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Annual Report, 2010-2011

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ammerman center

[arts & technology]

Annual Report 2010-2011

INTRODUCTION

The Ammerman Center continues to strengthen its programs through new initiatives and adjustments to its ongoing programs. This report summarizes the main activities of the center including the colloquia series, a new collaborative research and teaching program, student related activities, activities of the center's staff, awards and media placements. The center maintains its involvement in public events related to arts and technology on campus, in collaboration with departments, offices and the other centers.

STUDENTS

After admitting 8 and graduating 3 students this year we have 18 students enrolled in the Ammerman Center's certificate program. At the end of the year, our graduating seniors presented their senior projects in two well-attended, public sessions. The first presentation was on the last day of classes for the campus community and the second was on the day of the CAT graduation ceremony for families and guests. Our seniors worked diligently throughout the year, were very enthusiastic, and demonstrated truly interdisciplinary approaches through their projects. The senior projects are the culmination of many courses, independent studies, internships, colloquia, symposia, faculty advising, visiting artist interactions, the senior seminar and students' extensive work on implementation. Our graduation ceremony took place in the Charles Chu Asian Art Reading Room on the day before the College's graduation ceremony.

Colin Hanson (Major: Computer Science; Advisor Izmirli)

Colin's project was entitled "Trading Fours: An Interactive Jazz Improvisation Tool." He was interested in jazz improvisation and wrote a program which took turns with a musician in improvising jazz melodies. Instead of relying on pre-programmed rules to perform an improvisation, his program learns simple stylistic elements of pitch and rhythm from past performances by musicians. The program can evolve and adapt to the styles of the performers over time. His program also plays an accompaniment with chords and generates an automated bass line according to those chords. Being a musician himself, Colin created his interactive system by translating musical concepts into implementation while learning a new programming language specifically for this project. He gave a demonstration of his program during his final presentation. He was the recipient of the center's Bridget Baird prize given for excellence in research in arts and technology.



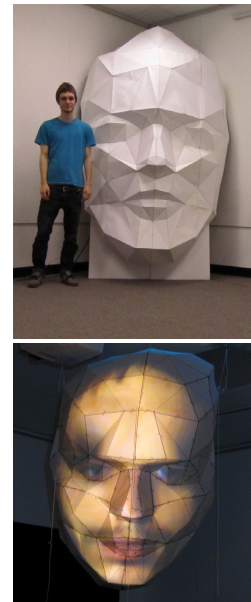
James Jackson (Major: Computer Science; Advisor Izmirli)

James was interested in creating a tool that would enable users to mix sounds from a range of sources. His project was entitled “EZ Mixer: A Beat Tracking Audio Mixing Tool.” He was mainly interested in the concept of remix and concentrated on implementing a tool that enabled the user to create rhythmic patterns that could be mixed with prerecorded audio in a beat aligned manner. James gave a demonstration of his program by creating rhythmic patterns through his program during his final presentation. He graduated with cum laude honors. He has been hired by Sonalysts Studios and will begin work over the summer.



Owen Stowe (Major: Art with concentration in design; Advisors Wollensak & Pelletier)

Owen’s project was entitled “Manifestations of Networked Identity.” For his project installation he built a 6-foot-high model paper head and projected videos of users’ faces onto it. He collected these videos and accompanying audio clips from visitors before they entered the installation room. These videos were automatically added to the collection through a random selection process. They were then processed, aligned and shuffled before they were presented to the audience in the adjacent installation room. The videos of the recorded faces were projected onto the model and randomly organized snippets of their voices were played through speakers. Owen was the recipient of the center’s Smalley Zahler prize given for excellence in Arts and Technology. He was also a Winthrop Scholar, the highest academic honor bestowed by the college, and was awarded summa cum laude honors. In addition to his CAT project and its accompanying installation, he wrote an honors thesis for his art major in which he discussed the discourse, his inspirations and theoretical framework of his work. He received honors and distinction in the major field and received one of the art department’s highest awards for the combined work.



