

Bee Ong (ICSRiM - University of Leeds)

Oliver Larkin (ICSRiM - University of Leeds)

Thijs Koerselman (ICSRiM - University of Leeds)

1:30 p.m.–2:30 p.m.**Arizona****ATMI Session: Sponsored Workshop (SoundTree/Korg USA, Inc.)**

Session Chair: Cynthia I. Gonzales (Texas State University-San Marcos)

Hands-on Evaluation of Virtual Instruments

Thomas Rudolph (University of the Arts)

2:30 p.m.–3:30 p.m.**Arizona****ATMI Session: Digital Video Workshop**

Session Chair:

Digital Video Basics for Musicians: Exploring Final Cut Pro

Bruce H. Frazier (Western Carolina University)

FRIDAY, November 16 (cont.)**2:45 p.m.–4:30 p.m.****Idaho****ATMI Session: Technology in Composition and Theory**

Session Chair: Jane Kuehne (Auburn University)

Active Versus Passive Learning: On the Effectiveness of Student Tasks in the Online Teaching of Music Fundamentals

Nico Schüler (Texas State University-San Marcos)

Elizabeth Lee (Texas State University-San Marcos)

Teenaged Girls and Technology-Based Composition: Outreach, Products, and Reflections

Betty Anne Younker (University of Michigan)

Mary Simoni (University of Michigan)

On Using Video Direction as an Application of the Study of Music Theory

Robert Willey (University of Louisiana-Lafayette)

3:45 p.m.–5:30 p.m.**Arizona****ATMI Session: Music Theory Assessment and Workshop on Listening Guides**

Session Chair: Richard Repp (Music Industry Institute)

Paper: *Beyond Paper and Pencil with "Exposition" – An Online, Customizable Assessment Tool for Music Theory*

Jennifer Snodgrass (Appalachian State University)

Susan Piagentini (Northwestern University)

Frank Barry (Appalachian State University)

Byron Richard (Trinity Software Solutions, Inc.)

Workshop: *Creating Interactive Listening Guides: A Workshop with iMovie and Flash*

Cynthia I. Gonzales (Texas State University-San Marcos)

4:30 p.m.–5:30 p.m.**Idaho****ATMI E-Poster Session II***Free Internet Applications That Support Fundamental Skills in Lower-level Music Theory and Ear Training Classes*

Shane Anderson (Texas A&M University-Corpus Christi)

CocoaCollider

Ryan Brown (University of Washington)

Survey of Commercial Musical Software for the Creation of Music

Sanford Hinderlie (Loyola University)

Piano Instruction and Performance without Boundaries: Real-time Linking of Acoustic Pianos over the Internet is Now a Reality

George F. Litterst (Private Piano Teacher, Yamaha Consultant)

*Virtual Ensembles for Chamber Music and Concerto Performance in the Piano Studio:**The Use of Virtual Instruments and Automated-Synchronization Software*

David R. Montano (University of Denver)

Poème Électronique In Music Appreciation Textbooks: A Case Study of Electronic Music Reception

Joo Won Park (University of Florida)

FRIDAY, November 16 (cont.)

*Learn How College Students in America Teach Music to Children in Mexico Through
Video-Conferencing Technology*

Patricia Riley (The University of Vermont)

Electronic Realizations of Conlon Nancarrow's Studies for Player Piano

Robert Willey (University of Louisiana-Lafayette)

SATURDAY, November 17**8:00 a.m.–9:15 a.m.****Idaho****ATMI Session: Technology Tools for Aural Skills**

Session Chair: Cynthia I. Gonzales (Texas State University-San Marcos)

Post-Ut: A Web-Based Ear Training System for Computer Musicians and Audio Engineers

Christopher Ariza (Towson University)

Sight-Singing Anthology as Database: Developing a Trait-Based Search Tool for Aural Skills Instruction

Gary S. Karpinski (University of Massachusetts Amherst)

Richard Kram (Tyco Telecommunications)

8:00 a.m.–9:45 a.m.**Arizona****ATMI Session: Technology and K-12 Pedagogy**

Session Chair: Jane Kuehne (Auburn University)

Connecting Pre-service Educators with Grades 2–12 Music Composition Students in an Online Mentoring Field Experience

Sandi MacLeod (University of Vermont/Vermont MIDI Project)

Learning Through Music: Uses of Technology to Enhance Integration of Music Across the K–8 Curriculum

Scott D. Lipscomb (University of Minnesota - Twin Cities)

Music and Multimedia: Bridging the Learning Gap for Music Teachers and Students At Risk

Gena R. Greher (University of Massachusetts Lowell)

9:30 a.m.–11:00 a.m.**Idaho****ATMI Session: Technology Skills**

Session Chair: Cynthia I. Gonzales (Texas State University-San Marcos)

Technology for the Common Man: Skill Sets for the Educator, Conductor, and Performer

Andrew M. Bliss (University of Kentucky)

Kerry O'Brien (Indiana University)

The Design and Development of a Learning Object for the Study of a Musical Composition

Lisa Zdechlik (University of Arizona)

10:00 a.m.–11:00 a.m.**Arizona****ATMI Session: Workshop on Computer Lab Management**

Session Chair: Richard Repp (Music Industry Institute)

Using Computer Lab Management Tools to Improve Instruction and Learning

Charles Menoche (Central Connecticut State University)

SATURDAY, November 17 (cont.)**11:00 a.m.–11:55 a.m.****ATMI Special Interest Groups**Music Lab Management **Arizona**

Moderator: Charles Menoche (Central Connecticut State University)

Distance Education in Music **Idaho**

Moderator: Jane Kuehne (Auburn University)

Multimedia Development (on- and off-line) **Flagstaff**

Moderator: Scott Lipscomb (University of Minnesota - Twin Cities)

CAI Theory/Aural Skills **Tucson**

Moderator: Susan Piagentini (Northwestern University)

1:00 p.m.–2:00 p.m.**Arizona****ATMI Session: Panel on Computer Lab Management**

Session Chair:

Operating and Maintaining a University Music Lab

V. Keith Mason (Belmont University)

Charles Menoche (Central Connecticut State University)

Michael Nord (Willamette University)

Richard Repp (Music Industry Institute)

2:00 p.m.–3:45 p.m.**Idaho****ATMI Session: Social Computing and Music Teaching/Learning**

Session Chair:

“Social Computing” and Music Teaching/Learning: Roots, Realities, and Reasoned Speculation

Peter Webster (Northwestern University)

David Brian Williams (Illinois State University, Emeritus)

Extending the Classroom: Using Blogs to Promote Discourse With Music Education Students

James T. Frankel (Teachers College, Columbia University)

3:45 p.m.–5:00 p.m.**Idaho****ATMI Session: Music Technology Curricular Concerns**

Session Chair: Dan Hosken (California State University, Northridge)

Pursuing NASM Approval for an Undergraduate Music Technology Degree

Nathan Wolek (Stetson University)

Implementation of a University Music Technology Distance Learning Course

Richard Repp (Music Industry Institute)

4:00 p.m.–5:00 p.m.**Arizona****ATMI Session: Workshop in Social Computing**

Session Chair: Jane Kuehne (Auburn University)

Web 2.0 and Music Education: Tools for the Classroom and Studio

Kimberly James (The University of Montana)

5:00pm-6:00pm**Idaho**

ATMI Business Meeting

Abstracts and Biographical Information

ATMI National Conference
November 15–17, 2007
Salt Lake City, UT



PLENARY SESSION

Extending the Musical Experience—From the Physical to
the Digital... and Back

Dr. Gil Weinberg, Georgia Institute of Technology
Fri., Nov. 16, 11:30am-12:25pm, Ballroom A-B

It is widely perceived that the computer has enriched and advanced the art form of music. Digital technology brought new palettes of sounds, composition techniques, and production methods; Innovations in digital compression and distribution changed music consumption and listening practices; for performers, novel musical instruments and controllers have been developed based on a variety of sensing, interaction, and mapping approaches. But after more than two decades of research in computer music, a fundamental question must be asked – has digital technology truly innovated and enriched the expressive, emotional, and creative core of the musical experience? It is not clear that the answer to this question is as positive as we, music technologists, would like to think.

During the last ten years, inspired and motivated by the prospect of innovating the core of the musical experience, I have explored a number of research directions in which digital technology bears the promise of revolutionizing the medium. The research directions identified – gestural expression, collaborative networks, and constructionist learning – may lead to musical experiences that cannot be facilitated by traditional means. The first direction builds on the notion that through novel sensing and mapping techniques, new expressive musical gestures can be discovered that are not supported by current acoustic instruments. Such gestures, unconstrained by the physical limitation of acoustic sound production, can provide infinite possibilities for expressive and creative musical experiences for novice as well as trained musicians. The second research direction utilizes the digital network in an effort to create new collaborative experiences, allowing players to take an active role in determining and influencing not only their own musical output but also that of their co-performers. By using the network to interdependently share and control musical materials in a group, musicians can combine their musical ideas into a constantly evolving collaborative musical activity that is novel and inspiring. The third research direction utilizes constructionist learning, which bears the promise of

revolutionizing music education by providing hands-on access to programmable music making. Through interaction with physical computational objects, learners can construct personally meaningful musical artifacts that enhance and deepen their learning.

While facilitating novel musical experiences that cannot be achieved by traditional means, the digital nature of these research directions often led to flat and inanimate speaker-generated sound, hampering the physical richness and visual expression of acoustic music. In my current work, therefore, I attempt to combine the benefits of digital computation and acoustic richness, by exploring the concept of “robotic musicianship.” I define this concept as a combination of musical, perceptual, and social skills with the capacity to produce rich acoustic responses in a physical and visual manner. The robotic musicianship project aims to combine human creativity, emotion, and aesthetic judgment with algorithmic computational capabilities, allowing human and robotic players to cooperate and build off one another’s ideas. A perceptual and improvisatory robot can best facilitate such interactions by bringing the computer into the physical world both acoustically and visually.

I will present six projects that represent this journey that were initiated by extending acoustic music with digital technology and ended by enhancing digital music through acoustical means. The first project in the journey, titled Musical Playpen, was developed in an effort to explore new musical gestures that can provide young children with meaningful musical experiences. The instrument sensed children's motion inside a playpen filled with plastic balls and mapped their gestures to musical output. This allowed “players” to use familiar play activities while exploring the musical consequences of their actions. In an effort to further investigate constructionist learning techniques, I developed the Musical Fireflies – palm-sized digital musical instruments that were designed to physically introduce mathematical concepts in music without requiring prior knowledge of music theory or instruction. Through simple controllers, the “fireflies” allowed players to input rhythmic patterns, embellish them in real-time, synchronize patterns, and trade instrument sounds. Since interaction with other players increased the richness and complexity of the experience, the Musical Fireflies also motivated collaboration and social play. This led to a further exploration of networked musical interactions with the Squeezables, a collaborative musical instrument that allowed a group of players to perform and improvise musical compositions using a set of squeezing and pulling gestures. The instrument, comprised of six squeezable and retractable gel balls mounted on a small podium, was designed to provide an alternative to asynchronous and sequential interactions with discrete musical controllers by allowing multiple channels of collaborative simultaneous input. The continuous nature of the interaction with the Squeezables led to the development of the Beatbugs, which featured more discrete and sequential group collaboration. These hand-held percussive instruments facilitated the creation, manipulation, and sharing of rhythmic motifs through a simple percussive interface. When multiple Beatbugs were connected in a network, players could form large-scale collaborative compositions by interdependently sharing and developing one another’s musical ideas. The Beatbugs were also featured in a following project, *iltur*, which was designed to explore a novel method of interaction between expert and novice musicians. Here, Beatbug players recorded live musical input from trained musicians and responded by transforming the recorded material in real-time, creating motif-and-variation call-and-response routines on the fly. The most recent stop in this journey is a perceptual robotic percussionist named Haile, which can listen to live players, analyze their music in real-time, and use the product of this analysis to play back in an improvisational manner. It is designed to combine the benefits of computational

power and algorithmic music with the richness, visual interactivity, and expression of acoustic playing. When collaborating with live players, Haile is designed to inspire players to interact with it in novel manners that combine human expression and robotic algorithms. Similar to the projects described previously, the robotic percussionist project was designed to address the same open question I established more than ten years ago. Like the other projects, it generated a set of new open questions that may assist in defining the future of music.

Biographical Information:

Gil Weinberg is the Director of Music Technology at Georgia Institute of Technology, where he founded the Master of Science in Music Technology program and is currently in the process of establishing a new research center in this field. He holds professorship positions both in the Music Department and the College of Computation. Dr. Weinberg received his M.S. and Ph.D. degrees in Media Arts and Sciences from Massachusetts Institute of Technology, after co-founding and holding a number of positions in music and media software industry in his home country of Israel.

In his academic work Weinberg attempts to expand musical expression, creativity, and learning through meaningful applications of technology. His research interests include new instruments for musical expression, musical networks, machine and robotic musicianship, sonification, and music education. Weinberg's music has been featured in festivals and concerts such as Ars Electronica, SIGGRAPH, ICMC, and NIME, and with orchestras such as Deutsches Symphonie-Orchester Berlin, the National Irish Symphony Orchestra, and the Scottish BBC Symphony. He has published more than 30 peer-reviewed papers in publications such as *Computer Music Journal* (MIT Press), *Leonardo Music Journal* (MIT Press), *Organized Sound* (Cambridge University Press), and *Personal Technologies* (Springer Verlag), among others. His interactive musical installations, notably the Beatbugs and the Musical Playpen, have been presented in museums such as the Smithsonian Museum, Cooper-Hewitt Museum, and Boston Children's Museum. With his perceptual robotic percussionist, Haile, he has traveled around the world, featuring more than ten concerts in Asia, Europe, and North America. As a result of this project, Weinberg has recently been recommended by National Science Foundation to receive a \$450,000 grant to continue to explore the concepts of machine and robotic musicianship. Based on his most recent project – a set of musical applications for cell phones – he is currently in the process of establishing a new company that will attempt to bring innovative research in music technology to the general public.

