



2021 Holiday Luncheon

March 2022

By Dan Palumbo

Our 2021 Holiday Luncheon was a catered affair held at the Olde Port Cove Clubhouse off of Calthrop Neck Road in Yorktown. Donis Anders, who you might recall operated the Langley Cafeteria for many years, was the caterer and served up a buffet dinner of turkey, salmon, carrots, green beans and mashed potatoes.

The food was wonderful, but even better was getting to see old friends again. Around 50 people braved COVID to attend and they were not disappointed.

The Clubhouse was well decorated and provided a comfortable setting to talk and enjoy dinner.

The photo gallery on pages 4 and 5 of this newsletter provides an example of the ambiance. If you look closely, you may recognize Roger Ferguson, our former LAA President. Good to see you again, Roger.

Many thanks to Damodar Ambur for suggesting the Clubhouse and for making the arrangements. ◆

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NASA Langley Contributions to the James Webb Space Telescope

By Rick Ross

[Editor's note: This article has been corrected to state that Kapton®, not LaRC-CPx, was used on the JWST.]

The James Webb Space Telescope (JWST), the successor to the Hubble Telescope, has been heralded as one of the most significant scientific and engineering achievements of this decade—and research from decades earlier at NASA Langley contributed to its success.

The JWST is a thermal imaging telescope that measures infrared frequencies. This requires that the telescope optics be kept at low temperatures to minimize noise in the signals.

In 1972, Anne St. Clair developed nearly colorless polyimide-based thin film coatings known as LaRC-CP1 and LaRC-CP2. These materials, which are ideal for space applications since they absorb very little heat, were commercialized by NeXolve and used for



solar sails. These materials were considered for use on the JWST, but ultimately, Kapton® was selected.

On December 25, 2021, the JWST launched aboard the Ariane 5 to begin its journey into space. The JWST reached its destination, nearly one million miles from Earth's orbit, then began the process of unfolding its components into their final position. Langley also contributed to this "origami method" of unfolding large deployable structures.

Thanks to Dick Hueschen, Damodar Ambur, Gary Price, Olaf Storaasli, Charlie Blankenship, Jonathan Ransom, and Catharine Fay for information on LaRC thin films. For further information, see these references:

- Analysis of Fluorinated Polyimides Flown on the Materials International Space Station Experiment
- NASA's Webb Telescope Keeping Cool with Ultra-thin DuPont™ Kapton® Polyimide Films
- Webb's Mirrors ◆

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Jaroslaw Sobieski Olaf Storaasli

Class of 2025

Stan Cole Wes Goodman Melvin Ferebee Dave Hinton Ed Prior Domenic Maglieri

Meet the New Board Members for 2022

By Rick Ross

The LAA elected the Class of 2025 Board Members-at-Large (MaLs) during the LAA Annual Meeting, held on January 11, 2022. Congratulations to these new MaLs: Stan Cole, Dave Hinton, Wes Goodman, Ed Prior, Melvin Ferebee, and Domenic Maglieri.

The LAA is grateful to the outgoing Class of 2022 who completed their three-year term of office: Linda Bangert, Sharon Stack, Charles Cockrell, Bill Tennis, Pete Jacobs, Ray Whipple, and Tony Pototzky. Thanks to your leadership and accomplishments for the LAA over the past several years.

During the LAA board meeting on January 11, LAA elected its new board members for 2022. Dan Palumbo took over as President from Damodar Ambur and Vicki Crisp replaced Dan Palumbo as the Vice President and Programs Chair, Damodar Ambur will continue to serve LAA as the Immediate Past President. In addition. Geoff Tennille will continue to serve as Treasurer. Dick Hueschen will carry on as the Communications Officer. and Rick Ross will remain the Secretary. Congratulations to the new LAA officers for 2022, and thanks to those who served in 2021. •

Treasurer's Report

By Geoff Tennille

The LAA added five more members to the Life-Paid category since the beginning of 2022, giving us a total of 64 members who are Life-Paid. An additional 105 members are in the Annual Membership category and 33 of them are paid through the end of 2022 or longer. To date, 72 Annual Members still have not renewed their membership for 2022.

Renewing is easy. Just mail a check payable to either Langley Alumni Association or LAA to Geoff Tennille, LAA Treasurer, at 309 Burgh Westra Dr. Hampton, VA 23669-1772. Checks payable to Geoff Tennille cannot be deposited to the LAA account and will be returned to the sender.

If you have an account with Langley Federal Credit Union (LFCU), you can use a member-to-member transfer to pay dues. This process can also be used to pay for the Holiday Luncheon, Annual Picnic, or any other special event. If you have previously set up a member-to-member transfer, then you can do another transfer whenever you choose.

If you have never done an electronic transfer, visit https://larcalumni.org and click on the link LAA Dues on the left side of the page. Then in the paragraph Paying by direct transfer, click on the highlighted link "click to view detailed instructions" to view the instructions to set up the transfer. Or you can send Geoff an e-mail at gtennille@cox.net and he will send you the instructions to set up the transfer. The LAA does not pull money from your account; you must initiate the transfer.

If you haven't paid dues since 2020 or earlier, there is no requirement for the payment of back dues; just pay for 2022 or become a Life-Paid member and you will be fully reinstated.

If you pay annual dues, then you may upgrade to a Life-Paid membership on or before December 31, 2022 by paying the difference between what you originally paid (\$10 or more) and \$100. If you paid \$20 and waited to upgrade to Life-Paid in January, 2023 you would owe \$90, not the \$80 that you could pay at any time in 2022. •

HoH Class of 2022

By Duncan McIver

The Hall of Honor (HoH) Nominations Committee has completed the nomination phase for the Class of 2022. The final count is 80 nominations, after one nomination was withdrawn. Thanks again to all who helped promote and develop the nominations.

