



The South Carolina Academy of Science mourns the passing of six distinguished members:

Mike Farmer:

November 8, 1941 – February 10, 2015

Dan Antion:

April 8, 1935 – March 23, 2014

Peggy Cain:

September 7, 1925 – January 02, 2015

Wade Batson:

May 7, 1912 – February 14, 2015

Charles H. Townes:

July 28, 1915 – January 27, 2015

Alvin Fox:

April 4, 1952 – March 6, 2015

The Academy remembers these members and recognizes them for their contributions to the state of South Carolina and to Science.

Dr. Michael Houston Farmer



Dr. Farmer of Tigerville, SC was born to the late Houston Martin Farmer and Edith Ballenger Farmer. He graduated from Greer High School and then received his Associate's Degree in Chemical Technology from Greenville Technical College in 1970.

In 1972 he received a B.S. in Chemistry from Clemson University, a Master's Degree in Science Education in 1974. In 1993, he received his Doctorate in Secondary Education from the University of South Carolina.

For over 40 years, Dr. Farmer taught Chemistry, Astronomy, and Physics at Riverside High, Greenville Technical College and the SC Governor's School. During his career, Dr. Farmer served as President of the South Carolina Science Council, President of the South Carolina Academy of Science, and Chairman of the High School Division of the National Science Teachers Association.

Dr. Farmer received many awards including Discovery Magazine Teacher of the Year (1984), South Carolina's candidate for NASA's Teacher in Space Program (1985), Order of the Palmetto (1985), Presidential Award for excellence in Science and Math Teaching (1987), National Science Teacher's Association's Gustav Ohaus Science Teaching Award (1990), and the Governor's Award for Science Awareness for South Carolina (1999).

Dr. Daniel J. Antion



Dr. Antion of Carnegie, PA was born in 1935. After high school, Dr. Antion served in the US Army. Following his service in the Army, Dr. Antion received his BA in Chemistry with a minor in Mathematics from Washington and Jefferson College, his MS from the University of Washington in Seattle, and his PhD from the University of South Carolina. During his time at USC, he served as the Associate Dean in the College of Science and Mathematics, an Associate Provost, and the Associate Director of Technology Transfer.

Dr. Antion served with the South Carolina Section for many years. He chaired the section from 1983-84, 89-90 and in 2013. In 1975-82 and 2002-09, he served as the Secretary-Treasurer, and in 2000-2001 he served as a Councilor. In 2005, the High School Teacher of the Year Award was renamed in his honor. In 1979 and 2002, he received the Distinguished Service Award of the South Carolina Section, and in 2011 he was named an ACS Fellow.

Dr. Antion was a founder of the South Carolina Association of Chemistry Teachers and the South Carolina Science Council. He served as the President of USC Sigma Xi Chapter in 1983 and in 1980 and 1998, he served as the President of the South Carolina Academy of Science and was a Distinguished Life Member.

Dr. Antion was also a recipient of many awards. In 1995, he received the Governor's Award for excellence in Science Awareness given by the South Carolina Academy of Science

In 1998, he received the Helms Citation for "Excellence in Science" by the South Carolina Science Council. In 1999, he was awarded the John Mitchener Award for Exemplary Service by the South Carolina Junior Academy of Science.

Dr. Margaret "Peggy" Garde Wright Cain



Dr. Cain, of South Bend, IN was born in 1925. After moving around for many years, she and her husband returned to Sumter, SC. In 1949, Dr. Cain graduated From the USC with a Bachelor of Science.

Dr. Cain then received her Master's Degree in Education from Clemson University in 1970 and was selected to serve as the South Carolina Science Consultant in 1979. In 1988, Dr. Cain received her Doctorate Degree from the University of South Carolina.

Some of Dr. Cain's achievements include developing the SC Maps and Aerial Photographic Systems (SC MAPS) curriculum for middle school, Developing the Elementary Science Leadership Program, Coordinating the Presidential Award for Excellence in Science Teaching, Chairing the Textbook Evaluation Committee, Coordinating with the Governor on Science Camp Awards, and organizing the South Carolina Science Supervisors Association.

Dr. Cain's awards include being selected as the Cryovac Award for the South Carolina Science Teacher of the Year, receiving the Helms Citation of Excellence Award in 1988,

and in 1998 receiving the Charles H. Townes Award by the Governor's School for Science and Mathematics for her long-standing service to science education in South Carolina.

Dr. Wade Batson



Dr. Batson, of Marietta SC, was the son of the late William Thomas and Mary Lenora Hendricks Batson. His extensive educational background includes Mars Hill College, University of Tennessee and Furman University.

Dr. Batson entered the U.S. Navy and served in the North Atlantic fleet as second in command on the USS Irwin Russell.

In 1948, Dr. Batson entered Duke University and received a M.S. and Ph.D. in Botany. For over 30 years, Dr. Batson taught botany and other biology course at the University of South Carolina and was the Chairman of the Biology Department from 1958-59. Dr. Batson also served as the President of the South Carolina Academy of Science and a member of the SC Hall of Science and Technology.

Dr. Batson authored twelve books to include *Wildflowers in South Carolina*, *Genera of Southeastern Plants*, *Genera of the Eastern Plants*, *Genera of the Western Plants*, *Landscape Plants for the Southeast* and *Wildflowers in the Carolinas*. He also wrote over forty article sin popular magazines and scientific journals.

