

**SCIENCE**

## Thomas Zacharia assumes new duties as ORNL director; starts new era at Lab

**Thomas Zacharia, who built ORNL into a global supercomputing power,** became the Laboratory's new director July 1.

His selection was announced June 1 by Joe DiPietro, chair of the UT-Battelle Board of Governors and president of the University of Tennessee,

"Thomas has a compelling vision for the future of ORNL that is directly aligned with DOE's strategic priorities," DiPietro said. "He has led many of the innovative research and development initiatives that ORNL has successfully pursued over the past decade."

DiPietro said Zacharia's almost 30-year career at ORNL in materials and computing will enable him to lead in the continuing advancement of programs in those areas and others.

"Thomas' background positions him well to strengthen ORNL's signature research capabilities in computational, neutron, materials and nuclear science," DiPietro continued. "His vision of ORNL playing a prominent role in advancing U.S. national and energy security reflects his leadership strengths. He has been key to the success of developing joint academic programs with UT. Finally, he embraces diversity and has a passion for developing and strengthening the workforce at the Laboratory."

Zacharia came to ORNL in 1987 as a postdoctoral researcher after receiving his Ph.D. in engineering science from Clarkson University in New York. He also holds a master's in materials science from the University of Mississippi and a bachelor's in mechanical engineering from the National Institute of Technology in Karnataka, India.

When UT-Battelle became ORNL's management and operating contractor in April 2000, Zacharia was director of the Computer Science and Mathematics

Division. In 2001, he was named associate laboratory director for the new Computing and Computational Sciences Directorate. During the next eight years, Zacharia built a scientific enterprise that brought more than 500 new staff to Oak Ridge and opened the nation's largest unclassified scientific computing center, the Oak Ridge Leadership Computing Facility, a user facility of DOE's Office of Science.

Zacharia was named ORNL's deputy for science and technology in 2009, responsible for the Laboratory's entire research and development portfolio. During his tenure, the Lab has strengthened its translational energy programs, establishing the Nuclear Science and Engineering Directorate and the Energy and Environmental Sciences Directorate.

A team led by ORNL won DOE's first Energy Innovation Hub, the Consortium for Advanced Simulation of Light Water Reactors, which leverages the Lab's expertise in computing and nuclear science and engineering. New capabilities were acquired in advanced manufacturing and cybersecurity, and the new Bredesen Center for Interdisciplinary Graduate Research and Education was established—it is now UT's largest doctoral program.

"Thomas represents the very best of ORNL: scientific excellence, a willingness to tackle tremendous challenges for the benefit of the nation and the vision to find innovative solutions and make them reality," said Jeff Wadsworth, president and CEO of Battelle and director of ORNL from 2003-2007. "His whole career shows that he knows how to apply ORNL's unique breadth of expertise to our most important priorities in science, energy, national security and economic competitiveness."

*(continued on page 6)*



Thomas Zacharia. (ORNL photo by Jason Richards)

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"Thomas represents the very best of ORNL: scientific excellence, a willingness to tackle tremendous challenges for the benefit of the nation, and the vision to find innovative solutions and make them reality."—Jeff Wadsworth

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Michelle Buchanan. (ORNL photo by Jason Richards)

## Long-time researcher Michelle Buchanan named deputy for science, technology

**Michelle Buchanan has been appointed ORNL's deputy for science and technology effective Oct. 1, 2017.**

Buchanan has been associate laboratory director for physical sciences since 2004 with responsibilities including the ORNL's Chemical Sciences, Physics and Materials Science and Technology divisions, as well as its Center for Nanophase Materials Sciences.

In her new position, Buchanan's responsibilities will cover the range of ORNL research—computing and computational sciences, neutron science, nuclear science and engineering, the physical sciences, energy and environmental science and national security—as well as the Lab's leadership role in U.S. ITER, the Exascale Computing Project and ORNL research centers and institutes.

“The scientific challenges and impact of Oak Ridge's research has compelled me for many years,” said Buchanan, who came to ORNL as a chemist in 1978. “It is a great privilege to be entrusted with shaping our future as a laboratory. My focus will be on strengthening collaborations across our diverse disciplines and promoting scientific achievement among ORNL staff, as well as the world-leading scientists who use ORNL facilities and benefit from our expertise.”