Fulbright Research Award

Ammerman Scholar Phoebe Bakanas '10 was awarded a Fulbright Research Award this year. Phoebe’s senior arts and technology project combined a gestural interface with audio and music controllers (Advisor Izmirli). She had created a system that responded to user movements through audio effects and synthesis. She will continue and expand that work at the University of Leeds, United Kingdom, working with Kia Ng, director of the Interdisciplinary Centre for Scientific Research in Music. She will spend a year researching applications of gesture tracking technology in music applications.

THE ANIMATION WORKSHOP

The Maya Animation Workshop was held Jan. 17-21, 2011 with 7 students and a teaching assistant helping the instructor. This year we broadened the focus of the workshop to include motion capture in the animation curriculum. We hired Jane Kernan, who teaches animation for Rhode Island School of Design, for a second time. She taught the course for the entire week. Jane was excited about the opportunity to work with a motion capture system and its inclusion in the animation workshop. To make up for the additional time that is needed for this addition, she brought pre-built human characters that she had created specifically for the workshop. Overall, it was a successful experiment, and we hope to continue this curriculum in the coming years. Ajjen Joshi, who is a CAT scholar, assisted the instructor during the week. Starting last summer, Ajjen has worked on another project that required motion capture and therefore his specialization in the setup, calibration and recording of motion was a good match with the teaching assistantship. Overall, the workshop ran very well and the week's efforts were demonstrated by the students during the showing at the end of the week.

INTERNSHIPS

We had an active year with our student internship placements which range from very highly competitive university and corporate internships to customized research experiences at Connecticut College. The following table shows the list of internship placements and the source of their funding. The internships were funded through CELS, the employer and KECK. We worked in conjunction with CELS throughout the students' internship searches.

CAT Internships	Location	Type of work	Amount/Source	Dates
Ajjen Joshi	Brown University Music Dept.; MEME@Brown (Multimedia and Electronic Music Experiments)	Motion Capture Research - Todd Winkler, Assoc. Prof. of Music, Co-Director of MEME@Brown	3000 CELS	May 31- July 22
Jon Markson	Gallery Recording Studio, Brooklyn, NY	Music Production Assistant	3000 CELS	June 1- Sept. 1
Amy Barrett	Connecticut College	DEEP\PLACE Project	3000 KECK	June 6- July 29
John Borbone	Undertone Inc.	Video and Advertising Assistant	3000 CELS	June 1- Aug 12
Matthew Gentile	Scott Rudin Productions (3 days; Media and Movie Producer, NYC) Jennie Livingston (2 days; Independent Film-Maker, NYC)	Film, Animation and Production Assistant	3000 CELS	June 1- Aug 10
Patrick McGrath	Sonalysts	Game Design	3000 SONALYSTS	June 13- Aug 5
Eli Pack	Connecticut College	Research on motion analysis and gestural interface design through video capture	3000 CELS	May 23- July 15
Alex Zarecki	Connecticut College	Research on sound and video integration for interactive stage performance	3000 CELS	May 23- Aug 12

COLLOQUIA SERIES

The Ammerman Center organizes its colloquia series during the off years to the biennial symposium. These events have proven to be inspirational to the CAT community as well as to the college community. This year, we had a diverse group of colloquia speakers whose topics were very intriguing and hence the events were well-attended by students and faculty. Over the past few iterations of the colloquia series we have gradually extended the scope of the visits beyond the traditional definition of colloquia - we now invite artists and scholars to not only give a public talk but to visit for an entire day allowing idea exchanges with faculty, student workshops, and meetings with our certificate students to talk about and provide critiques of their work. Each speaker was hosted by a different fellow in the CAT center and therefore represented a cross section of academic departments and faculty interests.



Our first speaker was Michael Rees. He is the creator of **Putto 4 over 4**, the sculpture located between Blaustein Humanities Center and Shain Library. His talk was entitled “Putto 4 over 4: The Public and the Private” and took place in the Charles Chu Asian Art Reading Room, on September 16, 2010. The day's event was sponsored by the Art Department, the Ammerman Center and the Office of College Advancement.

Betsey Biggs visited in November and talked about her project "The Waking/Dream-ness of Sound." She is a Post-Doctorate Fellow in the Multi-Media and Electronic Music Program at Brown University. She gave a guest lecture in the electroacoustic composition class and spoke with our seniors about their projects.

