**Director's Profile**

*Former CBH Director Dr. Catherine J. Randall Reflects on Her Experiences with CBH*

Dr. Catherine Rogers Randall has been very busy since retiring in 2004 from serving as Computer-Based Honors Director. She served as Chairman of the Board for Randall Publishing, her late husband Pettus Randall’s publishing business, until 2005. She has also been busy celebrating graduations for her three children, Jaynie Rogers, Kate and Pettus. Jaynie Rogers graduated from Princeton, Harvard Business School, and Yale Law School and is clerking for a federal judge in San Francisco. Kate graduated from Vanderbilt and Cambridge and is currently a student at Harvard Business School, and the youngest of the three, Pettus, graduated from Princeton and Oxford and is now working as an investment banker in New York City.

Dr. Randall has had a long history with CBH as a student in the inaugural class of 1968, Interim Program Director from 1978-1980, and Computer-Based Honors Program Director for almost 22 years from 1982-2004, but her favorite part about working with CBH was the students. “There is no group of American university students brighter than the students in CBH, and to have the privilege of watching them grow throughout their college experience is the greatest job in American higher education,” she said. She is still continuously enriched by her former CBH students through wedding invitations, birth announcements (of future CBHers), Christmas cards and visits.

Dr Randall believes that the program continues to improve because of the caliber and dedication of the students. “Dr. Seebeck’s vision for CBH, to give extremely talented undergraduates the opportunity to do research in their major field of study using computing technology is still as relevant today as it was in 1968. It allows students to embark on the freeing experience of academic-enterprise research,” she said. She believes that learning computing technology in the context of academic research stretches the students and facilitates dramatic leaps in critical thinking abilities. She is excited to see the continued growth of the program under the strong leadership of Dr. Sharpe and Mrs. Batson. “The University’s extraordinary support for CBH has made it, as Dr. Sharpe describes it, a ‘crown jewel.’ The quality of the students always has improved each year, but with Dr. Witt’s focus on and support of recruitment, the students are even better.”

![Cathy Randall awards 2006 graduate Shermeen Memon with the first annual Catherine J. Randall Student Excellence Award at the Computer-Based Honors Program Honors Day Ceremony on April 7, 2006.](image)
In April 2006, the UA Honors College hosted the Fifth Annual University of Alabama System Honors Undergraduate Research Day. Eighteen Computer-Based Honors students presented research that varied from advancing cancer treatment using nanoparticles to the effects of text coherence on understanding.

CBH students placed in all four competition categories. Jennifer Phillips, a senior Chemical Engineering major, won the Environmental and Health Sciences Presentations category with her research on Synthesizing Core and Shell Nanoparticles for Magnetic Fluid Hyperthermia Cancer Treatment.

Heath Howell, a senior Biology major, took second place in the Natural and Social Sciences Presentations with a presentation on the Fish Utilization of Riffle Habitat Created by a Dam Removal on the Cahaba River.

Shermeen Memon, a 2006 graduate in Biology, placed first in the Environmental and Health Sciences Poster competition with her research on Investigating the Potential Bacterial Sources of Dopaminergic Neuron Toxicity in C. elegans.

In the Physical Sciences Poster category, Computer-Based Honors Students took all three winning places. Cody Locke, a 2006 graduate in Biology, won with his research on how Genetic Interactions among Cortical Malformation Genes Mediate Susceptibility to Epileptic-like Convulsions in C. elegans. Second place went to Patrick Keenum, a 2006 graduate in Chemistry, with a poster on his research into the Structure Determination of Silicate Oligomers by Molecular Modeling and NMR Chemical Shift Calculations. Ryan House, a senior in Chemical Engineering, won third place in the Physical Sciences category with his poster on Computational Studies of the Activation of Hydrogen and Methane on Group VIB Transition Metal Oxide Clusters.

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The Computer-Based Honors Program also joined the rest of the Honors College to receive alumni at a celebration in the new Honors College facilities in Nott Hall on Saturday, October 27, before the Alabama vs. Louisiana-Monroe football game.

175 YEARS OF CRIMSON GLORY...
WELCOME HOME

Caroline Ball, a sophomore in Mathematics, headed up an incredibly successful week of Homecoming festivities. CBH won the lawn decoration competition in the Independent Organization category with a decoration themed “Home is Where You Hang Your Hat.” CBH also placed third overall in the Paint the Town Red competition. CBH teams competed in the Bowling, Basketball, and Dodgeball tournaments. The Homecoming Committee never released the winner of Bowling; however, it is widely believed that CBH won that competition as well.