ABSTRACTS AND BIOGRAPHICAL INFORMATIONIn Order of Presentation

THURSDAY, NOVEMBER 15, 2007***Using Recording Technology and Audio Streaming to Enhance Applied Teaching***
Francesca Arnone (West Virginia University)

Recording technology has greatly improved in both quality and affordability. Using this important pedagogical tool in an applied setting has always been valued and can now be shared with students in a simple way via the web. This application provides them immediate evidence of their playing or singing in a format with which they are familiar and likely to use, while creating a way of maintaining a database to which a variety of performances may be added and collected over time. This demonstration walks through the process of digital audio recording, transferring the material, and uploading it to user-friendly software with optional password protection. Both audio and video recordings are easily transferable and used via this process. Student responses to this are documented regarding both its ease of use and how it has enabled them to increase their performance progress and practice habits.

Dr. Francesca Arnone is Assistant Professor of Flute and member of the Laureate Wind Quintet at West Virginia University. She earned flute performance degrees from Oberlin, the San Francisco Conservatory, and the University of Miami. Piccoloist of the Palm Beach Opera Orchestra since 1997, her previous positions include Principal Flute of the Boise Philharmonic and Co-Principal/Piccolo of the Orquesta Sinfónica de la Universidad de Guanajuato (Mexico). She has performed with the Florida Philharmonic, the Florida West Coast Symphony, the Moscow Chamber Orchestra, Missouri Chamber Orchestra, and the Orquesta Sinfónica de Tenerife (Spain), and as a flute and piccolo soloist in the United States and Mexico. She previously taught at Northwest Nazarene, Boise State, and Idaho State Universities. She is a winner of the National Flute Association's Doctoral Dissertation and Convention Performers competitions. While at the San Francisco Conservatory, she was a participant in Bobby McFerrin's year-long "Creativity 101" Class.

Practical Applications for the Spectrogram in the Voice Studio: A Demonstration
Lorraine Sims (Louisiana State University)

A voice teacher with a computer with a sound card and a microphone can enhance the teaching of singing in a visual way using the software called Voce Vista for spectral analysis of sounds. Much of singing instruction is abstract because the instrument is inside the body and cannot be seen or even directly controlled. While great teachers of singing have gotten along without technology of any kind for generations, there is no reason that it must continue in this way. Several basic principles of good vocal technique can easily be seen and explained with a spectrogram. All students, especially those who are visual learners, will quickly accept what the

teacher is trying to explain when it is in a colorful display on a computer screen. The demonstration will include examples of the types of vocal technical problems that can be seen and addressed with the use of the spectrogram.

Soprano Loraine Sims is an Assistant Professor at Louisiana State University in Baton Rouge, Louisiana where she teaches Voice and Vocal Pedagogy. She has achieved critical-acclaim for her “vibrant, bell-like soprano” as well as her “warm intimacy, engaging passion and casual artistry.” She is an active recitalist whose voice has been described as “remarkably versatile, ranging from delicate lyricism to dramatic power” and her repertoire includes a broad range of songs and arias from the Baroque through Contemporary periods as well as a variety of selections from the American Musical Theater tradition. Dr. Sims is a member of MTNA and she is the current Louisiana Governor of NATS. She enjoys giving master classes which recently have included the Royal Irish Academy of Music in Dublin, Ireland, Minnesota State University, Gustavus Adolphus College (Minnesota), Drury University (Missouri), Southeastern Oklahoma State University, and the University of Southern Mississippi.

Podcasting Field Experiences for Music Education Students

Susan Thomas (University of Rhode Island)

In this presentation, I will describe a technological answer to the problem of providing enough field experience to pre-service music education students. Our music education curriculum is progressing toward supplementing field experience practicum placements with electronic observations via podcasting. I will include a brief overview of how the electronic observations project was planned and executed, as well as discuss the reactions of students and faculty to the project. Included in the description will be an overview of technology utilized, content and format of podcasts as well as how students gain access to electronic observations and how instructors assess student understanding, and finally sample excerpts of podcasts

Susan Thomas is a Lecturer in Music at the University of Rhode Island. She has been responsible for developing the electronic portfolio for music students that demonstrates their National Association of Schools of Music Competencies and their mastery of the Rhode Island Beginning Teachers standards using an outcomes-based assessment system. She has worked with Audrey Cardany, Professor of Music Education, in developing the series of Podcast Field Experiences. Susan is also an orchestral player; she plays Principal Flute in the Rhode Island Philharmonic Orchestra and also teaches Applied Flute at URI. Her degrees are from the New England Conservatory and Lesley University.

Podcasting Basics

J. Brian Post (Humboldt State University)

David A. Williams (University of South Florida)

This hands-on presentation for beginning to intermediate podcast developers will provide instruction on the creation of quick and easy podcasts for music education using GarageBand, ProfCast, Keynote and other peripheral Macintosh applications. Attendees will learn how to create and use the following different types of media for podcast production:

- Text
- Music Notation Graphics

- Music/Audio files and MIDI files
- Spoken Text/Audio files
- Video Files

Also, instruction will be provided on how to compile the media in GarageBand and ProfCast. Audio files will be created and mixed down using GarageBand and other audio and video files will be imported from iTunes and mixed into the composite podcast timeline.

Dr. J. Brian Post is currently teaching composition, music theory and music technology classes at Humboldt State University. He has a BA in piano performance from California State University, Hayward, a MM in Theory and Composition from the University of Northern Colorado, and a DA in Theory and Composition from the University of Northern Colorado. Prior to his position at HSU, Mr. Post taught at Emporia State University, the University of Northern Colorado, the Rocky Mountain Music Technology Workshop, the Midwest Music Camp, the Interlochen Arts Camp, and the International Music Camp. His most recent work was performed in May 2006 and was a cross discipline worked that incorporated dance, digital audio and slide projections. Other works composed by Dr. Post have been performed nationally by the Greeley Philharmonic, Cal State Hayward Big Band, Interlochen Lab Band I, and the Interlochen Concert Band.

David A. Williams is an associate professor of music education and technology at the University of South Florida. His research interests center on the enhancement of teaching/learning situations in music education, especially with technology. Dr. Williams was instrumental in the formation of a distance learning masters degree program at USF and has been teaching on-line classes for the past eight years. He recently completed work on a research project that involved the creation of digital music videos with k-12 students and teachers as an alternate model to learn about the arts. Presently he is investigating the types of meanings acquired by teenagers through participation in musical activities in and out of school.

Let BACH Help You Make Interactive Hypermedia Presentations Online

Timothy A. Smith (Northern Arizona University)

The BinAural Collaborative Hypertext (B.A.C.H.) is a project funded by the Hinkle Charitable Foundation of New York. The purpose of the project is to provide tools for creating Shockwave-based interactive hypermedia online (without need for ancillary software, programming, web-page layout, or knowledge of html). BACH's goal is to help teachers to assemble an online hypermedia presentation in comparable time to making a handout. The instructor who can upload and download files from a server can create a hypermedia presentation by linking to existing web resources, mp3 files, gif or png screen dumps of scores, etc. BACH "marries" up these elements in an interactive format. BACH includes an authoring tool, player, and documentation, available online for non-profit educational use. Content specific information created by means of the BACH authoring tool is stored in a .txt file that remains the property of its creator.

Tim Smith is a professor of Music Theory at Northern Arizona University where he has worked for twelve years. Smith is co-author, with David Korevaar (University of Colorado, Boulder) of the Fugues of Bach's Well-Tempered Clavier website. He is currently collaborating with Korevaar in a commissioned recording of the Goldberg Variations that will be used to demonstrate the utility of the BACH tools and concept.

Annotating Digital Scores and Audio for Pedagogy, Research, and the Creation of Multimedia Lessons

Brent Yorgason (Marietta College)

As more and more schools of music are digitizing and streaming audio from their libraries, providing students and faculty with access to more and more content, it is important to consider the question: "What can you DO with this content?" The Variations2 project at Indiana University has invested a great deal of time and resources into the consideration of this question, resulting in the creation of a number of very useful tools and applications that allow music instructors and students to meaningfully interact with digital content, both inside and outside of the classroom.

In this presentation, I will demonstrate a number of these tools, including a set of music-specific score annotation tools, an application for creating interactive annotated timeline diagrams, and a multimedia lesson editor that integrates all of these tools into a single framework.

Brent Yorgason is an Assistant Professor of music theory at Marietta College and is finishing his Ph.D. in music theory at Indiana University. Brent has served for four years as the Managing Editor of Music Theory Online. He also worked for several years as a computer programmer on the Variations2 Digital Music Library Project at Indiana University. In addition to his work with music and technology, Brent is interested in such diverse topics as rhythm and meter, performance studies, Schenkerian analysis, machine metaphors in music, minimalism, postminimalism, jazz and hymnology.

Using Adobe Acrobat Connect Professional to Create Online Media-Rich Interactive Courses in Music

Dr. Steven Kreinberg (Temple University)

Adobe Acrobat Connect Professional (formerly called Macromedia Breeze) allows music faculty to work with students interactively in a cross-platform, real-time, media-rich environment that requires only a high-speed Internet connection and the free Adobe Flash player that is installed on greater than 97% of Internet-connected computers worldwide. Thus, matriculated students as well as faculty-invited course guests do not have to purchase special software to interact with and use the program. Faculty can create virtual classrooms in real time where students and invited guests interact with the instructor and classmates much as they would in traditional classrooms. Additionally, faculty can create self-paced courses, simulations, meetings, and tutorials that are available online and on demand at times and durations specified by the instructor.

Steven Kreinberg is Associate Professor of Music History at Temple University. His courses include those in Music History, Music Appreciation, and Music Technology, where he has specialized in the development of online instruction in music. Previous presentations have included the World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education, ATMI, and the Pennsylvania Educational Technology Exposition and Conference, among others. Dr. Kreinberg also has served as a music administrator for many years, including Director of Admissions at Westminster Choir College, and Senior Associate Dean at Temple University. He holds a Bachelor of Music degree in Music Education from Westminster Choir College, the Master of Music degree in Musicology from Indiana University, and the Doctor of

Education degree in Higher Education Administration from Temple University. Currently he is pursuing a Master of Science degree in Instructional Design and Technology at Philadelphia University.

Automated concert and rehearsal recording, archiving, distribution
David Michael Cottle (University of Utah)

Digital music production 24/7: This discussion will cover basic digital editing techniques using intuitive, inexpensive programs to produce incipits for class, CDs and MP3s of private instruction, audition CDs, and podcasts. We will also demonstrate our system for automated recording, where five spaces, three concert halls and two rehearsal halls, are recorded 24 hours a day, 7 days a week, greatly facilitating compilation of audition CDs, regular concerts and convocations, and reviewing rehearsals in preparation for concerts. recorded 24 hours a day, 7 days a week, greatly facilitating compilation of audition CDs, regular concerts and convocations, and reviewing rehearsals in preparation for concerts.

Dr. Cottle has Composition degrees from Utah State University, Brigham Young University, and the University of Illinois. He began work in guitar performance, with an emphasis in jazz, then moved to composition as an undergraduate, focusing on electroacoustic music. As a graduate assistant at the University of Illinois he received several campus wide awards for innovation and excellence in teaching. He subsequently served on the Dean's awards committee. While at U of I Dr. Cottle moved to computer-assisted musics, joined the Computer Education Research Lab, which develops music related software. His work with this group included an article published in *Beyond MIDI: The Handbook of Musical Codes*. After graduating he served on the faculty at the University of Illinois, BYU, and Waterford, developing new curricula, teaching theory, electroacoustic music, and computer assisted composition. His text for SuperCollider, a language based synthesis program, is published online and used world wide, by individuals and in university courses, most notably Iowa State University, CCRMA at Stanford, UCSB, Penn State, Eastman School of Music, and Princeton Department of Music. He is now director of the experimental music studios at the University of Utah, where he teaches music technology, audio engineering, theory, and computer assisted composition. Dr. Cottle serves on the faculty at the University of Utah, where he teaches music technology, audio engineering, theory, and computer assisted composition.

Transcending Geography: Utilizing the Yamaha Disklavier, iChat and remote learning possibilities in Piano Instruction and Teacher Training.

Dr. Jennifer Snow (University of California Los Angeles)
George F. Litterst (Private Piano Teacher/Yamaha Consultant)

An interactive demonstration which highlights the use of video conferencing and digital piano remote learning technology as a creative and innovative approach to music instruction. The demonstration will involve a live Internet connection and cross-country teaching demonstration.

Dr. Jennifer Snow is an accomplished performer who has appeared as a solo and collaborative pianist throughout Canada, the United States, Asia and Europe. She currently teaches piano and pedagogy at UCLA and also presents workshops for teachers internationally. In addition to her performing career, her new creative projects include the creation and production of Brassfire,

video direction, and innovative applications of long-distance learning technology. Dr. Snow has presented at conferences including MTNA, World Piano Pedagogy, and RCM Art of Teaching.

George Litterst is a nationally known music educator, clinician, author, performer, and music software developer. A classically-trained pianist, he is a MIDI musician who works extensively with the high-tech Disklavier piano in his performing, teaching, and other professional activities. As a software developer, Mr. Litterst is the co-author of the intelligent accompaniment software program, Home Concert Xtreme, and the electronic music blackboard program, Classroom Maestro, from TimeWarp Technologies (www.timewarptech.com). Author of over 100 articles on the application of new technologies in music education, Mr. Litterst is currently the technology co-editor for both American Music Teacher and the technology editor Keyboard Companion.

Can You Hear Me Now?: An Exploration of Online Trumpet Lessons

Rick Dammers (Rowan University)

Bryan Appleby-Wineberg (Rowan University)

The increasing availability of internet-based video conferencing is opening new opportunities for music instruction. Through the experiences of an eighth grade student and her online trumpet teacher, the possibilities and limitations of this environment are explored. In this session, a portion of an online lesson will be recreated, and the themes and issues that arose over the three month study period will be discussed. Implications for further research and future practice will also be addressed.

Rick Dammers is an Assistant Professor of Music Education at Rowan University. He completed his Ph.D. in Music Education at the University of Illinois Urbana-Champaign. Prior to teaching at Rowan, he was a music teacher (band) and the Fine Arts Facilitator in the Ladue School District in suburban St. Louis. Rick has presented at several state and national conferences including the Association for Technology in Music Instruction (ATMI), Missouri Music Educators Association, TI:ME/MENC, Technological Directions in Music Learning, Midwest Educational Technology Conference, New Directions in Music Education, and the National Symposium on Music Instructional Technology. He went to Northwestern University where he earned a Bachelor of Music Education. While at Ladue, he earned a Masters in Music Education at the University of Illinois.