Our third speaker was Harmony Bench, an Assistant Professor of Dance at Ohio State University. She gave a talk, entitled “Social Dance-Media” in February. She worked with classes and ran a workshop for a combined group of students from the dance and computer science departments on creating location-based dance videos which she calls "Sitemapdance." She has posted the project that she and our students completed at Connecticut College on her personal web site.

Michael Casey visited in March. He is Professor and Chair of Music at Dartmouth College, and directs the Bregman Music and Audio Research Studio (BMARS), His talk was entitled "Scandora: Using Music Information Retrieval and Functional Magnetic Resonance Imaging to Predict Musical Meaning." He gave a guest lecture in the electroacoustic composition class and spoke with our seniors about their projects.

Casey Neistat was our last speaker of the year and he visited in April. He is an independent artist and film-maker who has a show on HBO. In his talk "A Camera, Marker, Paper & Scissors" he spoke about his experiences and his approach to film-making. He was a guest in the introductory film production class and spoke with our seniors about their projects.

THE NEW COLLABORATIVE RESEARCH AND TEACHING PROGRAM

This is a new initiative that aims to foster collaborations in interdisciplinary research and teaching in arts and technology at Connecticut College. The research track is a project based program that seeks faculty and student involvement in interdisciplinary inquiry and the teaching track aims to augment multi-disciplinary course offerings while strengthening the links between departments and the Ammerman Center. The executive summary of the initiative is given below and the full text outlining the proposal, activity and reporting requirements are given in the addendum to this report.

"Digital technology has become inseparable from the creation, performance and teaching of the subject matter in many fields of the arts. Today's academic environment requires faculty to not only remain knowledgeable of the available technology but to be fluent with it in teaching and research. The cross disciplinary landscape in this field is vast and progress can be made through frontier projects that cultivate interdisciplinary thinking with traditional and non-traditional combinations of disciplines while remaining cognizant of their implications in their respective fields.

To further this exploration, the Ammerman Center for Arts and Technology (CAT) invites proposals for collaborative research and teaching in arts and technology in two separate tracks: a) commissions for research b) collaborative and multi disciplinary teaching. Proposals are encouraged across the full spectrum of work spanning any of the creative fields and technology. Projects will be collaborative in nature and will consist of at least two faculty in different disciplines and must also involve students. Faculty will receive stipends and small funds will be available to offset expenses related to the project. The purpose of this initiative is to increase faculty and student participation in interdisciplinary work involving technology in the arts. It also aims to encourage exploration of ways to incorporate research into teaching. From our previous experiences in collaborating on interdisciplinary projects we have seen the potential for such projects and how they can stimulate discussion on a wider scale at Connecticut College. Deadlines for proposals are March 1 for the spring and November 1 for the fall semesters."

a) Collaborative Research

This year a project entitled "DEEP/PLACE: site-based immersive history" proposed by Andrea Wollensak, Bridget Baird and myself was launched as part of this program. We chose the Harkness Chapel as our example site. DEEP/PLACE will be a site-based installation that features an expanded interactive audiovisual space consisting of diverse media elements. This multidisciplinary collaborative artwork merges materials from discrete domains—such as architecture, cultural geography and geology—in an immersive site-specific experience. Participants will explore the multifaceted information by navigating a rich media landscape through intuitive gestures. The media landscape will be represented by a system of interconnected nodes of site-based information that include spatial and geological information, archival blueprints and images, 3D models, and audio material. The system will use a

gestural interface that allows a user to move between and within nodes, exploring the media about the Harkness Chapel. This installation will be presented at the symposium and it will be part of the College's centennial celebration. The group will also give a talk at ISEA (International Symposium on Electronic Art) in September. The project has received \$500 in initial funding from the Centennial Committee, and we have made a request to the Dayton Fund for 2011-2012 as well. Two students have started working on the project this summer: a student funded by CONSSHARP and another funded by KECK.

b) Teaching

A new course will be offered this Fall entitled "ART 222-1, Special Topics: Designing Visual Information," as part of this program. This course will fulfill the center's multidisciplinary course requirement for students enrolled in the program. The course will be taught by Andrea Wollensak and will be prepared over the summer with contributions from other faculty.