Buchanan is a fellow of the American Chemical Society and the American Association for the Advancement of Science. She has written or contributed to more than 100 scientific publications and reports, holds two patents, edited a book on Fourier transform mass spectrometry, and worked extensively at the national level helping shape research directions for DOE as well as the National Science Foundation.

She has held multiple positions in the American Chemical Society and the American Society for Mass Spectrometry. She is currently a member of the Board on Chemical Sciences and Technology, National Academy of Sciences, and serves on advisory boards for the University of Wisconsin-Madison Department of Chemistry, the University of Tennessee Department of Chemistry, the National Science Foundation Advisory Committee for Environmental Research and Education, and the Georgia Institute of Technology Southeastern Nanotechnology Infrastructure Corridor (SENIC).

Her stature in the research community has made her an effective advocate for increased opportunities for women, girls, and other underrepresented groups in STEM-based careers.

Buchanan earned her bachelor's degree in chemistry from the University of Kansas and her doctorate in chemistry from the University of Wisconsin-Madison. Her research focused on the development of mass spectrometry for trace detection of materials related to energy, health, and the environment for multiple DOE offices and other federal agencies. —David Keim 🌿

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My focus will be on strengthening collaborations across our diverse disciplines and promoting scientific achievement among ORNL staff, as well as the world-leading scientists who use ORNL facilities and benefit from our expertise.”

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*The ORNL Reporter* is published for retirees of ORNL, which is managed by UT-Battelle for the U.S. Department of Energy.

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## Gu, Paranthaman named Corporate Fellows

Researchers Baohua Gu and Parans Paranthaman have been named ORNL Corporate Fellows, recognized for significant career accomplishments and continued leadership in their scientific fields.

Gu is an international expert in environmental geochemistry most noted for his innovative approach to studying organo-metal interactions and applying spectroscopic techniques to characterizing the fate, transformation and transport of heavy metals, radionuclides and nanomaterials in aquatic and terrestrial systems.

Paranthaman has gained international recognition for the design, synthesis and fabrication of new materials and their translation into new energy technologies, including superconductor wires, electrodes for batteries and additive manufacturing of low-cost magnets. He is a fellow of the Materials Research Society, American Association for the Advancement of Science, American Ceramic Society, ASM International and the Institute of Physics, London.—Bill Cabage 🌿

## Thom Mason discusses his years as ORNL researcher, director

**Prior to his departure from ORNL for Battelle**, outgoing ORNL Director Thom Mason sat down with Bill Cabage of ORNL Communications to talk about his years at ORNL:

**Q:** How did you get to ORNL?

**TM:** When [original Spallation Neutron Source project director] Bill Appleton recruited me to be science director, the SNS project was just getting started. Bill was associate director for physical sciences and responsible for SNS. Part of the discussion was I'd still do research. Once I arrived, it became apparent that I'd have to jump in with both feet. I came in the beginning of May 1998. An Office of Science project review was scheduled right after I arrived. Somebody shoved a bunch of viewgraphs in my hand and said, "you're giving a talk, we're doing this DOE review," which was to approve the baseline for the project. I had no clue what that meant. Actually we were unsuccessful. DOE refused to accept the baseline we proposed – they didn't have confidence in the cost and scheduling. That's where I began my crash course in project management.

**Q:** Talk about your time at the SNS in the beginning.

**TM:** The learning curve was the part I liked best. It's stimulating to be in a position where you're trying to understand how things work. It's learning fast, it's engaging. That happens any time you move into a new role. I was pretty quickly given responsibility for the target group in addition to the instrument group. I knew instrumentation from my time in Denmark, but the target was new and a high-hazard radiological facility. Project management and how DOE works was something I had to figure out. Very stimulating.

After the SNS project was complete and had a year of operation, I got the Lab director role. Once again a steep learning curve, but by that point in time I kind of understood managing people, DOE, the federal budget process, safety, finance, human resources and so forth. SNS was good preparation because you see all those aspects. I didn't know much about national security. I had only become a U.S. citizen less than a year before I became Lab director and didn't have a security clearance. The Lab has sufficient breadth in terms of science and engineering that it's impossible to be an expert in all those areas – lots to pick up to understand what we were doing in biology, computing, nuclear and fusion. That's the part I like best, actually – trying to understand new things and how they fit together.