Dr. Bryan Appleby-Wineberg is Assistant Professor of Trumpet and Brass at Rowan University where he is Assistant Chair of the Department of Music, Coordinator of the Graduate Program in Music, and Head of the Brass Division. He is Principal Trumpet of the Bay-Atlantic Symphony, a member of the Riverside Symphonia, and Co-Principal Cornet and Assistant Conductor of the Atlantic Brass Band. Bryan has performed with the Cleveland Orchestra, The Indianapolis Symphony, The Opera Company of Philadelphia, The Chamber Orchestra of Philadelphia, The Delaware Symphony, the Akron and Owensboro Symphonies, the Jeunesses Musicales World Orchestra, The Bach Festival of Philadelphia, and many others. Bryan holds degrees from The Oberlin Conservatory of Music (B.M. in Music Education and Trumpet Performance), The Cleveland Institute of Music (M.M. in Trumpet Performance), and Rutgers University (D.M.A. in Trumpet Performance). Bryan lives in Glassboro, NJ with his wife a Certified Nurse-Midwife and their two daughters.

Sponsored Session (SoundTree/Korg, USA): *Sibelius Rhythm Section and Percussion Notation***Thomas Rudolph (University of the Arts)**

In this hands-on workshop you will transform Sibelius scores into rhythm section notation including slashes, chords, and drum/percussion parts. Editing drum maps will be addressed. This workshop is an excerpt from the Berklee Music online course "Music Notation Using Sibelius."

Thomas Rudolph, Ed. D. is the Director of Music for Haverford School District, in Havertown, Pennsylvania and an adjunct Assistant Professor at The University of the Arts. He teaches technology courses at Berklee College of Music, Central Connecticut State University, and Villanova University. Tom is the president of TI:ME, the Technology Institute for Music Educators. His books include *Sibelius: A Comprehensive Guide*, *Finale An Easy Guide to Music Notation*, *Recording in the Digital World*, and *Teaching Music With Technology*. His articles have appeared in the *Music Educators Journal*, *The Instrumentalist*, *Jazz Educator Journal*, *Downbeat Magazine*, and *Music Education Technology Magazine*.

musicXML: The Lingua Franca for Sharing Music Notation Files?**David Brian Williams (Illinois State University, Emeritus)**

The musicXML file format offers universal sharing of music notation. This session will offer simplified descriptions of XML, XML projects for music, and the musicXML/Dolet plug-in for Finale and Sibelius. Translation of a variety of scores will be demonstrated along with an analysis of the results.

David Brian Williams has been an evangelist and educator in the field of music technology for some 40 years. He co-authors with Peter Webster the textbook, *Experiencing Music Technology* (3rd Ed). He has been active in CMS, ATMI, MENC, TI:ME, and Educause in both leadership and support roles. Dr. Williams is emeritus professor of music and arts technology at Illinois State University. See www.tech4music.net for more information.

Collaborative Learning Online: Does it Really Work? Research Perspectives in Teaching and Learning Online**Melissa McCabe (University of Missouri-Kansas City)**

Collaboration forms the foundation of an online learning community; it brings students together to support the learning of each member of the group while promoting creativity and critical thinking. This session will present interactive activities that can be used in many different areas of online music instruction. Research examining the affects of collaborative teaching strategies on student achievement and perceived satisfaction will be presented. This session will also focus on developing teaching strategies that utilize communication technologies (both asynchronous and synchronous) that can be used to create a collaborative and highly interactive learning environment in the online setting.

Melissa McCabe is currently an Interdisciplinary Ph.D. candidate in Music Education/Curriculum and Instruction at the University of Missouri-Kansas City. She received a Bachelor of Music

degree from Simpson College and a Master of Music Education degree from the University of Missouri-Kansas City. She has taught band, choir, and orchestra in West Burlington, IA, and Kansas City, KS. As a graduate student, she taught online music courses and courses in teaching music with technology. Her biography is included in “Who’s Who in American Women”, “Who’s Who in America” and “Who’s Who in the World”. McCabe has presented sessions on research in technology at the TI:ME National Conference, Missouri Music Educators State Conference and the Kansas Music Educators State Conference. In 2006 McCabe was awarded a Superior Graduate Teaching Award from the University of Missouri-Kansas City for her teaching in the online music appreciation and online history or rock and roll courses.

Cognitive, Affective And Psychomotor Learning Through Online Music Instruction

Cyrus Ginwala (San Francisco State University)

In this presentation we will demonstrate how online instruction in music classes can combine cognitive, psychomotor and affective experiences that provide novice music students with meaningful contextual learning in music. We will discuss how two online music education classes—a large and small section--utilize online content, hands-on laboratory instruction, live performance experiences, and personal reflective practices. In addition, we will show how online instruction content is linked to cognitive, psychomotor and affective goals for each class. Examples include learning through the personal performance of music, understanding the intricacies of psychomotor application, and the peer assessment and critique of musical performances.

Cyrus Ginwala is Assistant Professor of Music at San Francisco State University. Dr. Ginwala directs the University Orchestra and teaches courses in instrumental music and beginning music theory. Dr. Ginwala has a D.M.A. in orchestral conducting from Peabody Conservatory of Music and was the music director of the Symphony of the Mountains in Tennessee.

Creating Your Digital Portfolio

Daniel Gonko (Cullowhee, North Carolina)

Robert C. Johnson (Western Carolina University)

In this hands-on session, Apple’s “DVD Studio Pro” software will be used in conjunction with the “iLife” package to create a digital portfolio. The primary focus will be the development of materials in a digital format to make your portfolio more accessible to peers and potential employers. We will also provide suggestions for sharing this knowledge with your students so they can begin creating their own portfolios as they progress through their educational careers. This presentation will include simple photo and audio editing, document manipulation, importing and assigning media, and the burning/duplicating process.

Daniel Gonko is a graduate of Western Carolina University, where he earned his Master of Music degree in Commercial and Electronic. He received his Bachelor of Music (Composition/Theory) and his Bachelor of Music Education from Central Michigan University where he studied with David Gillingham and has pieces published by C. Alan Publications. Recently, Mr. Gonko has done extensive work in WCU’s recording studio, including engineering, mixing, and mastering faculty, student, and professional ensembles.

Robert C. Johnson has recently graduated with a Master of Music degree from Western Carolina University with an emphasis in music technology and motion picture composition. His knowledge of sequencing, music notation, and digital video applications has been useful in his work as a teaching fellow at the university. He received the Bachelor of Science in Music Education degree from Western Carolina University in 2000 and taught several years in the North Carolina Public School system. His interest in Indonesian music has led to travel to Bali resulting in several compositions for the various Indonesian Gamelan ensembles.

ELECTRONIC POSTER: *Computer-Assisted Instruction in a General Music Classroom with Only One Computer*

Don Bowyer (University of Alabama in Huntsville)

Many general music teachers say they would like to use educational software, but "Our computer lab is not available for music and I only have one computer in my classroom." While a full computer lab for music might be nice, there are educational ways to use Computer-Assisted Instruction in a classroom with a single computer. This presentation will demonstrate effective lesson plans using three readily-available educational music software titles with one computer, a data projector or television, and a sound system. The presentation will also include a discussion of required hardware and cabling.

Don Bowyer is Chair of the Department of Music at the University of Alabama in Huntsville, where he teaches jazz and music technology. He has taught at every level from pre-kindergarten through collegiate in the United States, the Caribbean, and Sweden. He is the creator of Dolphin Don's Music School, an educational computer game that teaches music theory and ear training for children. As a trombonist, Bowyer has performed in nearly 40 countries on five continents, including eleven cruise ships in the Caribbean, the Mediterranean, and the Gulf of Alaska. The first ten didn't sink.

ELECTRONIC POSTER: *Hearing Atonal Context – An Integrated Approach Using Interactive Multimedia and Web-Based Dictation Drills*

Aleck Brinkman (Temple University)

I will present a systematic approach for teaching college students to hear/sing 20th century music. We do this in one semester, with students who are already fluent with tonal music using moveable DO solfege. Although I incorporate lots of rhythmic exercises in the curriculum, I will concentrate on the progression of exercises for learning 20th century pitch materials. The approach emphasizes hearing intervals – first isolated, and then in the context of various scales and pitch class sets. We sing with pitch class integers, relating the interval size in half steps to the numeric differences between the pc integers. I will also demonstrate a series of interactive web-based programs that I have developed to support this curriculum. These were written using Macromedia (now Adobe) Director, with Sequence Xtra to control MIDI devices or Quicktime. All programs are online for use of our students and are also available to the public.

The author received his PhD from the Eastman School of Music, University of Rochester, where he taught for 27 years before accepting his current position. His primary research interest has been in developing methods, data structures, and algorithms for music analysis and music synthesis systems. He has recently turned his efforts toward the development of multimedia and

web based methods for music instruction and for presentation of analytic materials. He has published in Music Theory and Music Cognition Journals, and has published a major book on Computer Programming for Music Research with the University of Chicago Press.

ELECTRONIC POSTER: *Developing and Using CAI Applications to Teach Species Counterpoint*

Leon W. Couch III (Converse College)

Today, many undergraduate theory textbooks incorporate rudimentary species counterpoint. This pedagogy intended for mid- and large-sized classrooms was designed for online delivery in order to increase the efficiency of student learning while simultaneously decreasing instructor's time input. Rather than relying solely on traditional master-student, trial-and-error models, this approach employs highly organized sequences of handouts, sample solutions, grading rubrics, and quizzes. With visual & aural CAI at initial stages, students progress at their own pace and master required competencies. Student responses provide real-time data on the effectiveness of instruction. Because instructors spend less time at routine drill, they devote more class time to artistic and stylistic issues, as well as demonstrating perceptual concepts. I.e., students appreciate the methodical presentation and getting to the "musical" part of the topic faster. In addition to showcasing the pedagogy behind this electronic resource, I will share experiences at adapting music-theory handouts into truly efficient learning tools.

Leon W. Couch III serves as College Organist and Assistant Professor of Organ and Music Theory at the Petrie School of Music at Converse College. While on the faculty at Texas A&M University, the College of Liberal Arts and Sciences named him the 2005–2006 Montague Teaching Excellence Scholar. He earned the D.M.A. in Organ Performance and the Ph.D. in Music Theory from the College-Conservatory of Music at the University of Cincinnati. His undergraduate degrees in physics, mathematics, and music are from the University of Florida, where he also worked as a computer programmer. Dr. Couch has presented at numerous international, national, and regional conferences and has been the recipient of numerous grants for his scholarship, performances, teaching, and public service. As an artist, he is represented the Concert Artist Cooperative.

ELECTRONIC POSTER: *How to Design A Digital Portfolio for A Music Education Program*
Cheryl Frazes Hill (Chicago College of Performing Arts at Roosevelt University)

In recent years, there has been a tremendous amount of literature surrounding educational portfolios including digital portfolios. The history and evolution of the educational portfolio will be explained. From this discussion, a design well suited for a college music education program will be demonstrated. Elements of three portfolio types, including Learning, Assessment, and Showcase models will be utilized to help create this model. The presentation will include guidelines for students to collect, select, and organize materials which demonstrate knowledge, skills, and dispositions they have attained throughout their course of study. Construction of artifacts as they connect to standards will also be demonstrated. Checklists, rubrics and schedules for assessment including collaboration amongst students and faculty along with digital resources will also be displayed. Samples of student digital portfolios will be shown.

Award-winning educator, Cheryl Frazes Hill is Head of Music Education and Director of Choral Activities at Chicago College of Performing Arts. She also holds the position of Associate conductor of the Chicago Symphony Chorus. She received her Doctorate in Conducting from Northwestern University and taught public school for 15 years.

ELECTRONIC POSTER: *The META-EVI - new performance paths with an electronic wind controller*

Tomas Henriques (University of Lisbon, Portugal)

The META-EVI is a project in electronic instrument building and instrument enhancement whose main objective is to achieve a performance tool of greater and wider expressive and technical capabilities. The META-EVI is a heavily modified STEINER MIDI EVI, a brass style 'electric valve instrument' (EVI), to which was added a whole new set of controllers based on sensor technologies. These clearly succeed at stretching the expressiveness and the range of musical gestures possible on the original instrument, allowing the musician to have a more complete, more complex and far reaching control of a great variety of meaningful musical parameters.

Tomás Henriques was born in Portugal in 1963. He earned a Masters and Ph.D in Composition at the University at Buffalo, USA in 1997 where he studied under Charles Wuorinen. His compositional work includes pieces for acoustic instruments, both small and large formations, as well as electronic music. Both are regularly played at international concerts and Music Festivals, being also regularly commissioned. He has done extensive research in the area of computer music and in the creation of alternative digital controllers. His music has been recorded by the Numerica and MisoRecords labels. Presently he is a Professor of Music Composition at the University of Lisbon.

ELECTRONIC POSTER: *The VoxBook Project: Multi-Media, Multi-Campus, Collaborative Database for Solo Voice*

Margaret Kennedy-Dygas (Hope College)

The VoxBook Project is a collaborative database project begun in 2003. Several colleges are members of the project, with one campus hosting the project on its server, and providing primary support for the development of the project. The goal of the project is to assemble and present via web pages a broad range of classical solo vocal recordings with related scores, texts/translations, commentaries, and bios of performers, composers, and poets/librettists. The recordings are digitized from archived concerts presented at the member colleges, or donated by performers interested in the project, or digitized from older vinyl records held by the member colleges. This presentation will explore the challenges and benefits of this project, along with the enhancement of student learning provided by opportunities for students to research and prepare materials, as well as using the VoxBook as a textbook in studio and classroom situations.

Margaret Kennedy-Dygas, soprano, is Professor of Music and member of the voice faculty at Hope College, Holland, Michigan, where she currently serves as department chairman. A graduate of the Cleveland Institute of Music and Indiana University, she has performed in concert and recital series in the United States, Canada, Great Britain and Italy, and has recorded for the Arkay Record and Coronet labels. She has served on voice faculties at the University of Kentucky-Lexington, and the University of Nebraska-Lincoln. In 2003, she founded the VoxBook

Project, a multi-campus database project of solo vocal recordings and related materials and is currently Editor of the project. In 2006 she was a co-recipient of the Ruth and John Reed Faculty Achievement Award at Hope College.