RESEARCH ACTIVITIES AND RELATED EQUIPMENT

Developing a Tool for Dance Motion Synthesis Using Motion Capture (Ajjen Joshi, Advisors: Baird & Izmirli with help from professors Dorfman & Race and three students from the Dance Department). This project involves creation of a computer program for dance sequencing in the study of choreography and teaching of dance motion description. The dance primitives were recorded using our 8-camera 34-marker motion capture system and upon cues chosen from a description system called Laban Movement Analysis. The program enables the user to organize the recorded dance primitives into a sequence and play the resulting dance using a virtual dancer. Ajjen Joshi completed a Keck Project on "Manipulating Motion Capture" during Summer 2010 and completed two independent studies in computer science this year. He presented a student poster entitled "Developing a Tool for Dance Motion Synthesis" at the Consortium for Computing Sciences in Colleges Conference, April 15-16, 2011, Western New England College, Springfield, MA. Baird and Izmirli presented a faculty poster at the same conference entitled "Motion Capture in a CS Curriculum."

Amy Barrett '12 (8-week KECK internship; Advisors: Baird & Izmirli) is working on the **DEEP/PLACE** project (see above) Summer 2011.

Gyanendra Sharma (8-week KECK internship; Advisor: Izmirli) is working on **audio to printed score alignment**, Summer 2011. The project aims to develop techniques to align music recordings to printed sheet music.

Elijah Pack (8-week summer internship; Advisors: Baird & Izmirli) is working on programming for **motion analysis and gestural interfaces through video capture** using the Microsoft Kinect interface, Summer 2011.

Alex Zareki (8-week summer internship; Advisors: Baird & Izmirli) is working on **sound and video integration for interactive stage performance** using MAX/MSP/JITTER, Summer 2011.

In addition to the equipment mentioned above, we have added a file server to the CAT lab's network. It now serves as a long term storage medium for CAT faculty and students. It is also used for related

courses. We are in the process of purchasing a new glove interface, wireless position trackers, Microsoft Kinect devices, a wireless video camera and a wireless router for the lab to be used for arts and technology research.

CENTER STAFF

This year we restructured first semester's seminar to include visiting faculty in critiquing the seniors' CAT projects in their initial stages. Each faculty member brought a different perspective and provided feedback about the students' project concepts. Visiting faculty members were Art Kreiger (Music), Bridget Baird (Computer Science), Andrea Wollensak (Art), and Ariana Hamidi (Film Studies). I oversaw the first semester and Art Kreiger taught the second semester of the seminar. Libby Friedman attended all seminars, organized all related events and worked with the students on their presentations.

Art Kreiger and Andrea Wollensak served as co-directors of events. I continued to serve as the Associate Director for Technology. We hired Jane Kernan (RISD) to teach the one-week animation/motion capture workshop.

Libby Friedman is the Center's Assistant Director. She very ably continues to run the day-to-day operations of the center. She brings a wealth of personal knowledge to the job and her ever-growing contacts on and off campus continue to benefit the center in numerous ways. Her ability to network and make connections also extend to our students, fellows, alums, internship companies and other departments on campus such as College Relations, Advancement, Admission and other Center administrators. In addition, she meets with our students individually and advises them on their course planning, projects and the center's requirements. This year she served on the Centennial Committee as the center's liaison and alumni representative, as well as two Centennial subcommittees that focused on New London and the Arts.

PUBLICITY AND MEDIA PLACEMENTS

All news regarding the public activities of the center were published through the center's web site, The Day, FaceBook, Twitter and the college's publications: The Voice, Source and the Calendar.

We held an open house for prospective students on October 18, 2010. James Jackson '11 was chosen to represent the center in two panels held for admitted students and families in April, called "The Center Experience."

Michael Rees, CAT colloquia speaker tells the story of "Putto: 4 over 4" (CC Source, Sept. 24.)

Andrew Nathanson '13 invited to Google Conference (CC web current news, Sept. 7.)

National electro-acoustic music conference presents original composition by Jonathan Markson (Advisor: Arthur Kreiger; CC web current news, Jan. 28; CC Magazine, Spring.)

Phoebe Bakanas '10 wins Fulbright Award (CC web current news, May 18; The Day, May 24.)