**Q:** Did someone stand out in helping you manage all of this?

**TM:** Lots of people. I've always been fortunate in working with teams motivated and effective. You learn the most from your colleagues. And I've been fortunate to work for people who gave me opportunities, whether it was as a grad student with my thesis advisor, Malcolm Collins, and folks like Bill Buyers, who I worked with at Chalk River and Brookhaven. They let me pursue things that I was interested in. As a postdoc at Bell Labs, my mentor there, Gabe Aeppli, provided lots of opportunity. The same thing's been true every step of the way. Bill Appleton recruited me to come here initially, and David Moncton came to run the SNS project. He really knew what was involved in running a project, having been responsible for the Advanced Photon Source. Bill Madia was Lab director when David left, and he was the one who made the leap of faith and put me in charge of the project even though I'd never done anything remotely like that before. Jeff Wadsworth was the director as we completed SNS.

**OT:** What's your best accomplishment?

**TM:** The important thing about ORNL is there are 4,800 people doing amazing things every day. There's little that I've done and a lot the Lab has accomplished. I was at a board meeting in Switzerland where they were showing statistics on neutron facilities generated by the Institut Laue Langevin, so it's not our data, it's ILLs, and the SNS and HFIR in terms of scientific productivity and high-impact publications have just taken off in the past couple of years. It takes a while to get the facilities working, the instruments working, the users, and you have to write the papers, but now we're seeing the world leadership manifest itself that we always knew was there. That's what brought me to the Lab in the first place, so I take pride in that. We've done amazing things in computing during my time here, having really put ourselves on the world stage in an area that is central to how we do science in the 21st century.

We've had some really important national security contributions, where our technical input was important to formulating constraints placed on Iran in progressing to weapons quantities of enriched uranium and developing monitoring technology to prevent it. That ties to the fuel cycle, front end and back end, which is also relevant to U.S. domestic needs and our support of nuclear energy. The Lab's been really successful in both winning and, more importantly, properly executing large multidisciplinary efforts that have a high degree of visibility, lots of investments, with important problems to solve like our Bioenergy Science Center, which we won just as I took over. It was wonderful to become Lab director and have this thing handed to you, which of course many people had been working on prior to that. CASL the Consortium for the Advanced Simulation of Light Water Reactors and the Critical Materials Institute adopted the model for BESC. The scientific and technical results have been outstanding and well recognized by DOE.

One of the things I'm most proud of is our effort with the University of Tennessee and the graduate program – the Bredesen Center – which has expanded to other universities. It certainly brings a group of motivated, smart young future scientists in a way that gives them a unique educational experience, but I also think it is invigorating for our staff. That's something that will have a huge impact over the years as we graduate researchers, even if they don't all work here. Some may work at the Lab, or at other DOE labs, or move to positions at industries and universities. We're building an alumni network that I think will really serve us well.

**Q:** What's the biggest job left undone?

**TM:** There's still a lot to do. Summit and the machine that comes after Summit – the Exascale Computing Project. That's a heavy lift with funding and challenging technical work to be done. We're well positioned with a role in the overall management of ECP. We're embarking on an SNS

*(continued on page 6)*



Thom Mason. (ORNL photo by Carlos Jones)

## Service anniversaries

### March 2017

**Over 40 years:** **George Malcolm Stocks**, Materials Science & Technology; **Della L. Elliott**, Institutional Planning; **Manuel G. Gillispie** and **Deborah P. Stevens**, Communications; **Horace M. Pratt**, Facilities Management; **Donald A. Spong**, Fusion & Materials for Nuclear Systems; **Elaine G. Thompson**, Computational Sciences & Engineering; **J.C. Brewster** and **Jerry Lee Butler**, Logistical Services; **Jeffrey A. Holmes**, Research Accelerator; **Delores S. Foust**, Acquisition Management Services; **Brad E. Nelson**, US ITER

**40 years:** **Leonard P. Phillips Jr.** and **Larry D. Phillips**, Nuclear Security & Isotope Technology; **Tom T. McConnell**, Nonreactor Nuclear Facilities; **Saylor B. Hummel**, Human Resources; **Richard A. Boody**, Utilities; **James Samuel Goddard Jr.**, Electrical & Electronics Systems Research