Some of Dr. Batson's awards and achievements include: 1966, voted one of three Outstanding Professors by USC students; 1968, Meritorious Teaching Award by the Association of Southeastern Biologists; 1968, Michael J. Mungo Distinguished Professor of the Year Award;

1976, Education Conservationist of the Year by South Carolina Wildlife Federation; 1982, Order of the Palmetto Award presented by Governor Richard Riley who hosted his Retirement Party at the Governor's Mansion; 1994, Inducted into the South Carolina Hall of Fame; 1995, Honorary Doctor of Science Award by the Medical University of South Carolina ; 2004 Honorary Life Member of the University of South Carolina Alumni Association; 2011 Legends of Conservation Award by the South Carolina Wildlife Federation. Three endowments have been made in his honor at the University of South Carolina: 2000, The Wade T. Batson Professorship Endowment; 2000, W.T.B. Fellowship in Botany Endowment; and the W.T.B. Endowment for the A C. Moore Herbarium. Senator Mike Fair presented a Resolution from the South Carolina General Assembly to honor the distinguished career of this great South Carolinian. Furman University established a wildflower garden on the Swamp Rabbit Trail in his honor. The South Carolina Department of Parks, Recreation and Tourism presented him the State Park Award, one of three ever presented.

Dr. Charles H. Townes



Dr. Townes, of Greenville SC, was the son of Ellen Sumter Townes and Henry Keith Townes. He earned his B.S. /B.A. at Furman University and completed his Master of Arts in Physics at Duke University in 1936. He then received his Ph.D. from the California Institute of Technology in 1939. During WWII, Dr. Townes worked for Bell Labs on radar bombing systems.

In 1950, he was appointed Professor at Columbia University where he served as Executive Director of the Columbia Radiation Lab from 1950-52, and was the Chairman of the Physics Department from 1952-55.

While at Columbia University, Dr. Townes along with two colleagues, created the first ammonia maser which led to him receiving one of three Nobel Prizes in Physics in 1964. From 1966-1970 he was the Chairman of the NASA Science Advisory Committee for the Apollo lunar landing program.

Dr. Townes was widely recognized for his scientific work and leadership. His awards and accolades include; 1956 — elected Full Member of the National Academy of Sciences; 1957 — elected Fellow of the American Academy of Arts and Sciences; 1958 — awarded the Comstock Prize in Physics from the National Academy of Science; 1959 — awarded the Richtmyer Memorial Award from the American Association of Physics Teachers; 1961 — awarded the David Sarnoff Electronics Award given by the Institute of Electrical and Electronics Engineers, and the Rumford Prize awarded by the American Academy of Arts and Sciences; 1962 — The John J. Carty Award for the Advancement of Science given by the National Academy of Science; 1962 — Stuart Ballantine Medal given by The Franklin Institute; 1963 — Young Medal and Prize, for distinguished research in the field of optics presented by the Institute of Physics; 1964 — Nobel Prize in Physics with Nikolay Basov and Aleksandr Prokhorov for contributions to fundamental work in quantum electronics leading to the development of the maser and laser; 1979 — He was awarded the Niels Bohr international medal, for contributions to the peaceful use of atomic energy; 1980 — Townes was inducted by his home state into the South Carolina Hall of Science and Technology, and has also been awarded a South Carolina Hall of Science and Technology Citation;

1982 — He received the National Medal of Science, presented by President Ronald Reagan; 1983 — appointed to the Pontifical Academy of Sciences;

1994 — elected Foreign Member of the Russian Academy of Sciences; 1996 — awarded the Frederic Ives Medal by the Optical Society of America; 1997 — Jansky Lectureship before the National Radio Astronomy Observatory; 1998 — awarded the Henry Norris Russell Lectureship by the American Astronomical Society;

2000 — awarded the Lomonosov Gold Medal by the Russian Academy of Sciences; 2003 — awarded the Telluride Tech Festival Award of Technology in Telluride, Colorado; 2004 — awarded the Italian Society of Optics and Photonics(SIOF) "Galileo" medal; 2005 — awarded the Templeton Prize for "Progress Toward Research or Discoveries about Spiritual Realities"; 2006 — Along with associate Raj Reddy, Townes was awarded the Vannevar Bush Award for Lifetime Contributions and Statesmanship to Science; 2008 — On May 24 Townes received an Honorary Doctorate of Humane Letters from the University of Redlands; 2010 — SPIE Gold Medal

2011 — On May 14 Townes received an Honorary Doctorate of Science from Texas A&M University; 2012 — awarded the Golden Goose Award for government-funded research with unexpected applications; 2012 — awarded the Nancy DeLoye Fitzroy and Roland V. Fitzroy Medal from the American Society of Mechanical Engineers.

Dr. Alvin Fox



Dr. Fox, of London, England, was the son of the late Emanuel Fox and Rebecca Fox. He obtained his B.S in Biochemistry in 1973, and his Ph.D. in immunology in 1976 from the University of Leeds, England. Following his graduation, he held two post-doctoral positions, first at the University of Texas, Health Center in Dallas, and next, at the University of North Carolina. In 1980, Dr. Fox commenced his Assistant internship at the University of South Carolina, and in 1991, was awarded a Full Professorship in Pathology, Microbiology and Immunology.

Dr. Fox was a member of the American Society for Microbiology, American Society for Mass Spectrometry, American Chemical Society and the South Carolina Academy of Science which he served on as a councilman from 2004-2009.

Dr. Fox was the Editor-in-Chief of the Journal of Microbiological Methods, joint-Editor-in-Chief of Molecular and Cellular Probes and was on the Editorial board of the Journal of Clinical Microbiology.

In 1995, Dr. Fox received the Basic Science Research Award from the USC School of Medicine and in 1999, he received the USC Education Foundation Health Sciences Research Award.