Jeanne Stern '03 created the animation for the documentary "Yizkor" which won the Gold Medal for documentary at the 2010 student Academy Awards (CC Magazine, Winter.)

Aubrey Millen '08 interview in the Art Department brochure.

Amy Barrett '12 on motion capture and animation workshop – story and picture (CC Magazine, Spring.)

Jon Markson '12 – SEAMUS (The Society for Electro-Acoustic Music in the United States) recognition.

BUDGET

Judith Ammerman's endowment has come into full swing allowing for new program directions for the center and research equipment purchases. The Patricia Blackall fund and other contributions continue to supplement the budget.

This year Sonalysts continued their long-running support of the center with a corporate sponsorship of \$5000 and one internship for \$3500. We were delighted to see Milt Stretton, President and Chief Operating Officer, and Dave Samuelson, Executive Vice President and Technical Director of Sonalysts at the senior final presentations.

In agreement with our proposed 2010-2011 budget and in anticipation of our upcoming symposium, we ended this year with a surplus, which will be rolled over to be used for next year's expenses and especially the symposium.

NEXT YEAR'S OUTLOOK AND CONCLUDING REMARKS

The center is continually expanding and restructuring its academic activities. The new program in collaborative research and teaching is another step towards promoting interdisciplinary research and teaching in arts and technology across departments at Connecticut College. Its purpose is to strengthen the center's ties with departments on a project basis in research and on a longer term basis in teaching. The cross-listed courses added to the center's curriculum through this program will continue to increase the variety and number of arts and technology related courses. This year was a successful year with interesting events and ample publicity. We have already started organizing the next symposium which will be held in March 2012.

I am looking forward to another productive year full of interesting activities and projects.

Ozgur Izmirli

Judith Ammerman '60 Director, Ammerman Center for Arts and Technology
Associate Professor of Computer Science

**Ammerman Center's Broadening Participation Program
in Interdisciplinary Teaching and Research
in Arts and Technology at Connecticut College**

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Addendum to the 2010-2011 Annual Report

Broadening Participation in Interdisciplinary Teaching and Research in Arts and Technology

Connecticut College

Executive Summary

Digital technology has become inseparable from the creation, performance and teaching of the subject matter in many fields of the arts. Today's academic environment requires faculty to not only remain knowledgeable of the available technology but to be fluent with it in teaching and research. The cross disciplinary landscape in this field is vast and progress can be made through frontier projects that cultivate interdisciplinary thinking with traditional and non-traditional combinations of disciplines while remaining cognizant of their implications in their respective fields. To further this exploration, the Ammerman Center for Arts and Technology (CAT) invites proposals for collaborative research and teaching in arts and technology in two separate tracks: a) commissions for research b) collaborative and multi disciplinary teaching. Proposals are encouraged across the full spectrum of work spanning any of the creative fields and technology. Projects will be collaborative in nature and will consist of at least two faculty in different disciplines and must also involve students. Faculty will receive stipends and small funds will be available to offset expenses related to the project. The purpose of this initiative is to increase faculty and student participation in interdisciplinary work involving technology in the arts. It also aims to encourage exploration of ways to incorporate research into teaching. From our previous experiences in collaborating on interdisciplinary projects we have seen the potential for such projects and how they can stimulate discussion on a wider scale at Connecticut College. Deadlines for proposals are March 1 for the spring and November 1 for the fall semesters.

Commissions for Research

Research groups will consist of at least two faculty and two students. Stipends in the amount of \$6000 per project will be available as grants to participating faculty and up to an additional \$1000 for project related expenses. Faculty may wish to use all or part of the \$6000 toward expenditures related to the project. Proposals for collaborative research involving faculty in different disciplines will be accepted on a semester basis. The minimum duration of the project will be one academic year. The CAT program committee will review proposals and assign priorities to the proposed projects in terms of coherence, clarity of goals, degree of interdisciplinarity, available infrastructural and financial support, impact on the intellectual discourse on campus and the arts and technology field at large. The selection will be competitive and number of grants per application period will depend on the amount of available funds. Projects that explore innovative combinations of disciplines are particularly encouraged.