ELECTRONIC POSTER: *Atonal Dictation—Extending MacGamut*
Brian Kershner (Central Connecticut State University)

The twentieth century has come and gone and the vast majority of its music exists in the new standard repertory. A large portion of this music functions outside of the tonal system, and yet teaching techniques in the areas of ear-training, sight-singing and dictation skills do little to prepare the musicians of the future to deal adequately with its challenges or to fully appreciate its unique aesthetic value.

It is the purpose of this paper to describe a recent project which goes beyond singing and performance skills, and develops skills in dictation with atonal music. The process is explained from its exception to its implementation. The popular software, MacGamut is the platform used to enter the examples.

As the educators of young musicians we are obligated to take a fresh look at our teaching methods and goals. They will be the caretakers of the music of our time, and we must give them the tools to perform it musically and to carry its traditions on to their students, lest an entire corpus of repertoire die a slow, painful death.

Brian Kershner, composer and bassoonist, has received enthusiastic performances of his works internationally. The Sonata for Bassoon and Piano (1989) and Contours, Canons, and Caricatures for saxophone quartet are available on CD on the Vienna Modern Masters label. His works are published by Roncorp, Bocal Music and others. Strata, (1998), a suite for wind ensemble, is available on a Mark CD. The composer's violin concerto (2004) was composed for Lenuta Ciulei and the Romanian National Radio Orchestra. Ms Ciulei has also championed Dr. Kershner's Pastorale and Scherzino through multiple performances in Philadelphia and Rome, Italy. His New England Trio (2005) was premiered by the Connecticut Trio (a piano trio) in Weill Recital Hall, Carnegie Hall, NYC in April of 2005. Brian Kershner is currently Assistant Professor of Music at Central Connecticut State University in New Britain, CT.

ELECTRONIC POSTER: *Building better Support for Student Success when Using Technology in Music History Courses*
Stanley C. Pelkey II (Western Michigan University)
Kenneth Smith (Western Michigan University)

Students in three music history courses were asked to complete research and present their findings in the form of a PowerPoint presentation that included a listening guide and a non-linear presentation of multimedia materials. After completing the presentations, students were given surveys to discern their attitude toward the projects and their strategies for completing the projects. Results revealed that students lacked the necessary software skills to complete the assignments and that students approached the projects in the same linear manner as a paper. In response to these findings, instructional materials were provided to teach students the needed software skills and to demonstrate the use of menus and hyperlinks to present material in a non-

linear manner. Findings from the third semester reveal the effectiveness of the tutorials and provide further direction for developing a scaffold of support for the continued and increased inclusion of technology into future music history courses.

Kenneth Smith currently teaches music education and music technology at Western Michigan University. He received his Ph.D. in Music Education from the University of Illinois at Urbana-Champaign. Prior to this he served as technology coordinator and taught courses in music technology at IUPUI. His research interests include the use of technology-based music instruction in junior high music education and the investigation of new educational media and distribution.

Stanley Pelkey is an Assistant Professor of Music at Western Michigan University where he teaches undergraduate and graduate courses in music history, world music, and music research. Prior to his appointment at Western Michigan University, he taught music history and world music for six years at Gordon College (Massachusetts). He holds the MA and Ph.D. degrees in Musicology from the University of Rochester's Eastman School of Music, and his research interests include eighteenth- and nineteenth-century organ music, Handel reception history, American film music, and musical aesthetics. He was the coeditor of *Music and History: Bridging the Disciplines*, which was published in 2005 by the University Press of Mississippi. Dr. Pelkey is also active in Southwest Michigan as an organist and church musician.

**ELECTRONIC POSTER: *Creating a Podcast of Enhanced Episodes*
Robert Willey (University of Louisiana at Lafayette)**

A variety of assets can be combined in an enhanced podcast episode, including video, music, narration, graphics, text, and links to web pages. In this workshop participants will see how materials are prepared using iMovie and iTunes, and then assemble those assets themselves to create two episodes in GarageBand. These episodes will be moved into iWeb to create a podcast, and then tested with the Safari browser.

Robert Willey received his masters in computer music and Ph.D. in theoretical studies from the University of California, San Diego. He worked for a technology exchange program between U.C.S.D., Stanford University, and a studio in Buenos Aires for five years, funded by the Rockefeller Foundation, followed by two years in Brazil, first with Fulbright scholarship teaching computer music composition and performance at the Federal University of Minas Gerais, and then as a visiting professor at the Carlos Gomes Conservatory.

Willey currently teaches music media and theory at the University of Louisiana at Lafayette. His present research interests include the analysis and performance of Brazilian popular music, the realization of Conlon Nancarrow's player piano music for synthesizers, audio and video processing, composing for interactive performance systems, and the recording of music from South Louisiana.

**PERFORMANCE: *Dreams and Disasters: Natural or Not*
Marie Grudzien (University of Utah Alumna)**

Dreams and Disasters: Natural or Not is a multi-media electro-acoustic composition scored for vocal quartet, string trio, percussion, electronics, projected text and theater. Complex realities of

dreams/nightmares, and their counterpart in a modern world are explored, along with issues of reality/illusion, conflict, displacement/identity, and the integration (or not) of positive and negative aspects of technology. What universal components can it contain – in an effort to balance the universal problems it can (and does) create? Phonemes from world languages interweave with the use of generated and manipulated sounds (from programs such as MAX and Logic). Analyzed human voice samples aid in the creation of generated sound and recorded sounds (mainly human) are manipulated and re-invented, at times mixing with white noise. Live acoustic instruments and voices play together with electronics at points. Throughout the piece, there are links provided between man and technology. Voices from people of different races, countries, and genders, have been recorded, in an attempt to employ technology as a transcendent medium for all.

Marie Grudzien, a native New Yorker, began her early studies in visual art at Parsons School of Design in NYC. Later she earned a BFA from the School of the Art Institute of Chicago in performance art, which involved creating, directing, and performing in productions that included music/sound/mixed media and alternative theatre. She has traveled and lived abroad, and her early work has been performed at various arts festivals venues in NYC, Chicago, England, Scotland and Holland.

A recent graduate of the University of Utah in music composition, she has received UROP grant funding, and scholarships from the Leroy Robertson Foundation and the University of Utah Women's Club. Her current work has been performed at the Utah Composer's Ensemble, student composer forums and readings by the New York New Music Ensemble. She teaches young children and has received grants from the Salt Lake City Arts Council for her development of youth-at-risk arts programs.

PERFORMANCE: *Fandango*
Rodney Oakes (Los Angeles Harbor College)

Fandango is a work created for the MIDI trombone. The electronic accompaniment was created with the software programs MetaSynth and Digital Performer. MetaSynth allows for the creation of sounds using digital images. The images for Fandango were created with pictures of Spain. The live performance consists of a trombone utilizing a pitch-to-MIDI converter controlling a software synthesizer, a MOTU MACH 4.

Rodney Oakes received his BA and MA degrees from San Diego State University, and a DMA from USC. Oakes taught electronic music and directed the PACE (Program for Accelerated College Education) at Los Angeles Harbor College where he is currently an Emeritus Professor. He has won numerous awards including a Rockefeller Grant; a Fulbright Senior Lectureship to the Academy of Music in Krakow, Poland; and ASCAP Standard Awards for every year since 1987. Oakes was the founding editor of Journal SEAMUS, the official journal of the Society for Electro-Acoustic Music in the United States. Oakes has pioneered the use of the trombone combined with electronic devices. A number of Oakes' works are available on the Cambria, the Living Music, and Innova labels. His CD, Music for the MIDI Trombone, has received excellent reviews. A recent CD, Rod Plays Oakes Plays Rod (III Records) features the jazz quartet, OGOGO.

PERFORMANCE: *The Plack Bage***Alan Lechusza**

Plack Bage is an ongoing series for multi-instrumentalist which involves both acoustic and electronic instruments noting how they balance and negotiate the spaces between composition and improvisation. A truly interactive work, The Plack Bage can never reveal the same realization with any given performance.

Alan Lechusza is a performer/composer who undertakes sonic challenges in variety of manners. His works have been performed all around the world where he continues to defy categorization. Alan Lechusza's most recent interactive compositions are gaining high critical notice as they continue to bridge electro-acoustic music within the different artistic disciplines. Recently his compositions were considered, "the new direction in contemporary classical compositions" at the New Media Festival in California (2006) by Patricia O'Neal.

PERFORMANCE: *Video Made the Radio Star***Christopher Barrick (University of Nebraska-Lincoln)**

This presentation includes a multimedia performance of Jacob Ter Veldhuis's Billie, a work for alto saxophone and soundtrack. Ter Veldhuis's piece combines the sound of the saxophone with the voice of jazz singer Billie Holiday. The composer utilizes phrases from interviews with Holiday as compositional motives. The video, compiled by the presenter, accompanies the music with a chronology of Billie Holiday's exciting life as a jazz vocalist.

Saxophonist and music educator Christopher Barrick holds degrees from the University of Tennessee-Knoxville (MM) and Indiana University of Pennsylvania (BS, BA). He has taught courses at the University of Nebraska-Lincoln and the University of Tennessee-Knoxville, and has taught applied saxophone at the University of Nebraska-Lincoln, Midland Lutheran College (Fremont, NE) and Union College (Lincoln, NE). Barrick also served for two years as the Assistant Director of Bands at Cocke County High School in Newport, Tennessee where he was honored in the 2005 edition of Who's Who Among America's Teachers.

Barrick has performed with groups such as the Legends of Swing, the Jimmy Dorsey Orchestra, Sonny Turner and the Platters, The Crystals, and Rock and Roll Hall of Fame inductees, The Coasters. He is currently in residence at the University of Nebraska-Lincoln pursuing a Doctor of Musical Arts degree.

PERFORMANCE: *"Strength" for Video, Saxophone, and Live Audio Processing***Julia Nolan (University of British Columbia)****Robert Pritchard (University of British Columbia)**

Strength, for alto saxophone, sound files, and interactive video/audio processing (Max/MSP/Jitter). Strength is a convergence of the metallic and the human, the durable and the impermanent, combining audio and visual domains. The saxophone's processed sound reflects upon, joins, and contrasts the processing of male body images and the sounds of machinery. The work's three-part form can be experienced as binary contrasts such as life/death or love/loss, or ternary structures such as Approach, Engagement, and Reflection, or Belief, Experience, and

Transformation. Strength was premiered at the 2006 World Saxophone Congress in Ljubljana, Slovenia.

Active as a performer, Julia Nolan has given master classes, performances, and public lectures in 2006. She performed as soloist with the Kamloops Symphony Orchestra in March 2006 and premiered two works at the World Saxophone Congress in Ljubljana, Slovenia in July 2006. Julia Nolan premiered Ian McDougall's Concerto, commissioned for her and the CBC Vancouver Orchestra in March 2005. She is featured as soloist on the CBC Vancouver Orchestra CD Globetrotting and has recorded Concerto by Fred Stride commissioned by the CBC. Her career achievements were profiled in the Sept/Oct. 2001 issue of The Saxophone Journal.

Julia Nolan is a third year PhD student at the University of British Columbia in Curriculum Studies, a professional musician, who also teaches saxophone at the UBC School of Music. Julia Nolan is an artist-clinician for Yamaha Canada, Ltd.

Bob Pritchard traces a line between technical impossibility and ripped-off quotation, ricocheting from Boulezian complexity to the romantic sparseness of a Bryars' drunk. Questions about death and memory lurk beneath the surface of each of his pieces, waiting to snare the listener's mind or heart. His music unwraps with shouts, whispers, murmurs, and questions, blending together to form commentaries, dialogues, and accusations. He has written direct sound synthesis routines using chaos algorithms, developed CD-ROMS, produced interactive materials for teaching orchestration, developed notation interfaces, and programmed interactive MIDI games. He is the recipient of a three-year research grant from the Social Sciences and Humanities Research Council of Canada, investigating gesture-controlled speech synthesis.

In addition to teaching at the UBC School of Music, Dr. Pritchard is a researcher with the UBC Music, Sound and Electroacoustic Technology group (MuSET), the UBC Institute for Computing, Information, and Cognitive Science (ICICS), and the UBC Media And Graphics Interdisciplinary Group (MAGIC).

FRIDAY, NOVEMBER 16, 2007***Facilitating Rhythm: An Interactive Tool for Practice and Composition*****Jay Alan Jackson, Rochester Institute of Technology****Andy Jaffe, Williams College**

This talk will demonstrate an interactive multimedia application developed by the authors to facilitate composing and practicing with polymetric and other intricate rhythms. The application's functionality includes novel methods for constructing patterns and exploring variations of them, including a highly versatile spreadsheet type input mode representative of a player-piano roll but that can be expanded and contracted to accommodate changing subdivisions of time. The application can utilize external MIDI devices, as well as export patterns to files in either standard MIDI or MusicXML format. Several interesting examples that have been produced from the use of this application will be presented to show its capabilities for creating interesting musical sequences and generating challenging practice exercises

Jay Alan Jackson is a musician, mathematician, and computer scientist. As a drummer, he has had the opportunity to study, perform, and record with many of the best jazz musicians in the world. He has also conducted computer music research, written numerous applications programs, and done audio production. He holds a Ph.D. in Mathematics from Florida State University, and has taught at Michigan Technological University, Duke University, University of Louisiana, and Western New England College. He is currently Associate Professor at the Rochester Institute of Technology, where he teaches digital audio and multimedia programming courses.

Andy Jaffe is a composer, performer, and recording artist. His 1996 text, "Jazz Harmony" (Advance Music) is now entering its fourth printing and is widely recognized as one of the most influential in its field. He recently completed work on a new text on Jazz Composition. He has been a leader in jazz pedagogy for over twenty-five years, having taught at the Berklee College of Music, The University of Massachusetts-Amherst graduate program in Afro-American Music and Jazz, the Institut Musical de formation Professionelle in Nimes, France, Amherst College, Tufts University, and Smith College. He is currently the Lyell B. Clay Artist in Residence and Director of Jazz Activities at Williams College, as well as Artistic Director of the Williamstown Jazz Festival.