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Greetings to all Seebeck Society Members and CBH Alumni!

It’s the time of year when we tend to reflect back on the past 12 months and review our accomplishments. Personally, as I glance through all the accomplishments of the current CBHP students, I’m at a loss for words. The awards and accomplishments of these students are simply outstanding. CBH students were well represented in all four categories during Honors Undergraduate Research Day – including a sweep of the awards in the Physical Sciences Poster Category. These awards were in addition to having numerous national award winners. The CBHP students also demonstrated how well-rounded and diverse they are by also doing quite well during the Homecoming Competitions – including a win in their division in the Lawn Decoration competition. Way to Pomp!

As you may have heard, the CBH program moved out of Maxwell Hall during this past summer and into their new facilities in Nott Hall. I had the wonderful opportunity over the summer to visit the Capstone and get a first-hand look at the new facilities during the annual Seebeck Society Meeting. The commitment the University has made to providing state-of-the-art facilities for the program proves that it is viewed as one of the top programs at the Capstone. While I know some of the alumni from the 1990’s may regret the move out of Maxwell Hall, let me assure you that the new facilities will provide better opportunities for interaction with the other programs in the Honors College, as well as placing the program in a more visible location on campus. Having been in the program during its tenure in a tiny office on the 3rd floor of Gordon-Palmer Hall, I can assure you that the facilities just keep improving with each move!

This was also my first opportunity to meet with Dr. Shane Sharpe, the current director of CBH. While I had a difficult time imagining anyone being able to take Cathy Randall’s place, I now feel that the program is in very good hands for the future! Dr. Sharpe has a genuine interest in the students and in furthering the visibility and importance of the CBH Program, both on campus and across the nation.

In order to facilitate the efforts of Dr. Sharpe to increase the visibility of the program and continue the tradition of excellent students entering the program, the Seebeck Society attempts to provide support in many ways to CBH. The primary ways are financial and through networking opportunities, where alumni make themselves available as resources for current students and other alumni. In order to provide the best support possible, we need everyone’s help. If you are not currently a member, please consider joining and encourage any other alumni that you may have contact with to also join. If you are already a member, please remember to renew your membership, or consider being one of the select few who have chosen to make a one-time donation to become a life-time member. The membership fees are nominal, especially for recent graduates.

Whether you are a member or not, if you have contact information for other alumni of the program, please send that information in so that we might include these “lost” classmates on our mailing lists and keep them informed about the wonderful accomplishments of the current students. In addition to the basic membership, the Seebeck Society has several endowed scholarship funds to which you can contribute. Remember, these scholarships help deserving students complete their education at the Capstone, as many of us were helped during our college years.

Let me close with a wish of joy for each of you, and for the continued success of the CBH Program. Remember, the current and future CBH students may well be the corporate and national leaders of the future – help them to achieve their goals, as I’m sure you have been helped throughout your life.

Best Wishes,
Janet Walker Davis (Freshman Class of 1984)
President, Seebeck Society, 2006-2007

Parents - Don’t Forget To Join
Seebeck Society Membership is open to parents of CBH Students as well as Alumni. So, parents please fill out the membership form and show your support of the program.
In September of 2006, the Computer-Based Honors Program officially moved out of Maxwell Hall and said farewell to over ten years of memories in the Old Observatory. While many students and alumni alike were sad to see CBH leave the building that had been the home to a generation of students working relentlessly on projects, the new lab facilities in Nott Hall hold a promising and very exciting future for the program.

The new computer lab in the bottom floor of Nott Hall is currently under construction and should be fully functioning early in the Spring 2007 semester. The entire facility is approximately 2500 square feet and will be split into five rooms, including a student lounge, classroom, computer lab area, open lab manager office area and a conference room.

The lounge will include a kitchenette, couches and a television. The classroom seats about 20 and will be used for the two freshman seminars. The conference room will be used for upperclassmen seminars and equipped with a full videoconferencing suite available for remote classes, student groups or project meetings.

Students will also have Action Card access 24 hours a day to both the building and the computer lab.

The new lab will not only accommodate the needs of CBH as it grows in size, but it also has the ability to grow with technology as it continues to advance, offering CBH students the most modern educational experience possible.