Deadlines for collaborative research proposals are March 1 for the spring and November 1 for the fall semesters. Interested groups should submit a letter of intent to the director of the Ammerman Center summarizing the project one month prior to the deadline (February 1 or October 1). A meeting with the director regarding the project's scope and coverage of artistic and technological aspects is highly encouraged. Funded projects will start at the beginning of the following semester.

Student involvement may be in the form of independent studies, summer work, internships, senior projects and honors theses. A project must have the equivalent of at least 4 semesters of student involvement. Each 4 weeks of full-time summer work will count as the equivalent of one semester of independent study. The projects should aim to engage students in the longer term, preferably in the role of certificate students, and require work that either prepares them for their senior integrative project or is part of that project.

Proposals should contain a clear description of the project, duration and a rough time line, anticipated presentation schedule and presentation forms (performance/installation/screening etc.) Student roles and the degree of their involvement should be clearly explained.

We recognize that certain research projects may evolve into cross listed courses. Stipends will also be available to support course development and team teaching of these courses. See the next section for details.

Only Connecticut College faculty are eligible for stipends. Exceptions may be made in cases where non-Connecticut College collaborators will bring significantly new directions to the program.

Reporting, Publicity and Dissemination of Results

- The presentation of the project:
 - A formal talk at the Arts and Technology Symposium
 - A performance /installation/screening/concert/demo etc. at the Symposium
 - An informal presentation to the CAT community every semester
 - Presentation at external conferences and venues is encouraged.
- Final report will contain
 - Summary of project and accomplishments
 - List of people involved in project
 - A list of activities related to this project
 - Deliverables in appropriate form (papers/digital media/photos/news articles etc.)



Payment Schedule

Faculty stipends for accepted proposals will be paid in two installments. The first will be during the semester in which the project starts. The second will be paid upon completion of the project and after submission of the final report. Expenditure payments will be disbursed at any time while a project is active.

Collaborative and Multi-Disciplinary Teaching

Groups of faculty with at least two members may propose to develop a multi-disciplinary course related to the field of arts and technology. The course will be a regular 4 credit course with the purpose of introducing new topics and approaches in the creative arts that are leveraged by technology into the existing curriculum. It would be desirable for the course to cover theoretical foundations as well as include hands-on components. The ratio of theory to practice would obviously depend on the discipline. Proposals should specifically address the ways in which the students, especially the center students, will benefit from this course. The course will count as a center certificate requirement for the CAT students. Course proposals with innovative models of teaching (such as project-based course, courses that incorporate research, courses that model faculty/student collaboration) are particularly encouraged.

The course will be expected to be cross listed in at least one department and CAT. Stipends of \$4000 per course will be available with an additional \$1000 for related expenses toward the preparation and initial offering of the course. The course will be supplemented with a \$2000 stipend for each subsequent offering of the course. Note that the course may be offered by a single faculty member as long as it has been developed collaboratively or stems from an earlier collaborative research commission (see above).

Deadlines for teaching proposals are March 1 for the spring and November 1 for the fall semesters. The earliest date for teaching the proposed course is the second semester after the above deadlines due to course approval requirements. A meeting with the director regarding the course's scope, coverage and impact on the center's curriculum prior to preparation the proposal is highly encouraged.

The CAT program committee will review proposals and assign priorities to the proposed course development in terms of relatedness and centrality to the CAT curriculum, potential student interest, incorporation of research into teaching, expected level of student engagement and



impact on CAT student recruitment. In this regard, recurrent freshman seminars are also welcome.

Connecticut College has held an extremely successful frontier in collaborative teaching in the arts through the Sherman Fairchild grant. Although CAT's collaborative and multi-disciplinary teaching program will build on the experiences of this grant, its emphasis will be on the impact of technology in the creative arts.

The proposal should accompany a letter from the related department chairs stating the departments' interest and long-term commitment to the proposed course - that it is not a one-time course and that the department/program plans to offer it on a rotating basis at least once every two years.

The first half of the stipend will be paid upon approval of the project and the second half will take place upon approval of the course by the AAPC and after course scheduling is secured.

A brief report will be submitted after completion of the course including an evaluation of how the course ran in its first year of offering.