Experiencing Rhythm through Rap: Rap composition and recording as a tool for developing and assessing rhythmic understanding.**Alan Kaschub: University of Southern Maine School of Music**

60 College freshmen are given a project during the second week of classes: Compose, notate and record a Rap composition. This project teaches the students about the challenges of notating rhythms, joining text with rhythm and recording themselves in multiple tracks. This project also teaches the instructor that college freshmen are more adaptable, creative and profoundly fluent with rhythm than anyone could have guessed.

Alan Kaschub is an Instructor of Music at the University of Southern Maine. In this capacity he teaches Music Theory, Ear Training, and Music Technology. As a trumpet player he is a member of the Maine Chamber Orchestra and has appeared with the Portland and Bangor Symphonies.

Podcasting Prowess for Music Educators**Raymond Riley, Alma College**

Podcasting is a method for distributing audio or video files over the Internet for listening and viewing on personal computers or mobile devices (hence "pod" for iPod). Podcasting differs from normal downloads or streaming media delivery by utilizing a subscription "feed" protocol that makes it possible to automatically update content and deliver new media "episodes". The podcasting studio in GarageBand 3 presents a comprehensive yet simple set of tools for creating and encoding audio podcasts as well as "enhanced" podcasts that include images and chapters. This hands-on workshop will lead participants through the steps of recording, editing, and publishing podcasts using GarageBand and iWeb (included with iLife 06). In addition, some alternative methods for publishing podcasts will be explored.

Dr. Raymond Riley, professor of music, joined the Alma College music faculty in 1988. He holds a B.M. from the University of Illinois, an M.M. from DePaul University and a D.M.A. in applied piano from Michigan State University. In addition to teaching piano and pursuing performance opportunities, he teaches several courses in MIDI composition and arranging, digital audio recording, new media development, and web audio techniques. Dr. Riley is a frequent presenter and clinician for technology conferences and workshops. A strong advocate for cross disciplinary study, he has worked closely with other faculty in the departments of Music, Art, Communications, English, and Biology to develop new courses and summer institute offerings, which have included topics in new media studies, web design, digital video production, and delivering streaming and interactive media over the Web.

Basic Techniques of Scoring To Picture Using the Digital Audio/MIDI Sequencer and Quicktime Movies**Richard Sussman - Manhattan School of Music**

The focus of this presentation is to demonstrate a simple and straightforward method for acquiring the technical skills necessary for "Scoring to Picture", while maintaining your perspective in terms of the creative process. Specific attention will be given to the process of "hitting" visual cues in a musical manner, using Markers, Tempo Changes, and other software functions. Emphasis will also be given to some of the unique musical considerations necessary for a successful score. Examples of successful student projects will be shown.

Richard Sussman is a pianist, composer, music technologist, and has been a professor of jazz composition at Manhattan School of Music in New York City since 1986. His responsibilities at MSM include private composition lessons, teaching jazz arranging classes, and managing all aspects of the Electronic Music Technology/MIDI Recording Studios for the Jazz Department. His varied career as a jazz pianist and composer has included performances with Lionel Hampton, Buddy Rich, Lee Konitz, Blood Sweat & Tears, David Sanborn, and Donna Summer. His jazz discography includes two albums of original music as a leader, including the critically acclaimed recording "Free Fall", now available on Double-Time Records. Writing credits include 2 NEA grants in composition and a 2003 commission for the Manhattan School of Music Jazz Philharmonic Orchestra, as well as arrangements for Lionel Hampton, BS&T, Randy Brecker, and others. His extensive work in the field of film and television scoring has included projects for

ABC, NBC, CBS, Nickelodeon, and Disney, as well as numerous documentaries, and independent films.

Using Pictures to Compose: Gesture-oriented Pitch Mapping Techniques in Hyperupic
Bonnie Miksch, Portland State University

Inspired by the UPIC system for realizing sounds from graphic tablets envisioned by Xenakis, Christopher Penrose's application Hyperupic provides a flexible and accessible environment for gesture-oriented electroacoustic composition. While there are many other computer music applications which influence users away from note-oriented models of composition, these applications do not tend to allow the composer to control frequency parameters with a high level of specificity. It is precisely this union of pitch mapping and gesture-oriented capabilities which make Hyperupic a compelling application for computer music composition. Following an overview of functionality, I will demonstrate various approaches to pitch mapping, using an assortment of digital images and sound samples to help create large, orchestral sounds with a variety of precise frequency relationships. I will close with excerpts from two electroacoustic compositions which were built in large part from sounds created in Hyperupic.

Bonnie Miksch, a composer and performer whose music embraces multiple musical universes, creates both acoustic and electroacoustic works. She is passionate about music which moves beyond abstract relationships into the boundless realm of emotions and dreams. An avid consumer of musical possibilities, she strives to create coherent musical environments where diverse musical elements can coexist. Her computer music and vocal improvisations have been heard in Asia, Europe, Canada, and throughout the United States. Lately, she has been busy creating collaborative video works with husband Christopher Penrose. Recent notables include the Atlanta Concert Artists' release of man dreaming butterfly dreaming man, a work for violin and piano. Currently an Assistant Professor at Portland State University where she teaches composition, theory, and computer music, she has also held academic positions at Williams College, Colgate University, and Mercer University.

Teaching Tuning Theory with SuperCollider 3
Reginald Bain, University of South Carolina

SuperCollider 3 (SC3) is a real-time audio synthesis programming language and environment for algorithmic composition by James McCartney. A former commercial product for Mac only, it is now a free program that is being developed by the open source community under a GNU General Public License. A beta version for Windows has recently been released under the name Psycollider, making it a much more attractive tool for educators. This paper will begin with a brief introduction to the SC3 application, which will be followed by a step-by-step demonstration of how to use SC3 to create a simple interactive tuning theory application with explanatory text and other media elements. The paper will conclude with a demonstration of some of the instructional materials for tuning theory that I have recently created with SC3. These materials are all organized around a single theme: the harmonic series.

Dr. Reginald Bain is Professor of Composition and Theory at University of South Carolina where he currently serves as Composition Program Coordinator and Director of the Experimental Music Studio (xMUSE).

Technology Reforming Music Teaching through Comprehensive Musicianship**Kimberly C. Walls (Auburn University)****Robert Lyda (Auburn University)****Jennifer Canfield (Auburn University)****Claire Burns (Auburn University)**

This session demonstrates how a variety of technologies was utilized to promote comprehensive musicianship in school choirs, bands, and general music. A team of course developers created and delivered a graduate-level distance learning course in comprehensive musicianship that enrolled in-service school band directors, general music teachers, and choir directors. A distance learning practicum course required the in-service teachers to develop, implement, and evaluate comprehensive musicianship units that included multimedia materials in their school music settings. In this session, the course developers will show how technologies were used in course delivery and in support of the practicum. Examples of the media that the in-service teachers created and tested will be shown, along with evaluation of the 3-semester long project (Spring 2007, Summer 2007, Spring 2008). Media shown will include web sites, multimedia listening guides, and digital video evaluations.

Kimberly C. Walls is Professor of Music Education in the Department of Curriculum and Teaching at Auburn University. Kim coordinates Auburn's distance learning graduate music education program. She is a contributing author of Scott Foresman elementary series publications: Animated Listening Maps, Making Music with Technology, Making Music, and Making Music with MIDI. She has written articles related to music education technology in publications such as Technological Aspects of Mentoring, Technology Strategies for Music Education (2nd Ed.), The TI:MEs, Journal of Music Teacher Education, and Psychomusicology; co-founded the Journal of Technology in Music Learning and the National Symposium for Music Instructional Technology; and serves on the TI:ME National Advisory Board. Kim presents clinics and sessions on music education technology nationally and internationally. She currently serves as chair of MENC's Music Teacher Education Special Research Interest Group and will be a discussant at the Tanglewood II Technology Symposium.

Robert Lyda is a Graduate Teaching Assistant at Auburn University where he is pursuing a PhD in music education. He teaches undergraduate music education courses, conducts the campus band, and manages technology for distance education courses. Rob received his BME at Troy University (AL) and MEd at Auburn University. Rob taught 6-12 band and general music in Alabama and Florida. He holds professional memberships in the American Orff-Schulwerk Association, National Band Association, Alabama Music Educators Association, TI:ME, and MENC: The National Association for Music Education.

Jennifer Canfield is pursuing a PhD in Choral Music Education from Auburn University. She directs the Women's Choir and teaches in the Music Education department. She holds her BME and MS degrees from Troy State University. Ms. Canfield has 17 years experience teaching students in Kindergarten through College.

Claire Burns is the general music teacher at Kleven Boston Elementary School in Woodstock, Georgia, where she directs the chorus, percussion ensemble, and recorder consort. She earned a

BM in Music Education from the University of Georgia and is pursuing a MEd in Music Education from Auburn University. Ms. Burns is an active member of Georgia Music Educators Association and Music Educators National Conference. She is also an active member of the American Orff-Schulwerk Association and attends monthly workshops hosted by the Atlanta area chapter of the American Orff-Schulwerk Association. During her time at the University of Georgia, Ms. Burns studied euphonium with Mr. David Zerkel. She performed with a variety of ensembles, including the University Wind Ensemble and the Tuba-Euphonium Ensemble.

Technology-enhanced Music Learning and Teaching: i-Maestro Framework and Gesture Support for the Violin Family

Kia Ng, Bee Ong, Oliver Larkin, Thijs Koerselman (ICSRiM - University of Leeds)

The paper presents an European collaborative project to develop interactive multimedia environments for technology enhanced music education. The project explores novel solutions for music training in both theory and performance, building on recent innovations resulting from the development of computer and information technologies, by exploiting new pedagogical paradigms with cooperative and interactive self-learning environments, gesture interfaces, and augmented instruments. This paper discusses the general context along with the background and current developments of the project, together with an overview of the framework and exploration of 3D motion data for posture and gesture support to musical instrument learning and playing.

Dr. Kia Ng is a senior lecturer at the University of Leeds where he is director and co-founder of the Interdisciplinary Centre for Scientific Research in Music (ICSRiM). Kia's research links together work in the School of Computing and the School of Music on interactive multimedia, computer vision, computer music, and AI. Currently, he is the President of the International Association of Interactive Multimedia MUSICNETWORK. Long experience in document imaging, working on pattern recognition, restoration, and translation of printed and handwritten music manuscripts. His Music via Motion (MvM) system, which provides interactive gestural control of musical sound, has been widely featured in the media, including the BBC, Sky and others.

Kia involves in several domains and initiatives relating to 2D and 3D imaging including paper texture and watermark analysis, gestural interfaces, and interactive multimedia systems, in collaboration with many European and international organisations and individuals in the field. Web: www.kcng.org

Sponsored Session (SoundTree/Korg, USA): *Hands-on Evaluation of Virtual Instruments*
Thomas Rudolph (University of the Arts)

This hands-on session explores in depth a wide variety of software synthesizers for Mac and Windows, including the Korg Legacy Collection, Ultimate Sound Bank PlugSound Pro, Propellerhead Reason, and more. Participants will play and evaluate instruments, and share assessments with others.

Thomas Rudolph, Ed. D. is the Director of Music for Haverford School District, in Havertown, Pennsylvania and an adjunct Assistant Professor at The University of the Arts. He teaches technology courses at Berklee College of Music, Central Connecticut State University, and

Villanova University. Tom is the president of TI:ME, the Technology Institute for Music Educators. His books include *Sibelius: A Comprehensive Guide*, *Finale An Easy Guide to Music Notation*, *Recording in the Digital World*, and *Teaching Music With Technology*. His articles have appeared in the *Music Educators Journal*, *The Instrumentalist*, *Jazz Educator Journal*, *Downbeat Magazine*, and *Music Education Technology Magazine*.

Digital Video Basics for Musicians: Exploring Final Cut Pro
Dr. Bruce H. Frazier-Western Carolina University

A hands-on, introductory session for musicians and media composers demonstrating techniques for blending audio with digital video using Apple's Final Cut Pro digital video production software. A sample project will illustrate media capture, importing, editing, adding transitions, applying plug ins, mixing, synchronizing, and exporting audio with video for the DVD and the web.

Bruce H. Frazier holds the Carol Grotnes Belk Distinguished Professorship in Commercial and Electronic Music at Western Carolina University where he teaches classes in music technology and film music.

Prior to teaching he was the music director for country singer Loretta Lynn for more than a decade, and conducted for other artists including Ronnie Milsap and Mac Davis, and served as the music coordinator for Dolly Parton's ABC TV series. The Academy of Television Arts and Sciences has twice recognized him for his contributions to dramatic underscore and sound mixing for television programs and he has also been nominated for several Emmys for his role as music editor on the TV series *Quantum Leap*, and a Golden Reel nomination for his work on *JAG*.

Frazier holds the bachelor's and master's degrees in music composition, both from East Carolina University, and the doctorate in music from the University of Southern California.

Active versus Passive Learning: On the Effectiveness of Student Tasks in the Online Teaching of Music Fundamentals
Nico Schüler, Elizabeth Lee (Texas State University)

While active learning (higher-level task) can be expressed in verbs such as “constructing,” passive learning (lower-level task) can be expressed in verbs such as “identifying.” Based on collected experimental data, this presentation shows that students with less training can complete the lower-level task better than the higher-level task and that the student success in completing both tasks is close to identical when the subject matter has been thoroughly introduced and practiced. Conclusions for online placement tests, the instructional course design, and the design of final proficiency exams will be discussed and examples will be provided. Most importantly, this presentation will demonstrate such a design in a NEW fundamentals online course. While most online tools use lower-level tasks only (because they are easier to program), the ultimate goal should be to proceed from lower-level to higher-level tasks. Numerous examples from the new online course will be given.

Nico Schüler, who studied music education, musicology, and music theory, is Associate Professor and the Director of Graduate Studies in Music at Texas State University. His main research

interests are computer applications in music, music theory pedagogy, modern music, and methodology of music research. He is the editor of the book series "Methodology of Music Research" (Frankfurt am Main, New York: Peter Lang) and of the refereed journal *South Central Music Bulletin*, the author or editor of 18 books, and the author of more than 70 articles. Dr. Schüler is President of The College Music Society's South Central Chapter and Vice President of the Texas Chapter of the National Association of Composers USA (NACUSA). He was an invited speaker at national and international conferences and workshops in Germany, Austria, Czech Republic, Poland, Sweden, England, The Netherlands, Lithuania, Switzerland, Slovenia, Peru, South Korea, Japan, and throughout the United States and Canada.

