

# **Club Meeting**

Oak Ridge Meets at DoubleTree by Hilton 215 S. Illinois Avenue Oak Ridge, TN 37830 Time: Thursday at 12:00 PM

Oaktarian 24-25 Vol LXXV, No. 36



### **Club Officers**



Vendie Aurin Club Membership Chair



President-Elect



Club Service Chair Community Service Chair Judy Stone Wilson



Club Executive Secretary Cynthia S. Jeffers



Chris Copelan Public Image Chair



Elaine M. Bunick Club Rotary Foundation Chair





Past President



Todd W Bergener Vocational Service

# THE Rotary Club of Oak Ridge

Club of Oak Ridge

Celebrating 75 Years



# Special Announcements

## Interact TORCH Collection



# Please bring new items only!!

# **Upcoming Events**

## **Club Events**

• More to come!

# **District Events**

- May 1st: District Golf Tournament Chattanooga Learn more.
- May 2-3rd Multi-District Conference Learn More
- May 17th Club Leadership Learning Assembly Location TBA

# **Community Events**

April 24: Emory Valley Center Compassion Fundraiser





Exchange Officer
Curtis Scott Jamison

David Rankin

Club Youth

iPast President

### Invocation Schedule

March 27th Elaine Bunick

April 3rd David Carr

April 10th Maria Catron

April 17th Linda Cloutier

April 24th Tom Connolly

# Upcoming Meetings

March 27th Commanding a Nuclear Submarine

Speaker: Geoffrey DeBeauclair Subject: Commanding a Nuclear Submarine

April 3rd <u>Voices for a Safer TN</u> **Speaker:** Todd Cruise **Subject:** Voices for a Safer TN April 10th

AdvoKids Speaker: Mindy Wilson Subject: AdvoKids

### Birthdays

### No Birthdays this Week

#### Anniversaries

Patricia D. Row 04-02-2015 10 Years David Rankin 03-29-2018 7 Years

### Condolences

Long-time member and currently honorary member Jack Yaggi has passed away. Condolences to his daughter Jenifer Yaggi Campbell and their family and friends.

Condolences are also extended to Cyndi Jeffers and family on the recent loss of her brother.

### Last Week's Program

### Andrea Schneibel: Type One Energy

Andrea Schneibel, Communications Manager, Type One Energy was our speaker on March 20.

Type One Energy (T1E), was founded in 2019. They have sixty employees in four offices -Knoxville is the headquarters. Their fusion energy research and development is well-funded at more than \$82 M after receiving their first round of venture capital in 2023 from an investor syndicate that includes Bill Gates.

Features providing confidence of T1E's success in fusion realization include: (1) By-passing much of the experimental work, T1E has used supercomputing simulations at Oak Ridge National Laboratory to rapidly determine the best fusion machine design.

(2) T1E is partnering with TVA to take advantage of their existing energy infrastructure and power delivery expertise to shorten their timeline to commercialization. T1E is the first fusion company to secure an end customer agreement (out of 30 companies).

Andrea said nuclear energy is like a coin with two sides: one side is fission, when atoms split, the released energy is harnessed by our current nuclear plants to provide electricity - but fusion is the opposite. Fusing atoms also releases energy. So far, we have nuclear fission plants generating electricity, but fusion power has eluded us for 75 years. The byproducts of fusion reactions are very safe, whereas nuclear fission releases longlasting radioactive byproducts.

Fusion is the main energy reaction powering the sun which generates temperatures of 15 million degrees C. T1E has been able to create plasmas as hot or hotter than the sun. But the plasma must generate the triple product: producing plasma hot enough, with the right density, and sustainably. When something that hot is generated, machine durability is critical, so new materials must be developed to survive such harsh conditions.

T1E is using the stellarator strategy, which is a machine that confines and stabilizes the superheated plasma using twisted, complex magnetic coils to guide plasma reactions without relying on electric currents like other prospective fusion devices do.

To shorten the timeline to the triple product, the T1E team has completed more than 140,000 simulations on supercomputers at Oak Ridge National Laboratory. The simulations tell them which configurations of magnets will generate a sustainable fusion triple product. Without these simulations, T1E staff would have had to rely on laborious, lengthy, and costly experiments to come up with improved fusion device designs.





T1E's partner, TVA has decades of experience delivering energy to the real world. The prototype -Infinity One - will be located inside Bull Run Steam Plant. It will go online by 2029, but will not produce electricity.

Infinity Two — the Fusion Pilot Power Plant (350 MW)— will be built between 2029-2035. TVA will own the pilot. Investors will weigh in on the pilot location.

Andrea said science is no longer a show-stopper and that T1E is now addressing the engineering portion of the project. Several important research papers will be published the week of March 24. She said we need to think of these fusion devices as being directly pluggable into the electric grid.

For more information: typeoneenergy.com

# This Week's Program

### Geoff deBeauclair: Commanding A Neclear Submarine

Geoff deBeauclair was selected as the manager of the Office of Science Consolidated Service Center in February 2023. In this role he supervises approximately 300 federal and contractor employees, providing critical mission support services in personnel, finance, budget, procurement, property (personal and real), records management, emergency management, security, and financial assistance across DOE Office of Science field sites with a combined annual budget of over \$3 billion.

He was appointed to the Senior Executive Service and joined the Department of Energy (DOE) as Deputy Manager of the Oak Ridge Office / Integrated Support Center – Oak Ridge in May 2017. This organization combined with the Integrated Support Center – Chicago in October 2019 to become the Office of Science Consolidated Service Center.

Prior to joining DOE, Mr. deBeauclair served thirty years as a career nuclear submarine officer in the United States Navy, commanding the USS NEBRASKA, a nuclear-powered ballistic missile submarine, completing four strategic deterrent patrols. His final assignment was command of the Naval Undersea Warfare Center, Newport Division, leading the Navy's one-of-a-kind organization tasked with research, development, testing, evaluation, and engineering in support of the undersea enterprise. Responsible for a \$1 billion budget, he led a workforce of more than 5,000 scientists and engineers, consisting of both government employees and contractors, providing cutting edge technology to the fleet.

Mr. deBeauclair was born and raised in Detroit, Michigan. He graduated from the United States Naval Academy with a Bachelor of Science Degree in Aerospace Engineering and earned a Master of Science degree in Engineering Management from The Catholic University of America. He resides in Oak Ridge, Tennessee with his wife, Jaqkee. Geoff has a life-long passion for aviation and spends his free time flying as a private pilot.



# This Month's Rotary Theme