**35 years:** **Daniel G. O'Connor**, Facilities Management

**30 years:** **David Andrew Denning**, Integrated Operations Support; **Mark A. Buckner**, Electrical & Electronics Systems Research; **D. Lynn Cox**, Logistical Services; **Stan Cooper**, PSD Integrated Research Operations; **Mark H. Robbins**, Communications

**25 years:** **Mark Matthews Delph**, Nonreactor Nuclear Facilities; **Angela J. Raby**, Global Security; **Kathy A. Brown**, Transportation & Waste Management; **David Alan Craft**, Nuclear & Radiological Protection; **Scarlett R. Clark**, Fusion & Materials for Nuclear Systems; **Neil R. Giffen**, Facilities & Operations; **Eric W. Laubach**, Engineering Management

**20 years:** **Craig A. Blue**, Energy Efficiency & Renewable Energy

### April 2017

**Over 40 years:** **Jo Ann Fitzpatrick**, Acquisition Management Services; **Charles L. Watson**, Chemical Sciences; **Randall**

**C. Vaught**, Utilities; **Dorothy W. Coffey**, Materials Science & Technology; **Jack M. Crawford Jr.**, Nonreactor Nuclear Facilities; **Tina Jo Graves**, Logistical Services

**40 years:** **Larry M. Rosenbaum**, Information Technology Services; **Ken Guymon**, Nonreactor Nuclear Facilities; **Mark J. Rennich**, Instrument & Source

**35 years:** **Curtis A. Maples**, Nonreactor Nuclear Facilities; **Eraina G. Elliott**, Fusion & Materials for Nuclear Systems; **Carol T. Rice**, Business Services

**30 years:** **Nancy R. Sweat**, Nuclear & Radiological Protection; **Richard E. Rodriguez**, Laboratory Protection; **Cathy L. Gaudreau**, Biosciences; **Michael L. Baker**, Office of Integrated Performance Management

**25 years:** **Sherry E. Ray**, Center for Computational Sciences; **Jeanne Denise Bonner** and **Kathryn A. Kinney**, Nonreactor Nuclear Facilities; **Janet M. Baucom**, Electrical & Electronics Systems Research; **Ronald Joseph Reagan**, Research Reactors; **Linda S. Huskey**, Nuclear Security & Isotope Technology; **Chad C. Plemmons**, DOE-IN Programs

**20 years:** **Brad Nance**, Computer Science & Mathematics; **Anthony C. Gehl**, Energy & Transportation Science; **Shane S. Poteat**, Laboratory Protection

### May 2017

**Over 40 years:** **H.L. Hodge** and **Ronnie L. Revels**, Logistical Services; **Larry W. Owen**, Fusion & Materials for Nuclear Systems; **Howard Edward Freeman** and **Pamela H. Vasquez**, Integrated Operations Support; **John M. Begovich**, Nuclear Security & Isotope Technology; **Ron Clark**, Information Technology Services; **Robert A. Anderson**, Environmental Protection Services; **Jeff A. Patty**, Nonreactor Nuclear Facilities

**40 years:** **Stephen Kenneth Ellis** and **Lewis Franklin Futrell Jr.**, Facilities Management; **Becky J. Verastegui**,

Computing & Computational Sciences; **Van D. Baxter**, Energy & Transportation Science; **Johnny C. Brown**, Utilities; **Suzanne A. Herron**, US ITER Project Office

**35 years:** **David K. Felde**, Reactor & Nuclear Systems; **James E. Radle**, Nuclear Security & Isotope Technology

**30 years:** **Donna L. Balltrip**, Materials Science & Technology; **J. David Snider**, Nuclear Security & Isotope Technology; **Robert A. Dean**, Directorate Operations Office; **David B. Geohegan**, Center for Nanophase Materials Sciences; **Mark B. Rogers**, Information Technology Services; **Diane Maddox**, Environmental Protection Services

**25 years:** **Jeffrey J. Duff**, Instrument & Source; **DeAnna Kay Hatmaker** and **Sonya G. Beck**, Nuclear & Radiological Protection; **Jeffery Lynn Redwine**, **Martin Bailey Wice**, and **David R. Williams**, Laboratory Protection