Teenaged girls and technology-based composition: Outreach, products, and reflections
Betty Anne Younker and Mary Simoni (University of Michigan)

The problem, as formulated for this study, is three-fold: (1) the minority of females in the field of music technology as made evident in the literature, (2) the minority of students who participate in school-based music programs at the high school level, and (3) related to the second, the lack of variance in the kinds of music making for students in high schools. The purpose of this study was to (1) design, develop, deliver, and evaluate co-curricular (non-credit) learning modules; and (2) investigate teenage girls' attitudes towards technology-based composition.

During the paper presentation, the literature that reveals the gap between male and female's participation in technology-based activities will be reviewed, four modules that include technology-based music learning will be shared and the experiences of the girls' experiences as reflected in their verbal response to questions posed in a semi-structured interview will be presented.

Betty Anne Younker (Ph.D., Northwestern University) is an Associate Professor of Music Education and Associate Dean for Academic Affairs at the University of Michigan. Her research areas include philosophy and pedagogy of music education, critical and creative thinking, and curricular issues related to, and processes involved in, composition, including technology-based composition. Betty Anne has presented at state, national, and international conferences; and has published articles in peer-reviewed journals pertinent to the field, and chapters in a variety of books, including the 2nd edition of the *New Handbook of Research on Music Teaching and Learning* (R. Colwell, and C. Richardson, eds.). As a musician, Younker is a member of the Vocal Arts Ensemble in Ann Arbor, Michigan, and adjudicates and clinics with bands in Michigan and various parts of Canada.

Professor Mary Simoni, Chair of the Department of Performing Arts and Technology and Associate Dean for Research and Planning, has done post-doctoral studies at the Stanford University Center for Computer Research in Music and Acoustics, the City University of New York Center for Computer Music, and the Mills College Electronic Music Studios. She has taught at the Berklee College of Music, Stanford University, Michigan State University, and Lansing Community College. Her music and multimedia works have been performed in Asia, Europe, and widely throughout the United States and have been recorded by Centaur Records, the *Leonardo Music Journal* published by the MIT Press, and the International Computer Music Association. Her work has been funded by the Kellogg Foundation, the National Science Foundation, and the

Michigan Council for the Arts and Cultural Affairs. Her most recent book, *Analytical Methods of Electroacoustic Music*, was published by Routledge.

On Using Video Direction as an Application of the Study of Music Theory
Robert Willey (University of Louisiana at Lafayette)

Involving music theory classes in the video recording of concerts provides opportunities to approach analysis from a new perspective. The process of translating scores into instructions for camera operators and editors invites students to apply theoretical knowledge to a new field, and involves experiences and intuitions from other domains that are not traditionally engaged. A methodology for making and editing multi-camera video recordings is presented, incorporating comments on philosophy, technique, and style obtained from interviews with professional directors.

Robert Willey received his masters in computer music and Ph.D. in theoretical studies from the University of California, San Diego. He worked for a technology exchange program between U.C.S.D., Stanford University, and a studio in Buenos Aires for five years, funded by the Rockefeller Foundation, followed by two years in Brazil, first with Fulbright scholarship teaching computer music composition and performance at the Federal University of Minas Gerais, and then as a visiting professor at the Carlos Gomes Conservatory.

Willey currently teaches music media and theory at the University of Louisiana at Lafayette. His present research interests include the analysis and performance of Brazilian popular music, the realization of Conlon Nancarrow's player piano music for synthesizers, audio and video processing, composing for interactive performance systems, and the recording of music from South Louisiana.

Beyond Paper and Pencil with "Exposition" - An Online, Customizable Assessment Tool for Music Theory

Jennifer Snodgrass (Appalachian State University)

Susan Piagentini (Northwestern University)

Frank Barry (Appalachian State University)

Byron Richard (Trinity Software Solutions, Inc.)

The presentation will guide participants through the unique range of customizable possibilities in the online music theory skills assessment software "Exposition." The server-based program includes 12 categories of both written and aural theory components including notes, intervals, rhythm, error detection, dictation, triads, cadences, and Roman numeral analysis. Question formats include fill-in-the-blank, multiple choice, drag-and-drop notation, inserting pitch/rhythmic options, pull down menus, and listening/response questions. The online server based application creates questions in every possible key resulting in an infinite number of possibilities. The lead programmer will provide an introduction to the programming, graphic design, and database structure. The software was designed with MySQL, JAVA, Google Web Tools, The Hibernate Interface, Sibelius, Photoshop, .PDF and .mp3 files. We will close with results from beta testing at New England Conservatory, the Ohio State University, and Grand Junction High School (Colorado), and a discussion of possibilities for integration into the classroom.

Professor Frank Barry is in his fourth year as an assistant professor at Appalachian State University after a distinguished career as a senior software engineer, systems engineer and computer architect with Kodak and IBM. Mr. Barry received his B.A. degree in Physics from Wake Forest University in 1981, his M.S. in Electrical Engineering from Duke University in 1983 and completed additional work toward the Ph.D. at North Carolina State University. As System Architect and a founding member of BOPS, Inc. he helped develop one of the fastest programmable DSPs at the time (2001) and holds over 30 U.S. patents. He has been directly involved with teaching and education for over 10 years, serving as a founding board member (4 years) of a successful private school in Cary, N.C. (700 students). Besides his interests in programming, Professor Barry is also an active self-taught guitarist.

Jennifer Snodgrass is currently assistant professor of music theory at Appalachian State University where she teaches both undergraduate and graduate courses in music theory, aural skills, and voice. Dr. Snodgrass also serves as a research development officer for the university, evaluating external funding in the performing arts. She has received numerous grants relating to technology and music instruction, most specifically in music theory. Prior to joining the faculty at ASU, Dr. Snodgrass was coordinator of theory at IUPUI where she was coordinator of music theory. She has presented papers at numerous national and regional meeting including Society for Music Theory, ATMI, College Music Society, TDML, and TI:ME. Her research has been published in several journals including the Journal of Technology in Music Learning and the Music Educators Journal. More recently, her research has focused on the integration of the Tablet PC for music analysis.

Susan Piagentini is the coordinator of the first-year core curriculum at Northwestern University. Elected to the Faculty Honor Roll in June 2006, she teaches freshman theory, aural skills, and graduate courses in analysis and pedagogy. Prior to Northwestern, she served on the faculty of Valley City State University in North Dakota, and Elmhurst College. Dr. Piagentini has presented papers at national and regional conferences, including the Society for Music Theory, ATMI, TDML, IUPUI Music Technology Conference, TI:ME, and the College Music Society. She has received numerous grants to author supplemental online materials for the undergraduate curriculum. Her technology research has been published in the Journal of Technology in Music Learning. Recent interests include a research study investigating the effect of varied timbres when matching pitches out of vocal range, and the development of a layered dictation strategy tool to unveil student problem-solving paths.

Creating Interactive Listening Guides: A Workshop with iMovie and Flash
Cynthia I. Gonzales (Texas State University-San Marcos)

This hands-on workshop will teach music teachers how to create interactive listening guides using iMovie and Flash. Designed for the novice computer user, the training session will begin with a presentation of two similar listening guides (one created with iMovie, the other with Flash) that include synchronized text, graphics, and audio. The iMovie version (exported as a QuickTime movie) will demonstrate the ease with which instructive listening guides can be created. The Flash version will also include basic interactivity, giving the user the ability to make choices and get feedback on those choices. The main part of the session will walk participants through the step-by-step process of how to create these projects in both iMovie and Flash. This juxtaposed

comparison will provide participants with the overall limitations and challenges of these two flexible programs.

Cynthia I. Gonzales is Assistant Professor of Music Theory at Texas State University-San Marcos, as well as a professional vocalist. As a theorist, her primary research interests are text-music relationships in the early tonal songs of Arnold Schoenberg and the application of technology to aural skills pedagogy. As a soprano, she is in her eleventh season with Grammy nominated *Conspirare*, the professional choral ensemble based in Austin, TX. Dr. Gonzales received her PhD from Harvard University in 2005.

ELECTRONIC POSTER: *Free Internet applications that support fundamental skills in lower-level music theory and ear training classes*
Shane Anderson (Texas A&M University at Corpus Christi)

As an instructor of freshman and sophomore music theory and ear training, I have spent many hours searching the internet for free, web-based programs that my students can use for practicing music fundamentals. However, many excellent sites do not meet my students' needs, because they do not ask the students to solve a particular problem the same way I would like my students to solve it. For example, I may want my students to practice building seventh chords, given the roman numeral and a key signature. While there are many websites that offer practice building seventh chords, only a few are associated with a particular key. Most simply give a starting note and chord quality, but not a roman numeral. The following is a list of active websites that offer practice in music fundamentals: the websites are classified according to how the student interacts with the material.

Dr. Shane Anderson, assistant professor of music, joined the faculty of Texas A&M University—Corpus Christi in Fall 2006. Dr. Anderson received a Doctor of Musical Arts and Master of Music degrees in Applied Piano from the University of Texas at Austin and a Bachelor of Music degree in Applied Piano with high distinction from the Eastman School of Music. He teaches piano and coordinates music theory and ear training for the department. Prior to teaching at TAMUCC, Dr. Anderson has taught at Texas A&M University—Kingsville. Dr. Anderson performs frequently in South Texas as a soloist and collaborative artist and has presented papers on the music of Olivier Messiaen at the Hawaii International Conference on Arts and Humanities and at *Couleurs dans le vent: Celebrating the Music of Olivier Messiaen*, an international conference at The University of Kansas at Lawrence.

ELECTRONIC POSTER: *CocoaCollider*
Ryan Brown (University of Washington)

CocoaCollider is an Objective-C bridge for the SuperCollider audio programming environment. It bridges the best environment in the world for building user interfaces with the best environment for doing sound synthesis. With it, SuperCollider gains access to the wealth of tools Apple has made available for free, such as Quartz Composer, QuickTime and Interface Builder. The project is licensed under the GPL and has been in active development for over a year.

I'm currently a sophomore at the University of Washington in Seattle, having just transferred from the Evergreen State College in Olympia. I've been working with music technology for a

long time, and discovered SuperCollider about a year ago. Discovering SuperCollider was a “holy shit” moment and I’ve spent most of my time working with it since then. I’m now an active developer on the project with several significant contributions. I’ve been programming and working with computers since middle school, and speak a large number of programming languages. My musical tastes mostly swing towards the IDM scene, and I’ve been producing music in the genre for several years.

ELECTRONIC POSTER: *Survey of Commercial Musical Software for the Creation of Music*
Sanford Hinderlie (Loyola University New Orleans)

The proliferation of music software, especially in virtual synthesis and effect plug-ins has created an almost overwhelming amount of choice. This survey of commercial musical software for the creation of music is not only a listing of software, but provides a logical order and placement into categories of types of software. A brief background about each category is included, some with the history about the category. All compositional genres (pop, art form, and music for video) are listed. The categories include: Sequencing/Recording/Production, Groove and Loop-based Programs, Post Production Music, Plug-in Effects, Virtual Synthesizers, Samplers and Libraries, Synthesis Software, Libraries, Notation, Synthesizer Editor/Librarian, and Editor/Mastering are the categories. This survey is by no means a complete listing of all software. It consists mostly of higher end professional products that can be purchased at retail music stores or at the manufacturers web sites, and some items are shareware available on the Internet.

Sanford Hinderlie, professor of music at Loyola University New Orleans, has taught music technology, recording techniques and composition since 1981. Hinderlie was awarded major grants of nearly one million dollars in 1987, 1998, 2001, 2004 and 2007 to build music technology labs and studios at Loyola. The director, composer and engineer of An Electronic Dream Odyssey and VooDoTek is known as a composer, jazz pianist, musical demonstrator and performer of MIDI and computer applications ("MacWorld", Apple Computers, College Music Society, International Computer Music Conference, Electronic Music Plus Festivals). He has performed throughout the United States, Europe, Japan, former Soviet Union and the Middle East. He is a past winner of several composition awards, including the Delius Composition Contest. He also composes for television, radio, and films. As the president of STR Digital Records he has produced and recorded 25 CD's, including his own recordings, Solo Flight and Hinderlie Plays Hinderlie.

ELECTRONIC POSTER: *Piano Instruction and Performance without Boundaries: Real-time Linking of Acoustic Pianos over the Internet is Now a Reality*
George F. Litterst (Private Piano Teacher, Yamaha Consultant)

This session will demonstrate that real-time, long distance piano performance and instruction are no longer hypothetical concepts. Using off-the-shelf technologies, you can now (1) perform on acoustic pianos in several venues simultaneously, (2) conduct master classes with participants in multiple locations, and (3) teach lessons over the Internet. Join us as we connect the MIDI output of two Disklavier pianos over the Internet and visually coordinate the MIDI transmission and subsequent playback with video conferencing software.

George Litterst is a nationally known music educator, clinician, author, performer, and music software developer. A classically-trained pianist, he is a MIDI musician who works extensively with the high-tech Disklavier piano in his performing, teaching, and other professional activities. As a software developer, Mr. Litterst is the co-author of the intelligent accompaniment software program, Home Concert Xtreme, and the electronic music blackboard program, Classroom Maestro, from TimeWarp Technologies (www.timewarptech.com). Author of over 100 articles on the application of new technologies in music education, Mr. Litterst is currently the technology co-editor for both *American Music Teacher* and the technology editor *Keyboard Companion*.

ELECTRONIC POSTER: *Virtual Ensembles for Chamber Music and Concerto Performance in the Piano Studio: The Use of Virtual Instruments and Automated-Synchronization Software*

David R. Montano (University of Denver)

Pieces for chamber ensembles and concertos for solo instruments with orchestra represent vital parts of the Western art-music repertoires of many instruments, including keyboards (harpichord, fortepiano, and pianoforte). It is arguable that, in large part because of the daunting logistical challenges involved for individual student and professional instrumentalists in obtaining or providing sufficient opportunities to practice playing such ensemble pieces with other players, those parts of the repertoires have received less attention than they deserve in pre-college and college music performance curricula as well as in professional performance.

