Computer Music at the Peabody Conservatory of the Johns Hopkins University

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Abstract

The Computer Music Department at the Peabody Conservatory will soon celebrate the thirty-fifth anniversary of its founding in 1968. Over the three and one-half decades the Computer Music Department has grown and expanded its activities considerably in the areas of education, composition, performance, and research. Peabody has offered a Master of Music in Computer Music composition and performance for fifteen years. This year Peabody introduces a new degree program, a Bachelor of Music degree in Computer Music.

1 Introduction

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Electroacoustic music was introduced to Peabody in 1968, when Jean Eichelberger Ivey founded our first Electronic Music Studio. The affiliation of Peabody with Johns Hopkins in 1977 gave the conservatory access to the computers and expertise available at the University and made possible the Conservatory's entrance into computer music, under the direction of Geoffrey Wright. The current Computer Music Department, with Dr. Wright as coordinator, now manages its own network of computers, and provides computer expertise to the rest of the Conservatory, and multimedia leadership throughout Johns Hopkins.

2 Facilities

The Computer Music Department occupies a suite of five rooms on the third floor of the historic Conservatory building. There is an office for the department's faculty and four special purpose studios for student and faculty composition, performance rehearsal, and research.

The Teaching Studio is the largest studio, and doubles as the department's primary classroom. This room houses the carefully maintained and functioning original Moog modular synthesizers of the first Electronic Studio. In addition, there is an extensive MIDI setup, with MIDI-controlled synthesizers, signal processors, and mixing facilities, centered on a Macintosh G5 computer. The Teaching Studio features a quadraphonic monitoring system for multi-channel audio production.

The adjacent Production Studio is a smaller room designed for single users and small group collaborations. This room features a digital console, a 5.1 surround-sound monitoring system, and is reserved for use by faculty, graduate students and other advanced users for composition and research. Both studios feature multi-channel A-to-D and D-to-A audio interfaces, professional mixing facilities, monitoring systems, analog and digital audio patch bays, direct-disk recording and editing systems, and digital multi-track and two-track recording systems.

In addition, there are two other studios: the Digital Arts Studio and the Digital Performance Studio. The Digital Arts Studio is a multi-user facility supporting a variety of digital arts applications including MIDI/Digital audio workstations and several computers for programming, Internet access, digital video processing and general use. The Digital Performance Studio is primarily for rehearsal of small electroacoustic ensembles. This room houses a Kawai MIDI Grand Piano.

A variety of computing platforms is available for student and faculty use, including Macintosh, Windows, and Linux machines. The department supports a large number of music, sound and multimedia software applications from both commercial software companies and shareware from independent developers. Conservatory faculty and students are also active in software development.

Peabody is connected via DS3 to the Johns Hopkins SONET network, with access the vBNS high-speed research network.

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3 Degree Programs

In 1989 Peabody launched its Master of Music degree in Computer Music. This two-year program was designed to prepare students with some previous computer music experience for careers in the field, or for further graduate study. The Conservatory's degree is unique in that it allows students to focus their attention in one of three major areas: composition, performance, or research. The highly selective applications procedure allows only the most highly qualified candidates admission, with no more than six students entering the program each year.

During the first year of study in the Master's degree, program students learn the department's core curriculum of Studio Techniques, Synthesis Theory and Digital Music Programming. Private instruction with departmental faculty in the student’s chosen area is also required, as well as a series of Special Topics Seminars which focus on specific areas of current interest. Students must also complete the Conservatory's core Master's degree requirements in Music History, Theory, Bibliography, and Ear Training.

In the second year, students focus more on their chosen area. Those in composition are expected to complete a portfolio of at least four significant works, demonstrating a mastery of a variety of computer music techniques, in combination with acoustic instruments and other media. Performance majors concentrate on producing a full recital, featuring "classic" electroacoustic repertoire as well as newer works and compositions created expressly for them in collaboration with other students. Students in the research track are required to describe their research activities in a Master's Thesis.

The new Bachelor of Music in Computer Music offers two tracks: Composition and Performance. The composition track is closely modeled on Peabody’s highly successful Composition Bachelor’s degree. For the performance track students must audition for and be accepted by a teacher in their major performance area. They will take traditional lessons on their instrument as well as studies in music technology. Students in both tracks study Music Theory, History, Ear Training, Sight Singing and Keyboard Skills, as well as liberal arts and languages. Both degrees culminate in a recital during the senior year.

Collaboration between students in different areas is strongly encouraged and is common at Peabody. Composers greatly benefit from working directly with performers, and research activities are often aimed at addressing compositional or performance issues. In addition to their study inside the department students are often directed to other conservatory or university faculty when need arises. Study with appropriate studio faculty is recommended for performance majors, for example, while research projects often involve faculty expertise from other departments within the Johns Hopkins University.