**20 years:** **David C. Radford**, Physics; **Tim Wynn**, Nuclear Security & Isotope Technology

### June 2017

**Over 40 years:** **Lynda Hawkins Saddiq** and **Raymond C. Juras**, Physics; **John K. Munro Jr.** and **William J. Allington**, Electrical & Electronics Systems Research; **Patricia G. Cleveland**, Transportation & Waste Management; **Patrick N. Rader**, **Leroy Sims**, and **Michael T. Huie**, Business Management Services; **Dennis Benker**, **Paul Allen Taylor**, **Benjamin E. Lewis Jr.**, and **Robert Thomas Jubin**, Nuclear Security & Isotope Technology; **Alfred Hendricks**, Facilities Management; **Connie L. Begovich**, Information Technology Services; **James B. Roberto**, Science & Technology Partnerships; **Albert D. Devaney**, Research Reactors; **John C. Rowe**, Energy & Transportation Science; **Nermin A. Uckan** and **Charles R. Foust**, Fusion & Materials for Nuclear Systems; **Johnny S. Tolliver**, Computer Science & Mathematics; **Benjamin Thomas Jr.**,

## Service anniversaries (continued)

Defense & Homeland Security; **Karen H. Galloway**, Nuclear & Radiological Protection

**40 years:** **G. Randall Wetherington Jr.**, Electrical & Electronics Systems Research; **Wallace D. Porter**, Materials Science & Technology; **Bill Nelson**, Information Technology Services; **Hal L. Jennings**, Nuclear Security & Isotope Technology; **Leslie Kevin Felker**, Isotope Business Office; **Eric Craig Bradley**, Fusion & Materials for Nuclear Systems; **John Edgar Long**, Facilities Management

**35 years:** **John W. Shaw Jr.** and **Diana Lynn Tucker**, Nuclear Security & Isotope Technology; **David E. Williamson**, US ITER Project Office

**30 years:** **Barbara J. Snow** and **Anita S. Benn**, Reactor & Nuclear Systems; **Linda A. Lewis**, Chemical Sciences; **Cheryl D. Parks**, Business Management Services; **Paul A. Menchhofer**, Materials Science & Technology; **Titonia K. Sawyer**, Scientific & Program Services Office; **Don E. Maxwell**, Center for Computational Sciences; **Milton Nance Ericson**, Electrical & Electronics Systems Research; **Robert “Rob” F. Peacher**, Nuclear Security & Isotope Technology

**25 years:** **Tonia L. McPeters**, US ITER Project Office; **Dale E. Perkins**, Nonreactor Nuclear Facilities; **Pamela J. Olszewski**, Energy & Transportation Science; **W. Jay Pruitt** and **Clint Ausmus**, Physics; **Stephen Hood Lyles**, **John H. Eubanks**, and **Kenneth Paul Curtis**, Nuclear & Radiological Protection; **W. Jerry Bohannon**, Environmental Protection Services; **Sheryl Maki Draime**, Safety Services; **Laura Kay Harvey** and **Michael Gregory Sergent**, Nuclear Security & Isotope Technology; **Bruce Balkcom Bevard**, Reactor & Nuclear Systems; **Kenneth Alan Lowe**, Environmental Sciences; **Kara J. Clayton**, Business Management Services

**20 years:** **Thomas E. Potok**, Computer Science & Mathematics; **Mikhail A. Sokolov**, Materials Science & Technology; **Alfredo Galindo-Uribarri**, Physics

### July 2017

**Over 40 years:** **George F. Flanagan**, Reactor & Nuclear Systems; **Mary L. Johnson** and **Tim Welch**, Nuclear Security & Isotope Technology; **Shirley B. Waters**, Biosciences; **John E. Capshaw**, Logistical Services; **Eddie H. McBay**, Chemical Sciences

**40 years:** **Gary Q. Kirk**, Research Reactors; **Robin L. O’Hatnick**, Nuclear Security & Isotope Technology; **Joseph Gregory Winfree**, Information Technology Services; **William L. Jackson**, Computational Sciences & Engineering

**35 years:** **Sherl Reed** and **Steven W. Cox**, Facilities Management; **Kathy M. Brooks**, Laboratory Protection

**30 years:** **Michael Roy Moore**, Intelligence Programs; **Walter S. Koncinski**, Communications; **Kirby L. Wilcher**, US ITER Nuclear Systems; **Charlene M. Patrick**, Reactor & Nuclear Systems; **W. Brian Ray**, Computer Science & Mathematics; **Timothy J. Theiss**, Energy Efficiency & Renewable Energy; **Richard Howell Goulding**, Fusion & Materials for Nuclear Systems; **Jeff Patton**, Scientific & Program Services Office