This electronic poster presentation is designed specifically to show how a Mac Pro computer by Apple, and other currently available electronic technology, can be used within a piano studio to provide students with especially high-quality opportunities for the practice of the piano parts of chamber-music works and concertos, with virtual performers, in lieu of other human performers, playing the other parts.

David Montano is Associate Professor and Director of Piano Pedagogy Studies in the University of Denver's Lamont School of Music. He holds a D.M.A. in music education from the University of Missouri at Kansas City, a M.M. in piano performance from the University of Arizona, a Master of Computer Information Systems from the University of Denver, and a B.M. in piano performance from Indiana University. He has been a concerto, chamber music, and solo performer, and has presented papers at ISME conferences in Zimbabwe and Canada, and at conferences of CMS, the National Piano Teachers' Institute, and state chapters of MENC and MTNA. He has published articles in various publications of the ISME and MENC, and co-authored a textbook for adult keyboard instruction. He has served on the Editorial Board of the *International Journal of Music Education*, as Editor of *Colorado Music Educator*, and as Co-Editor of *Ars Musica Denver*.

ELECTRONIC POSTER: *Poème Électronique In Music Appreciation Textbooks: A Case Study of Electronic Music Reception*

Joo Won Park (University of Florida)

This presentation evaluates students' reception of technology-based compositions by analyzing the sections devoted to electronic music in leading music appreciation textbooks. The common, and often only, example used in many of these books is Edgard Varèse's *Poème Électronique*.

Unfortunately, the readers are often given incomplete and misleading descriptions of the work, resulting in outdated images of technology-based compositions. The presentation concludes with possible solutions to this dilemma with a proposal for updated listening guidelines and repertoires.

Joo Won Park (b. 1980) is a composer of various musical genres and a researcher of electroacoustic music. His music and audio applications have been featured in several conferences such as the Florida Electro Acoustic Music Festival, Society for Electro-Acoustic Music in the United States Conference, Society of Composers Inc. National Conference, and International Computer Music Conference, as well as in print in *Electronic Musician* and *The Csound Book*. He is currently working towards the PhD in Composition at the University of Florida where he is studying with James Paul Sain, Paul Richards, and Paul Koonce. He graduated from the Berklee College of Music majoring in Music Synthesis and Contemporary Writing/Production, under the direction of Richard Boulanger. Joo Won is also working as an associate director of the Florida Electroacoustic Music Festival, and teaches undergraduate and graduate music courses as a teaching assistant. His music is available at ICMC2004 DVD and spectrumpress.com.

ELECTRONIC POSTER: *Learn How College Students in America Teach Music to Children in Mexico Through Video-Conferencing Technology*
Patricia Riley (The University of Vermont)

This session demonstrates and provides information regarding how pre-service teachers at a university in the United States teach music to students at a residential elementary school for underprivileged children in Puebla, Mexico through video conferencing using the Internet. Videos will be shown, and use of the technology will be explained and demonstrated. Participants will also brainstorm ideas for using this exciting technology in their own teaching.

Dr. Patricia Riley is Assistant Professor in the Music Department teaching Music Education courses at the University of Vermont. Prior to this, Dr. Riley taught at The Crane School of Music, State University of New York at Potsdam. She holds a DMA in Music Education from Shenandoah University, a MA in Music from The College of New Jersey, and a BS in Music Education from West Chester University. Previously, Dr. Riley had taught instrumental, general, and choral music for twenty years in the public schools of New Jersey and Vermont; and for five years had maintained a woodwind and brass studio at Green Mountain College. She has published in the *Vermont Music Educator*, *Teaching Music*, and *Update: Applications of Research in Music Education*. Dr. Riley is a frequent presenter of sessions at international, national, regional, and state conferences.

ELECTRONIC POSTER: *Electronic Realizations of Conlon Nancarrow's Studies for Player Piano*
Robert Willey (University of Louisiana at Lafayette)

Conlon Nancarrow devoted nearly all of his composing to the creation of a series of Studies for Player Piano, an instrument chosen in part for its ability to precisely perform rhythmically intricate music. While it was capable of super-human glissandi and arpeggios and complex tempo relationships, the composer wished at times that it had more timbral resources. Ten years after the composer's passing, a series of electronic realizations have been made combining electronic

synthesis with DVD's visual display and surround sound capabilities, making possible new understanding and appreciation of his work.

Robert Willey received his masters in computer music and Ph.D. in theoretical studies from the University of California, San Diego. He worked for a technology exchange program between U.C.S.D., Stanford University, and a studio in Buenos Aires for five years, funded by the Rockefeller Foundation, followed by two years in Brazil, first with Fulbright scholarship teaching computer music composition and performance at the Federal University of Minas Gerais, and then as a visiting professor at the Carlos Gomes Conservatory.

Willey currently teaches music media and theory at the University of Louisiana at Lafayette. His present research interests include the analysis and performance of Brazilian popular music, the realization of Conlon Nancarrow's player piano music for synthesizers, audio and video processing, composing for interactive performance systems, and the recording of music from South Louisiana.

SATURDAY, NOVEMBER 17, 2007***Post-Ut: A Web-Based Ear Training System for Computer Musicians and Audio Engineers*
Christopher Ariza (Towson University)**

Post-Ut is a free, platform independent, web-based ear training system for computer musicians and audio engineers. The system offers numerous types of exams employing thousands frequently-updated, dynamically-generated audio files. Questions test frequency identification (in Hz) of sine waves and filtered noise, time interval identification (in ms) and dynamic range identification (in dB) of noise bursts, and spectral density of harmonic and inharmonic synthetic timbres. This paper will briefly describe the technologies used in the implementation of the system, including the use of a generative music system (athenaCL), synthesis language (Csound), and a Python object-to-database (MySQL) interface. Next, the design of questions is evaluated in terms of pedagogical and perceptual considerations. Practical applications in University courses in music technology and recording techniques are described. Finally, opportunities for future development and expansion are outlined.

Christopher Ariza is a composer and programmer of sonic structures and systems. He is currently an Assistant Professor of Recording Arts and Music Technology at Towson University. He has studied at Harvard University (B.A.1999), New York University (M.A. 2003, Ph.D. 2005), and, under a Fulbright grant, at the Institute of Sonology in The Hague, the Netherlands. His compositions have been performed at numerous concerts, festivals, and conferences, and he performs live electronics in the experimental ensemble KIOKU. His research in generative music systems and computer-aided algorithmic composition has been published in journals and presented at numerous national and international conferences, and is made available through the open-source, cross-platform software athenaCL. His music, software, and research are distributed via www.flexatone.net.

Sight-Singing Anthology as Database: Developing a Trait-Based Search Tool for Aural Skills Instruction

Gary S. Karpinski (University of Massachusetts Amherst)
Richard Kram (Tyco Telecommunications)

This paper examines the development of software that treats a newly-published sight-singing anthology as a database from which instructors can select excerpts based on dozens of pedagogically significant criteria. The impetus for this project came from the observation that many aural-skills instructors search various sight-singing books looking for just the right excerpts by leafing through these volumes and visually scrutinizing the pages. We detail the conception and implementation of new software that automates and systematizes this process, allowing instructors to pinpoint excerpts from music literature that meet specific criteria, such as clef, key signature, tonic, mode, melodic shape, range, scale degrees, harmony, meter, and rhythm. We describe the pedagogical principles that guided the design of this software and we explain the software engineering used to create it.

Gary S. Karpinski is Professor of Music and Coordinator of the Music Theory program at the University of Massachusetts Amherst. He has also served on the faculties of the University of Oregon, Brooklyn College, and Temple University. He is immediate past president of the New

England Conference of Music Theorists, and has served as president of the Association for Technology in Music Instruction, and Board Member for Music Theory in the College Music Society. He has published articles on aural skills, theory pedagogy, early twentieth-century music, and computer-assisted instruction in *Music Theory Spectrum*, *Music Theory Online*, *The International Journal of Musicology*, *The Journal of Music Theory Pedagogy*, and *The Computer and Music Educator*. He was editor of the *Festschrift for George Perle* (1995). His book *Aural Skills Acquisition* was published by Oxford University Press in 2000. He has written two textbooks published this year by W. W. Norton: *Manual for Ear Training and Sight Singing* and *Anthology for Sight Singing*.

Richard Kram is a Distinguished Member Technical Staff at Tyco Telecommunications, formerly part of AT&T Bell Laboratories. He received a Doctor of Musical Arts degree in composition from Temple University and has worked in the computer programming and systems engineering field for the past 20 years. He is recognized in the field of fault detection in trans-oceanic fiber-optic cable systems, having developed a patented algorithm for diagnosing failures in a repeated undersea cable system through finite state analysis and pattern matching of high-loss loopback signatures. He has written a number of music- and computer-related articles, and recently designed and implemented the software accompanying W. W. Norton's *Anthology for Sight Singing* in conjunction with Gary S. Karpinski.

Connecting pre-service educators with grades 2-12 music composition students in an online mentoring field experience

Sandi MacLeod (University of Vermont and Vermont MIDI Project)

During the past two years, five different institutions of higher education have collaborated with an established online mentoring project in music composition to provide experiences for college music education majors with grade 2-12 students in the schools. This collaboration has produced positive results and unexpected consequences for both higher education and the 2-12 music composition project. The collaboration includes five music education preparation programs in higher education in various locations throughout the country. Four different scenarios have been explored to meet the needs of the colleges and the range of work available in the 2-12 music composition program. This presentation will elaborate on the different models of collaboration and invite others who may be interested to participate.

Sandi MacLeod, Ed. D., has served as Vermont MIDI Project coordinator since 1996 and was a founding member of the project. This nationally acclaimed music composition and online mentoring project now includes students in Vermont schools as well as new pilot project schools in Illinois, Connecticut, New York and Maine. Currently Sandi MacLeod is a faculty member at the University of Vermont where she teaches courses both in educational technology and in integrated arts and supervises students in the field. MacLeod has conducted numerous workshops and courses in music composition with the integration of technology. She has presented sessions at over 20 technology or music conferences in locations across the country since 1998. She plays an active role in state arts initiatives in assessment, arts integration, and arts education collaborative projects.

Learning Through Music: Uses of technology to enhance integration of music across the K-8 curriculum

Scott D. Lipscomb (University of Minnesota)

The proposed presentation will provide a brief overview of the Learning Through Music program at a specific public school, focusing on applications of technology that have proven beneficial in this unique educational environment in which music has been truly integrated across the curriculum.

Scott D. Lipscomb is an Associate Professor & Division Head of Music Education & Music Therapy in the School of Music at the University of Minnesota. His primary areas of research interest include integration of technology in the music classroom, the facilitation of music learning through technology integration, interactive instructional media development, sound for multimedia, web site design, and multimedia cognition. Dr. Lipscomb is currently serving his third term as President of the Association for Technology in Music Instruction (ATMI) and serves as a member of the Executive Board and Chair of the Research Committee for TI:ME (Technology Institute for Music Educators). He was recently elected Treasurer for the Society for Music Perception & Cognition, where he also serves on the Executive Committee. Scott has presented results of his research at numerous regional, national, and international conferences and his work has been published in numerous peer reviewed journals and edited volumes.

Music and Multimedia: Bridging the Learning Gap for Music Teachers and Students At Risk

Gena R. Greher (University of Massachusetts, Lowell)

Movies and music are central to the lives of children in 21st century America. How might we as teachers capitalize on that interest to help students make the emotional connections necessary for learning to take place? This presentation focuses on a pilot music technology program between music education students in a Northeast urban setting and students from an alternative High School for students at risk. Working in a multimedia environment future music educators are gaining real world experiences teaching with technology and their High School students are learning about music, learning to problem solve with technology and think about the inter-relationship between music, sound and emotion in a context that is relevant to them. This presentation will focus on student work as well as comments from the various participants, my students based on their reflective journals and conversations as well as emails and conversations with the school's Principal.

Gena R. Greher is Coordinator of Music Education at the University of Massachusetts Lowell. She teaches both undergraduate and graduate level music classes. Her research interests focus on examining the influence of integrating multimedia technology in the general music classroom and the middle school music curriculum, as well as in the music teacher education curriculum. She developed a distance learning web-site for music teacher licensure preparation and implemented and oversees the Creative Sound Play project for the UMass Lowell String Project.

Gena received her Ed.D., from Teachers College Columbia University. She has published articles in *The Music Educators Journal*, *General Music Today*, *Journal of Technology in Music Learning*, *Journal of Music Teacher Education* and *The Massachusetts Music News* and presents regularly at National and International conferences on the benefits of creating multimedia projects

to develop listening skills, integrate the arts into the curriculum, and engage adolescent learners in school music programs.

Technology for the Common Man: Skill Sets for the Educator, Conductor, and Performer

Andrew M. Bliss (University of Kentucky)

Kerry O'Brien (Indiana University at Bloomington)

Our proposed demonstration will introduce our audience to a number of music applications that apply in both performance and education. Through a number of case studies, we will introduce several skill sets including how to make a listening excerpt, loop musical excerpts, edit durations, create multi-meter click tracks, and create click tracks with tempo modulations. The demonstration will pair each skill-set with a case study; using audio-visual aids, we will elaborate on and demonstrate each skill. This presentation will have extensive program notes that will serve as a resource beyond this convention. This demonstration is specifically designed with multiple audiences in mind, including conductors, performers, and educators.

Andrew M. Bliss is currently a D.M.A. Percussion Performance candidate at the University of Kentucky. He serves on the Percussive Arts Society Music Technology Committee and is on the music faculty at Centre College.

Kerry O'Brien is currently a M.A. Musicology candidate at Indiana University. Last year, she received an undergraduate apprenticeship grant to study music and technology with Dr. Gregory Beyer at Northern Illinois University.

The Design and Development of a Learning Object for the Study of a Musical Composition

Lisa Zdechlik (University of Arizona)

This presentation will outline the design and development of a learning object for the interactive study of a musical composition. The functionality and interactivity of the learning object will be demonstrated together with a discussion of the pedagogical framework of the object and its current use in a university piano course for general education students. For the general student who is first learning music notation, the complexities involved in decoding traditional music notation can create barriers to immediately interacting with a piece a music and developing critical listening and analytical skills. The objective of developing this learning object was to create a multimedia learning tool that links an iconic, graphic representation of a music score with a music performance so that the learner is able to interact with the music as a global, interactive structure rather than as a series of discrete, individual notes.