Since the inception of the academic program, more than 30 people have received the Master of Music degree in Computer Music from Peabody. Many have gone on to further study or research at leading computer music centers throughout the world. Peabody alumni can currently be found at IRCAM, CCRMA, the University of California at San Diego, and many other locations. In addition Peabody graduates find that their computer music skills make them ideal candidates for work in the multimedia industry, and are often employed as composers, web authors, programmers, and network administrators.

For study beyond the Master's degree level Peabody also offers a Doctor of Musical Arts degree in composition and performance. Computer music is one of the areas on which composers and performers may choose to focus in their DMA studies. The Doctoral program is highly selective, usually admitting no more than 2 or 3 students per year. Those interested in further information regarding graduate study at Peabody should contact the Conservatory Admissions Office at (410) 659-8000 ext. 3035.

4 The Friedberg Lectures in Music and Psychology

Peabody and Johns Hopkins are fortunate to jointly host a unique series known as the Friedberg Lectures in Music and Psychology. Funded by a generous grant by the Sidney M. Friedberg foundation, these lectures feature leading researchers in their fields from around the world. Guest speakers are chosen jointly by the Peabody Computer Music and Johns Hopkins Psychology departments. Previous Friedberg lecturers include Roger Reynolds, Stephen McAdams, Bruno Repp, Max Mathews, Carol Krumhansl, Chris Chafe, Paul Lansky, Raymond Kurzweil and Tristan Murail.

5 Composition

Composition is an important part of Peabody’s activities, and is central to Computer Music as well. The department’s faculty members are active composers, and the composition track remains the most popular area within the Master’s degree program. In a typical year, 25 to 30 new works composed for a variety of different media are created in the Peabody studios by students, faculty and guest artists. Many of these works involve acoustic instruments as well as electronics, and an increasing number of these are "interactive" works that involve technology in performance. Collaborations with artists from other disciplines are facilitated by active relationships with the Dance Department of Goucher College, and with the Video and Digital Arts programs of the Maryland Institute College of Art, one of the oldest visual arts schools in the country. Compositions from Peabody are performed regularly on student and faculty recitals within the school, and have been featured in recent years on ICMC, SEAMUS, and other electroacoustic music festivals as well as on radio and television.
Excellence in computer music composition is rewarded at Peabody through the annual *Prix d’Et?* competition. Funded by a generous grant from Peabody alumnus Walter Summer, the *Prix d’Et?* awards cash prizes and a guarantee of a public performance to 3 compositions selected by an outside panel of judges.

6 Performance

Peabody is home to over 700 concerts every year, ranging from student and faculty solo recitals to fully staged opera productions. Resident ensembles include two orchestras, a Wind Ensemble, a Chorus, an Opera Company, and the Peabody Camerata (specializing in twentieth- and twenty-first century chamber music). There are four main concert halls, the 950-seat Friedberg Hall, the mid-sized Griswold Hall, the smaller Goodwin Hall, and the new Cohen-Davison Family Theater. The majority of students at the Conservatory are performers, and this talented pool of musicians is a wonderful resource for Peabody composers and researchers.

With the Conservatory’s strong tradition in performance, it is natural that performance is important component in the Computer Music Department as well. Each year, in addition to degree recitals by Master's degree candidates, the department produces several concerts featuring student composers and performers. Most important of these is the annual *Prix d’Et?* concert, featuring winning compositions from that competition. These concerts are usually featured as a part of Peabody's Thursday Noon Concert Series, which presents the best Peabody student performances to the public free of charge.

The Peabody Computer Music Consort, founded in 1984 by Geoffrey Wright and McGregor Boyle, is a professional ensemble in residence at the Computer Music Department and dedicated to the performance of the digital arts. The Consort aims to bring the best current computer music and multimedia performance to the public in unique and original ways. The Consort frequently invites guest composers and performers to participate in its events. Previous guests have included composers Morton Subtonic, Roger Reynolds, Mario Davidovsky, Dexter Morrill, alcides lanza, Paul Lansky, James Mobberley, Christopher Doblin, Corte Lippe and Andrew May, and performers including Joan LaBarbera, Janos Negyesy, Robert Black, Elizabeth McNutt, Marilyn Nonken, and wheelchair dancer Charlene Curtis. Critically acclaimed performances have been given by the Consort in New York, at the Kennedy Center in Washington D.C, and the Maryland Science Center, among others.

7 Research

Computer Music research activities are focused in the areas of psychoacoustics and music perception, support of real-time composition and performance systems, multimedia systems, and music cognition. Peabody researchers regularly work with Johns Hopkins researchers in a variety of related areas of mutual interest.

8 The Future

Building on the established musical traditions of the Conservatory, and the academic excellence of the Johns Hopkins University, the Peabody Computer Music Department will continue to pursue its activities in composition, performance, and research. Our mission is to accept the most gifted musical artists, and to provide them with a musical and technical education of the highest quality.

References


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