**25 years:** **John Allen Keaton Jr.**, Nuclear & Radiological Protection; **Brenda G. White**, Nuclear Security & Isotope Technology; **Harry M. Meyer III**, Materials Science & Technology; **Gregory John Hirtz**, Research Reactors; **Ramie Vanessa Wilkerson**, Office of Institutional Planning; **Shari C. Butters**, Safety Services; **James D. Rhyne**, Information Technology Services

### August 2017

**Over 40 years:** **John T. Mihalcz**, **Emory D. Collins**, and **Alan M. Krichinsky**, Nuclear Security & Isotope Technology; **Richard L. Cox**, Computational Sciences & Engineering; **James R. Keiser**, Materials Science & Technology; **Terry Wright Christie**, Nonreactor Nuclear Facilities; **J. L. Johnson**, Laboratory Protection; **Thomas R. Gibson**, DOE-IN Programs;

**Nancy Young Wright**, Human Resources; **Margaret Boone “Bonnie” Nestor**, Office of the Laboratory Director; **Jack P. Adams**, Transportation & Waste Management; **Richard M. Davis**, Defense & Homeland Security; **Richard Wayne Leggett**, Environmental Sciences; **Janet V. Honey**, Research Reactors; **Johnny H. Fairs**, Integrated Operations Support

**40 years:** **D. Michael Turpin**, Information Technology Services; **Paul Thomas Singley**, Nuclear Security & Isotope Technology; **Carlton P. Rose**, Logistical Services; **Fred J. Peretz**, Fusion & Materials for Nuclear Systems

**30 years:** **Robert N. Baugh**, Utilities; **Sandra B. Bowman**, Accounting Services; **D. Allen White**, Directorate Operations Office; **Mark A. Klein**, Integrated Operations Support; **Kay J. Houser**, Logistical Services; **Debra H. Austin**, Nuclear & Radiological Protection

**25 years:** **Daniel Lane Pinkston**, **Steve Norris Hammonds**, and **Kevin Arthur Smith**, Research Reactors; **Michael L. Simpson**, Center for Nanophase Materials Sciences; **Mark S. Gallaher**, Acquisition Management Services; **Kitty McCracken** and **Tracy M. Clem**, Environmental Sciences; **Sean Russell**, Logistical Services; **Beth Bailey**, Biosciences; **Karen A. Garrett**, Communications

**20 years:** **Hsin Wang**, Materials Science & Technology; **Dominic F. Lee**, Sustainable Electricity Program

## ORNL Reporter blog now available

If you would like to learn updated news about ORNL, you may now link into the ORNL Reporter blog at <https://www.ornl.gov/blog/ornl-reporter>.

The blog is periodically updated with news and events involving ORNL.

For more information, contact [strohlhf@ornl.gov](mailto:strohlhf@ornl.gov).

## Periodic Table with Ts included distributed to Tennessee schools

Copies of the Periodic Table of Elements – including ORNL-discovered element 117 named

tennessine – are being distributed to all high schools and middle schools in Tennessee.

Jim Roberto, ORNL's associate laboratory director for science and technology partnerships, said the new element further strengthens Tennessee as a science and technology state.

“We think that because of Oak Ridge National Laboratory, the University of Tennessee, Vanderbilt, TVA and other organizations, Tennessee is a very strong science and technology state,” Roberto said. “This is a way of emphasizing that to all of our citizens at a very critical time in their education.”

Roberto said the Periodic Table provides the foundation for the study of science and technology.

“It is the way to organize our physical world and our chemical world in a manner that we can understand it,” Roberto said. “Because of the involvement of Tennessee and the name tennessine now included in the Periodic Table, its presence on the chart will capture the minds and the imagination of our students throughout Tennessee and help them to develop a greater understanding of the importance of the Periodic Table and stimulate students throughout Tennessee in science and technology.”



*Mason discusses his years as ORNL researcher, director (continued from page 3)*

upgrade, with the Proton Power Upgrade's conceptual design review in May. That's the first phase ultimately culminating in a Second Target Station that will double the overall capacity and significantly increase the performance for measurements involving long-wavelength neutrons. We have the competition for the successor to BESC, the Center for Bioenergy Innovation.