Lisa Zdechlik is Assistant Professor of Piano Pedagogy and Group Piano at the University of Arizona. She holds degrees in piano performance and music education from the University of Northern Colorado, an M.M. in piano performance from San Diego State University, and a D.M.A. in piano performance/pedagogy from the University of Oklahoma. Her research involves the interaction between music analysis and performance and the applications of current technologies to music learning. Dr. Zdechlik is a recipient of a 2004 Arizona Board of Regents Learner-Centered Education Grant to develop an interactive CD-ROM for piano and music study. She was awarded a 2002 Dissertation Prize at the University of Oklahoma for her dissertation, *Texture and Pedaling in Selected Nocturnes of Frederic Chopin*. Dr. Zdechlik serves on the

steering committee of the National Group Piano and Piano Pedagogy Forum and the Technology Committee for the National Conference on Keyboard Pedagogy.

Using Computer Lab Management Tools to Improve Instruction and Learning
Charles Menoche (Central Connecticut State University)

Effective teaching in a music technology lab-environment can present many unique, and constantly changing, challenges. In many music technology programs, hands-on learning environments are not only a preference, but a must. In this presenter's experience, the most common cause for faculty frustrations with teaching in a lab environment has been a lack of the proper tools for managing and monitoring the classroom/computer environment. Although the appropriate tools are currently available to help solve, most of these challenges, many faculty members (and Information and Instructional Technologies members) are unaware of these solutions and their relative ease of use. This lab presentation will demonstrate, model, and share both successful and unsuccessful experiences with common applications for computer lab management tools and strategies. Although the presentation will focus on Apple Remote Desktop in the ATMI hands-on technology lab, mention of PC applications offering similar solutions will be included in the session.

Dr. Charles Paul Menoche is an associate professor of music at Central Connecticut State University (CCSU). At CCSU he teaches courses in composition, music theory, electro-acoustic music, orchestration, and music technology. He holds a Bachelor of Science degree in Music Education from Tennessee Technological University and Master of Music and Doctor of Musical Arts degrees in music composition from the University of Texas at Austin. As a composer, Dr. Menoche has written a variety of works for voice, acoustic instruments, small and large ensembles, and electro-acoustic media. He has also collaborated with dancers, theater productions, and visual artists. and has written reviews of music technology resources for Notes, the journal of the Music Library Association.

PANEL: Operating and Maintaining a University Music Lab

V. Keith Mason (Belmont University)

Charles Menoche (Central Connecticut State University)

Michael Nord (Willamette University)

Richard Repp (Music Industry Institute)

A panel of music technologists will discuss numerous issues related to operating and maintaining a university music lab. Each panelist will respond to questions (administered by the moderator) pertaining to their university's music lab. Questions and responses will deal with such matters as classroom-lab space, computer selections, software, peripheral devices (Midi Controllers, Audio/Midi Interfaces, Audio Monitors, mixers, etc.), and various other topics related to hardware and software used in the music lab. Additional discussions will focus on maintenance issues, upgrading, networking, funding, and music technology curriculums used in music labs. Workshop attendees will also have an opportunity to ask the panelist questions. Photo slideshows of various university music labs will be projected during the workshop.

V. Keith Mason is the Coordinator of Music Technology at Belmont University in Nashville, Tennessee. He joined the Belmont school of music faculty in 1998 and currently teaches courses,

and develops curriculum, in the area of music technology. Keith has more than 20 years of experience in the Nashville Music Industry. As a professional composer, arranger, programmer, and producer, Keith has produced music for major companies like Oscar Meyer, Nissan, Cadillac, General Mills Cereals, and many others. His productions have won numerous Advertising Federations awards and a GMA Dove Award. Keith has presented at TI:ME and ATMI National conferences as well as being a contributing author for TI:ME's "Music Technology Guide for Music Educators" by Thomson Course. Keith continues to be active in the Nashville music industry. He is a member of BMI, NARAS, ATMI, and serves on the national advisory board for TI:ME.

Dr. Charles Paul Menoche is an associate professor of music at Central Connecticut State University (CCSU). At CCSU he teaches courses in composition, music theory, electro-acoustic music, orchestration, and music technology. He holds a Bachelor of Science degree in Music Education from Tennessee Technological University and Master of Music and Doctor of Musical Arts degrees in music composition from the University of Texas at Austin. As a composer, Dr. Menoche has written a variety of works for voice, acoustic instruments, small and large ensembles, and electro-acoustic media. He has also collaborated with dancers, theater productions, and visual artists. and has written reviews of music technology resources for Notes, the journal of the Music Library Association.

Dr. Mike Nord is an Associate Professor of Music at Willamette University where he co-chairs the Arts, Multimedia, and Technology program. He designed and oversees the Music Technology Lab and its affiliated curricula. Mike's interests include both multimedia and intermedia composing and performance. His improvisational group Carr Nord Hofmann Maddox records for Leo Records. In addition to performing on guitar and electronics, he mixes the group's recordings. Their newest work, Noru Ka Soru Ka is a DVD collaboration with improvisational dancers from Japan.

Dr. Richard Repp holds a Ph.D. in Technology-Based Music Instruction from the University of Illinois at Urbana-Champaign, a Master of Music in Performance (Voice) with an emphasis in Arts Technology from Illinois State University, and he completed the Recording Engineering and Music Production Program from the Recording Workshop in Chillicothe, OH. He has published articles on educational technology for music in several leading journals and presented at international conferences. He is active in the Association for Technology in Music Instruction (ATMI), the College Music Society, and the Technology Institute for Music Educators (TI-ME). He currently serves as ATMI Treasurer.

"Social Computing" and Music Teaching/Learning: Roots, Realities, and Reasoned Speculation

Peter R. Webster (Northwestern University)

David B. Williams (Illinois State University, Emeritus)

This session will explore the past, present and future of the "social computing" movement and its implications for music teaching and learning. We will explore just what social computing is, how it is rooted in the way young people think about technology, and what linkages there might be between this phenomenon and music education in the broadest sense. We will define terms and ideas about social computing and offer perspective on the traditions in our field that lead up to

today. We will provide perspectives and examples from in and outside of music. We will end our presentation with some audience participation via the Turning Point clickers and present our collective speculations about the future.

Dr. Williams is Emeritus Professor of Music and Arts Technology at Illinois State University. Dr. Williams' distinguished career has included teaching and administrative appointments at Illinois State University, SWRL Educational Research Laboratory, the University of Washington, and the University of Guam. He holds a Bachelor of Music Education and a Master of Music Theory degree from Northwestern Louisiana State University and a PhD in Systematic Musicology from the University of Washington. His technology work broadly covers multimedia and Internet applications, music and arts technology education, the development of software applications for music education, and the management of information and instructional technology resources. Dr. Williams has served as a consultant to many organizations in education and business combining his music, technology, research, and administrative experience. He has written extensively in the areas of music education, music psychology, music and arts technology, and instructional development. He has served on boards for the National Association for Music Education, Illinois Music Educators Association, Technology Institute for Music Educators, the Association for Technology in Music Instruction, and currently serves as the Technology Chair and national Secretary for the College Music Society. He chaired the MENC task force for developing Opportunity-to-Learn Standards for Music Technology and, in 2001, received the Illinois Music Educators Association Distinguished Service Award for his work in music technology.

Dr. Webster is the John Beattie Professor of Music Education and Technology at the School of Music, Northwestern University in Evanston, Illinois. He holds degrees in music education from the University of Southern Maine (BS) and the Eastman School of Music at the University of Rochester (MM, PhD). He has taught in the public schools of Maine, Massachusetts, and New York; following fourteen years of teaching at Case Western Reserve University, he moved to Northwestern in 1988. His teaching responsibilities at Northwestern include courses in philosophy of music education, undergraduate and graduate research, music technology, assessment, and creative thinking in music. He supervises the doctoral program in music education and supervises practice teachers. Webster has presented at many state, national, and international meetings and is a frequent keynote speaker. His published work includes over 70 articles and book chapters on technology, music cognition, and creative thinking in music which have appeared in journals and handbooks in and outside of music. He serves on the editorial boards of the *Journal of Research in Music Education*, *Journal for Technology in Music Learning*, *International Journal of Education in the Arts*, *Research Studies in Music Education*, and the *Asia-Pacific Journal for Arts Education*. He is the author of *Measures of Creative Thinking in Music*, an exploratory tool for assessing music thinking using quasi-improvisational tasks. Webster has served as president of the Association for Technology in Music Instruction (1995-2002) and has been a Board Member for Music Education with the College Music Society. He received the 2002 Illinois Music Educators Association Distinguished Service Award for dedicated service.

Webster and Williams have presented workshops, clinics, and major addresses together for more than 15 years. Their collaboration led to the co-authorship of *Experiencing Music Technology* (Thomson/Schirmer Books, 3rd edition, 2006), the major textbook for the introduction of music

technology to advanced high school and college students. The book has been recognized as the leading source for a comprehensive introduction to music technology.

Extending the Classroom: Using Blogs to Promote Discourse With Music Education Students
James T. Frankel (Teachers College, Columbia University)

This presentation will illustrate how blogging can be utilized within undergraduate and graduate music education courses to extend the traditional classroom. Using free online blogging resources, faculty members can easily create well-designed blog spaces for their courses and can foster a dialogue between the students and professor using the asynchronous blog interface. Examples of the types of discourse that are possible will be displayed and discussed using a recent blog created for a graduate course in music technology and education. Session participants will also be taken through a brief tutorial on how to set up a blog for their own use.

James Frankel, Ed.D., has taught in the New Jersey Public Schools as an instrumental and general music teacher for the past 14 years. He is also an Adjunct Faculty member at Teachers College, Columbia University and Montclair State University. Dr. Frankel has published over 30 articles in various state, national and international journals of music education. He is also the author of "Teaching Classroom Music in the Keyboard Lab," published by SoundTree. He has presented clinics and workshops at the statewide and national level. Recently, he was included as a contributing author in *Strategies for Teaching: Technology, and Spotlight on Technology*, both published by MENC. Dr. Frankel is on the Board of Directors for TI:ME where he also serves as the Chair of the State Chapters Committee and the Editor of the TI:ME E-mail Newsletter. He is currently the President of TI:ME NJ.

Pursuing NASM approval for an undergraduate music technology degree
Nathan Wolek (Stetson University)

The National Association of Schools of Music (NASM) maintains a broad set of guidelines for music technology degrees. Even after assembling the required resources to establish such a degree program, applying for NASM approval can seem like a daunting task. This paper will discuss the questions to consider when establishing an undergraduate music technology degree program, distill the NASM proposal formatting requirements into an easy to follow format, and detail the process of preparing for plan approval. The author will illustrate specific points with descriptive accounts from of his recent experience preparing a successful NASM application to establish a Bachelor of Music in Music Technology.

Nathan Wolek is an audio artist and researcher whose work encompasses advanced signal processing techniques, multimedia performance, audio installation art, and electronic music history. His music features gradually changing textures, quivering pulses and environmental recordings of personal significance. Wolek's software development includes Hipno, a collection of over 40 plugins co-developed with Electrotap, that Keyboard magazine recently called Hipno "just the antidote to sonic boredom that you need". During 2006, Wolek performed as a laptop instrumentalist at the Spark Festival of Electronic Music and Art (Minneapolis, MN), Florida Electroacoustic Music Festival (Gainesville, FL), the International Symposium of Electronic Art (San Jose, CA), Conflux Festival (Brooklyn, NY) and International Computer Music Conference (New Orleans, LA). Wolek completed his Ph.D. in Music Technology at Northwestern

University, and is currently Assistant Professor of Music at Stetson University in DeLand, Florida.

Implementation of a University Music Technology Distance Learning Course
Richard Repp (Music Industry Institute)

A university-level Introduction to Music Technology course was converted from a traditional lecture to a distance-learning format. Student's test scores, final grades, answers to questionnaires, instructor feedback, and responses to University course evaluations were all analyzed to evaluate the procedures. An ANOVA test showed that members of the live lecture group scored significantly higher on course averages than the all podcast group ($F=3.6$, $df=2$, $p<.034$). Further tests showed that the difference was because of improved test scores ($F=7.7$, $df=2$, $p<.001$), with no differences in scores on projects. This study does NOT prove that distance learning is inferior to classroom instructions; it does prove that simply recording class lectures does not provide an adequate learning experience.

Dr. Richard Repp holds a Ph.D. in Technology-Based Music Instruction from the University of Illinois at Urbana-Champaign, a Master of Music in Performance (Voice) with an emphasis in Arts Technology from Illinois State University, and he completed the Recording Engineering and Music Production Program from the Recording Workshop in Chillicothe, OH. He has published articles on educational technology for music in several leading journals and presented at international conferences. He is active in the Association for Technology in Music Instruction (ATMI), the College Music Society, and the Technology Institute for Music Educators (TI-ME). He currently serves as ATMI Treasurer.

Web 2.0 and Music Education: Tools for the Classroom and Studio
Kimberly James (University of Montana, Missoula)

THE WEB IS WHERE IT'S AT, whether we are talking about listening to music, conducting research, gaming, or catching up with old friends. More specifically, the web 2.0 environment provides rich user experiences that enable collaboration on multiple levels. Collaborative learning on the web is not new to education but is not utilized as often in music classrooms and studios. In this session, participants will learn about web 2.0 development and tools, view a demonstration featuring a course wiki and an applied studio collaborative website, discuss ways to incorporate web 2.0 learning into their curriculum, and work hands-on with a number of free on-line tools. Most entering college students are familiar with Google, Wikipedia, YouTube, MySpace, and the like. Music educators can use a number of these web 2.0 tools to communicate, collaborate, and learn with their students.

Dr. Kimberly James is an Assistant Professor of Music at the University of Montana and active professional singer. The Internet has been a source of inspiration and procrastination for over a decade though her consumption of web 2.0 technology began more recently. Dr. James's web 2.0 pursuits include blogs, wikis, social bookmarks, RSS, and most recently, podcasting. She is particularly interested in innovative teaching and learning theory, curriculum design, and philosophical issues related to music education and performance. Kimberly has appeared in operas and concerts across the country with organizations such as the New World Symphony, the

Los Angeles Symphony, Chautauqua Opera, and New Orleans Opera, among others. Dr. James holds advanced music degrees from Indiana University and Rice University.