A ribbon cutting ceremony for the new facility will take place at the 2007 Honors Day Celebration on April 6. Alumni and friends are welcome to attend.

**Join the List**
Join the Computer-Based Honors Listserv and keep up CBH’s with current news and events.

**Update Your Info**
Update CBH with your current personal information like addresses, employers and family news. E-mail your updates to cbhp@bama.ua.edu.

Some of the CBH freshmen pose for a picture on the steps of Nott Hall after setting up the Homecoming lawn decoration.
Dr. Cecil Robinson, an assistant professor in Educational Psychology, has attracted two Computer-Based Honors Students far from his field to work on some unique research projects with him over the past two years. Josh Converse, a senior in Electrical and Computer Engineering, and Eric Coulter, a junior in Physics, have enabled Dr. Robinson to make some advances in online social science experiments.

Dr. Robinson’s decision to work with CBH students was an outgrowth of a need to be able to do online experiments using randomized testing, something that commercial programs lack. Josh Converse began working with Dr. Robinson in the Spring Semester of 2005 to develop a few online surveys. In the past two years, the project has grown into Researcher Solutions, a platform which enables researchers to administer social science experiments from beginning to end, from experiment design to data collection and statistical analysis. For instance, a researcher can design a survey, administer it online and analyze the data with one application.

The development of Researcher Solutions has also led to a research initiative by Josh Converse. This initiative studies the effects of conducting an online survey versus a paper and pencil survey, including the variables of classroom administration and home administration. Despite the growing popularity of online survey tools, little research has been done concerning any psychometric differences. The study has been funded by the Center for Ethical Reasoning at the University of Minnesota in order to determine whether the Defining Issues Test, a leading index of moral development, can effectively be administered online.

Dr. Robinson saw the opportunity to use Researcher Solutions in some of his other projects as well, specifically analyzing the cognitive processes involved in historical thinking and reasoning. Eric Coulter worked with Dr. Robinson to develop and implement a research project that moved beyond simple survey results to actual document generation by the respondents, which allows Dr. Robinson to study the understanding of different text formats and text coherence. The historical cognition project has led to several national conferences and a manuscript under review.

“Both students had very central roles in the projects,” said Dr. Robinson. He conceptually designed the studies, but the students designed the interface and actually administered the tests. Dr. Robinson said that he enjoys working with CBH students and hopes to continue to in the future. “It’s fun to work with really talented and bright individuals, those whom I can just give an idea and let them run with it.”

Students take the Defining Issues Test on the Researcher Solutions platform as a part of the study comparing paper and pencil surveys to online surveys.
USA Today Academic All-Americans

Six students from The University of Alabama have been named to the 2006 USA Today All-USA College Academic Team - three of whom are members of the Computer-Based Honors Program.

The first of these students, Cody Locke, is a Biology major from Boaz, Alabama. He has been recognized with numerous other honors, including the Benjamin Cummings Biology Prize, the National Society of Collegiate Scholars Merit Award, and is editor in chief of the Journal of Science & Health at The University of Alabama as well as president of Beta Beta Beta Biological Honor Society. In addition to his extensive research on the genetics of such diseases as epilepsy and Parkinson’s disease, through his Computer-Based Honors Project Cody has also developed the world’s most comprehensive genetics website for the study of epilepsy, www.carpedb.ua.edu.

Aundrea Lollar, a Chemical and Biological Engineering major from Northport, Alabama, also earned a spot on the USA Today Team. Her work in the laboratory has helped to develop new ways of connecting mercury control, behavior and site-specific characteristics that facilitate a cleaner and safer way of providing energy. She is currently working to make surgical techniques cheaper and safer through her research in the Loss of Heat through the Surfaces of Saline Solutions that are Used in Irrigation During Surgery. Aundrea also served as the president of the UA chapter of the American Institute of Chemical Engineers and spends a portion of her free time tutoring students in math and science on both the high school and college levels.

The final CBH student to earn this award was Taylor Nichols from Northport, Alabama. He has worked extensively to provide college students the opportunity to become educated and concerned voters through Voice of the Educated Student Coalition, or VOTES. In addition to Taylor’s work in founding VOTES, he created the Alabama Collegiate Summit in order to provide a new generation of concerned, active and motivated leaders in politics. He also serves as president of Alabama Students for Constitutional Reform. In 2005, Taylor received the William P. Bloom Scholarship in recognition of his achievements in uniting the campus and promoting social responsibility. Taylor recently finished his degree in Economics and is currently working for Governor Bob Riley.