ORNL is in a strong position and facilities are largely modernized, but there are still parts of the Lab that aren't up to scratch. It's not as big a challenge as when I arrived in '98, but if we don't stay on top of it, we can get back in the ditch in terms of infrastructure. We're always going to be working to renew the facilities

**Q:** Any disappointments that stick out?

**TM:** We haven't won every proposal we've made. You wouldn't expect to, but you're always putting your best foot forward to come out on top. In terms of facilities, we've had some unsuccessful runs, such as the new data center for computing infrastructure with private funding. We couldn't get that through the wickets at the Office of Management and Budget. We've been able to respond and adapt and we've found ways to use existing space to accommodate Summit, for example, but you always have problems and setbacks.

Overall our safety performance has increased substantially over the past several years, but it doesn't mean things haven't happened that shouldn't have happened. The measure of the institution is not the absence of problems, but overcoming the problems that you encounter.

**Q:** How have East Tennessee and Oak Ridge changed since you moved here?

**TM:** If you went to downtown Knoxville when I first arrived, Market Square was all boarded up. It didn't look too good. Now you've got Market Square and Gay Street in a tremendous revitalization and Main Street in Oak Ridge is finally coming to fruition. The degree to which the business and economic development community is interacting with the Lab has changed significantly to the benefit of both. It's good to have an engaged private sector that aligns with our strengths while ORNL is an asset to the region's effort to attract and grow companies. That combination is very powerful, particularly since the economic downturn. It's become a more connected, cosmopolitan area.

**OT:** What will you miss most about ORNL and East Tennessee?

**TM:** The breadth and depth of activities at ORNL are really hard to reproduce. I feel privileged to have been involved in them and feel pretty committed. It's not going to be easy to watch from a distance as the exascale project comes to fruition, or the Second Target Station. I'll miss all the colleagues, but it's like Allan Mackintosh said, you never really leave a place. You keep all those connections. I don't intend to disappear off the face of the Earth.—*Bill Cabage* 🌱

*Thomas Zacharia becomes new ORNL director (continued from page 1)*

In 2012, Zacharia took a leave to serve as executive vice president of the Qatar Foundation for Education, Science and Community Development, overseeing research in energy and the environment, information and computing technology, life sciences and biomedical research and social sciences. He led Qatar's leading science and technology park, which is home to more than 40 multi-national companies including GE, Microsoft and Siemens. He returned to ORNL in 2015.

The UT-Battelle board conducted an open, competitive search for a new director after Thom Mason announced that he would be leaving to join Battelle after 10 years leading ORNL. Among the goals Zacharia outlined if he were chosen as director: leading ORNL to be the world's premier research institution; building on the ORNL's original sense of mission – winning World War II while pushing the boundaries of research – to reshape its creative energy for the future; celebrating a science and technology culture that encourages individuals to be the best in their fields; and pursuing institutional excellence that advances U.S. leadership in neutron science, computing, materials and nuclear science and engineering.

Mason is now senior vice president for laboratory operations at Battelle in Columbus, Ohio, where he is working with Ron Townsend, Battelle's executive vice president of global laboratory operations, to support the six DOE labs and one Department of Homeland Security lab managed by Battelle.—*Bill Cabage* 🌱



## From the Lab Director

As I assume the responsibilities of director at ORNL, this is something I could have neither envisioned nor fully appreciated when I arrived as a postdoctoral fellow in 1987.

I was recruited at a conference in Gatlinburg by Corporate Fellow Emeritus Stan David, then a group leader in the former Metals and Ceramics Division. It wasn't until I arrived at the Lab, however, that I recognized the privilege of working with ORNL's accomplished staff and understood the potential available at a national laboratory.

In my case, wise mentors and managers encouraged new ideas, which meant the pursuit of new funding, which enabled the rapid growth of our computing capabilities. At different scales, the same story can be told across the Lab throughout its history: Incredibly smart people supporting one another, identifying important problems, pursuing creative solutions and allowing the Lab to explore compelling ideas from materials to neutrons to nuclear to life sciences and clean energy, applying breakthroughs in fundamental science to energy technologies, national security, medicine and industry.

We are part of a remarkable story that began when there was truly an existential crisis, when without success there would have been no tomorrow. National missions have driven our work ever since, and we are uniquely positioned to take on the most important and difficult challenges today. My goal is for ORNL to be the premier research institution in the world, translating innovative breakthroughs that will secure our nation's energy future and mitigate national security threats.

We can only achieve that goal together as a research community energized by a desire to lead. It is my commitment to support the pursuit of excellence throughout the Laboratory.

I will be talking about new ways ORNL will enable world-leading science and innovation. Our group leaders, for instance, have been thinking creatively about how to develop and mentor staff. The goal is to attract and retain the best and brightest, raise our expectations, enhance collaboration and ensure an exemplary environment that maximizes productive time. ORNL research staff should always aspire to be the best in their fields.

I have pledged a relentless pursuit of institutional effectiveness. This means setting the right expectations on our cost of doing business, discretionary investments in both science and facilities, and organizational structure. We say we deliver the most powerful scientific tools and advanced facilities to solve the nation's most challenging problems – which is absolutely true. We will apply the same passion and energy that brought us these capabilities to continued leadership in safe, efficient and effective Laboratory operations. The successes I've been privileged to enjoy as a scientist and scientific leader would not have been possible without the excellence of our technicians, craft workers and other support staff, who are all part of our research community. I have told colleagues many times, if you can imagine something that may help your research, ORNL staff will find it, procure it or figure out a way to make it.

At the moment, we face uncertainty about funding and programs. We are making the case for the importance of our work. We also know the long-term solution is always to effectively serve national priorities. I have had the good fortune to spend time with new Energy Secretary Rick Perry as he has consistently emphasized areas where ORNL can play a critical role, such as high-performance computing, grid security, nuclear energy, advanced manufacturing and national security. Our main sponsor, the DOE Office of Science, recognizes that 23 of DOE's 24 "core capabilities" reside at ORNL, from accelerator science to systems engineering. The quality of our work across a diverse portfolio is our best argument for sustained funding in these areas.



Thomas



## Nominations for CORRE board of directors being accepted through Sept. 1

Nominations for board members for the Coalition of Oak Ridge Retired Employees (CORRE) are being accepted through Sept. 1.



If you would like to nominate another retiree, please send a very brief summary of the person's work experience to Mike Bradshaw, bradshawmr@comcast.net or mail to Mike Bradshaw, 11324 Berry Hill Dr., Knoxville, Tenn.

If you are nominating another retiree, that person must have agreed to serve, and must be a CORRE contributing member. Please inquire of your nominee whether or not he/she has contributed the one-time \$20 membership.

Nominations from the floor during the Oct. 23 annual meeting are not allowed. If you wish to enter your name into nomination and have not been chosen by the nominating committee, you may obtain the names of 30 CORRE contributing members. Please present to the member a sheet headed "Contributing Members – Petition for Nomination." Submit the list of signatures to the Nominating Committee Chair as shown above by Sept. 1. The nominating committee's proposed list of 2018 board members will be transmitted via e-mail by Sept. 30.

## Club ORNL events

Get the details and latest news online via <https://info.ornl.gov/sites/clubornl>. Request an XCAMS account, which will allow you to participate in these events or contact Lara James at 865-576-3753 or jamesla@ornl.gov.



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## Hallerin Hilton Hill encourages ORNL support for United Way

Knoxville radio and TV personality Hallerin Hilton Hill, right, encouraged employees to support those in need during opening ceremonies for ORNL's 2017 United Way campaign held June 1 on the ORNL Quad. "One of the lessons of life is that of giving," Hill said. "When you learn to give something without expecting anything in return, it does something for you. The United Way has organizations that provide meals and help people set up a new life. It is because of someone's giving." Hill said the InterFaith Health Clinic – a local United Way agency – helped his family. "When I moved to Knoxville 27 years ago and I didn't have a job, the place I went for help was the InterFaith Health Clinic," Hill recalled. "Someone made a contribution then to help my family and me. When they made that contribution, they had no idea I



would be showing up to speak out for United Way five years later. They had no idea who that contribution was for, but they knew it was for somebody and that turned out to be my family." Hill said many East Tennesseans are in need and contributing to United Way helps the contributors as well as the recipients. If you are interested in contributing to the ORNL United Way campaign, please go <https://portal02.ornl.gov/sites/unitedway/Lists/Forms/AllItems.aspx>. (ORNL photo by Jason Richards).



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