Hollings Scholars

Of the 101 National Oceanic and Atmospheric Administration Ernest F. Hollings Undergraduate Scholarship, three were awarded to Computer-Based Honors Students this year. The prize for each individual is $8,000 per year for full-time study during the junior and senior years and $6,500 for a 10 week internship at NOAA or a NOAA-approved facility during the summer between the junior and senior years. This scholarship was designed with the hope of improving undergraduate research and training in natural and environmental sciences.
Michelle McGaha, an Industrial Engineering major from Albertville, Alabama, and a member of the CBHP, was one of the students selected for this honor. At UA, she is a member of Phi Eta Sigma, Alpha Pi Mu and Tau Beta Pi honorary societies and was named Computer-Based Honors Most Outstanding Freshman and Sophomore Student of the Year. Through the Computer-Based Honors program, Michelle has worked to develop programs that helped determine the safest route between two locations and currently is working on a program to convert two-dimensional images into three-dimensional models for research in variations of strain, temperature, and pressure on mechanical components. She is also an Honors College Ambassador, an Ambassador of the College of Engineering and is president of the Institute of Industrial Engineers.

Jackson Switzer, a Biochemistry major from Gulfport, Mississippi, was the second CBHP student chosen for this award. At UA, he is a member of Phi Eta Sigma and Alpha Epsilon Delta honoraries, received a Randall Outstanding Undergraduate Research Award and was named a Blackburn Institute Student Fellow. Jackson is a Presidential Scholar and is working with Dr. David A. Dixon studying computational chemistry.

Dylan Whisenhunt, a Chemical and Biological engineering major from Vestavia Hills, Alabama, was also honored with a Hollings Scholarship. At UA, he is a member of Phi Eta Sigma and Alpha Lambda Delta honoraries and received a McWane Honors Undergraduate Research Fellowship. Dylan participates avidly in Sigma Nu, Capstone Men and Women, the Interfraternity Council and GEAR UP. He has spent part of his time at UA working with Dr. Duane Johnson researching the production methods of biodiesel fuels. In addition, Whisenhunt spent the summer in Oxford with the Alabama study abroad program.

**Goldwater Award**

Thomas Glenn Kelly earned one of the coveted Goldwater Awards for excellence in science and mathematics. He is a member of Omega Chi Epsilon, Tau Beta Pi, Computer-Based Honors Program, Alpha Lambda Delta and Golden Key. He has conducted extensive research with Dr. David Dixon on three projects in the UA chemistry department, which were displayed last April at the College of Arts and Sciences Undergraduate Research Poster Competition. In his first project, Thomas studied Potential Uses for Transitional Metal Catalysts in Relation to Methane, the results of which are being prepared for publication in an academic journal. He will be presenting his findings at a national conference on chemical engineering in the near future. Currently, Glenn is researching the Fluoride Affinities of Fluoride Phosphines, which have potential applications as electrolytes in lithium-ion batteries, and he hopes to one day become a professor of chemical engineering.

**Fulbright Award**

Amanda McMillan of the Computer-Based Honors Program was awarded a Fulbright Scholarship in order to teach English as a second language in Germany. At UA, she majored in mathematics and German. As a Fulbright scholar, Amanda will receive round-trip transportation, tuition, book and research allowances, supplemental health and accident insurance, and living expenses for an academic year in Fulbright’s effort to create positive relationships and intercultural understanding between people from more than 150 countries.
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Benefits of membership include a Homecoming Reception, annual meeting vote and newsletter. These goods and services provided in return for your contribution have insubstantial value, entitling this gift to be tax deductible to the extent allowed by law. You can keep in touch by subscribing to the CBH Discussion List if you have Internet access; send e-mail to jbatson@bama.ua.edu and ask to be subscribed. Please send this form to Computer-Based Honors Program, Box 870169, Tuscaloosa, AL 35487-0169. You can send address or new updates to that address or to jbatson@bama.ua.edu

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Important Dates:
Seebeck Society Business Meeting: August 2007
CBH Freshman Orientation: February 19 - 20, 2007
CBH Honors Convocation: April 6, 2007 11:30 a.m. at Nott Hall