Special thanks to Dan Palumbo for his work on the on-line nomination form, and to Kathy Ferrare, her daughter, and her friend from Virginia Tech, for their assistance with processing the nominations.

Julie Williams-Byrd has the Selection Committee hard at work with a schedule to report the selection results to the Langley Center Director in May. Thanks to Deborah Douglas from MIT for creating a secure file for distributing the nominations to the Selection Committee.



The Operations Committee will begin working to develop plans for the Honoree Event, currently scheduled for July 2022. We continue to believe an in-person attended event is very important. This celebration should allow for family and friends to recognize these outstanding HoH selectees in person. A virtual event will not allow for the type of celebration this award deserves. We are also open to any suggestions for improvements in the HoH process, which we will include in our final report, and could be useful for the next Hall of Honor class. •

Websites R Fun!

By Olaf Storaasli

Website management is fun and you are welcome to "learn the ropes" and assist with maintaining our <u>LAA website</u>. You could even start a website of your own for less than \$50 per year. Rick and I can lend a hand.

Nowadays, <u>WordPress</u> (free on HDL) uses simple menu options to create great web sites with minimal effort. HDL uses <u>cPanel</u> to provide full HTML (language of the web) capability.

Two criteria determine website success: content and access speed, both measured by tools such as <u>GTmetrix</u>. Frequently updated websites draw interest as do "snappy" pages. Images are preferred to lengthy text but they must be compressed to speed access. Image compression tools, such as the free <u>TinyIPG</u>, can reduce image sizes by up to two-thirds.



Speed Visualization

0.76

0.76

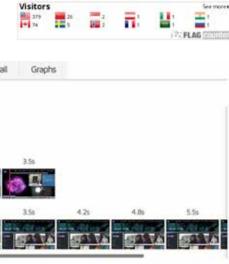


GTmetrix can also compare the performance of multiple websites, such as the example shown for the LAA and NASA websites. Try it yourself!

The Filmstrip tab, shown below, shows the web page "paint time." Our compressed images and structure reduce load time to 1.4 seconds, giving us a 99% performance score. Our menu splits content over ten pages to avoid performance hits for many complex images on a single page. Try running GTmetrix twice for repeatability.

Our LAA website is updated every few days, with the update time shown at the bottom. We welcome member input and suggestions for improvements. Remember clever Math Challenges á la Researcher? Want to pose something to members?

The bottom of the LAA web page shows site accesses by state and country. We truly reach out to the world. •



Largest Contentful Paint

2021 HOLIDAY LUNCHEON PHOTOS







2021 HOLIDAY LUNCHEON PHOTOS





This Too Shall Pass

By Olaf Storaasli

Ishare this with LAA members to avoid a "painful surprise" just when all's going well. My 3 mm "asteroid" kidney stone caused a huge pain (the most I've ever felt) on passing.

Sunday at 1:00 PM, our Zoom book group was discussing "Atomic City Girls," when I felt a sharp pain in my lower left back. It was so excruciating I couldn't focus on the book as it spread through the left side of my abdomen. I thought I'd soon meet my maker. Chamomile tea helped me endure the night, only to awaken with pain and vomiting, yet normal temperature, blood pressure, and O₂ level.



The University of Tennessee emergency room admitted and diagnosed my mm kidney stone after diagnostic tests, including a CBC, EKG, and CT scan. By the evening, my pain subsided. My doctor said it reached my bladder. I was surprised to collect my culprit "asteroid" 48 hours after my initial pain. Some have pain as stones pass out from the bladder, but not me.

Looking back, my pain was severe, but after it passed I felt on Cloud 9, knowing I'd gone through the worst: a combination of pain and uncertainty. Soon I'll receive the analysis of my stone, which if is calcium oxalate, now has a preventative prescription. •

Memorial Tribute to Donald Hearth

By Gary Price

The National Academy of Engineering (NAE) recently published the latest "Memorial Tributes" to honor those NAE members who passed away in the last decade. The new Memorial includes a three page tribute to Dr. Donald Hearth, who served as Langley Center Director from 1975-1985. (Deceased 2013.)

Two years ago, the NAE asked former Center Director and NAE member, Richard "Pete" Petersen, to draft Don's tribute. In turn, Pete asked our LAA member, Gary Price, for assistance, since Pete felt Gary was closer to Don and might remember him a little better. With some reluctance, Gary took on the task and worked with the NAE to prepare the final published document.

The tribute to Dr. Donald Hearth is on page 143 in the hard-bound version or can be found at: www.nae.edu/51314/MemorialTributes. Not being a very good historian, Gary said it was a challenge finding four-decades-old documentation to support the tribute. It was also a challenge when Gary had to meet the NAE's requirement that a member's family must approve the written material. Being a very private person, neither Pete or Gary knew Don's family or where to locate them in 2021.

Knowing Dr. Hearth passed away while living in Charleston, SC, Gary located Don's former Unitarian church. No one seemed to remember



Dr. Hearth, but a church staffer did recall, "maybe he was the choir member who left \$50,000 for our choir." Sure enough, there in the church file were four little original yellow "Postits" with the names and addresses of Don's four children. Fortunately, one of Don's daughters lives in Williamsburg and works for Newport News Public Schools as a psychologist. Dr. Anne Hearth was very cooperative and got the three other siblings' comments and approval. Gary reminds us of an old fact of life: people may not always remember who we are or what we accomplished, but they always remember our money!

Gary said if anyone has a criticism or editorial comment related to Don's NAE Tribute, it is too late, or call Pete. He still lives in La Jolla by the Sea. In his late eighties, Pete says he is doing well, although all of his new joints are not very good at golf. •



LANGLEY ALUMNI ASSOCIATION

The LAA Newsletter is published quarterly. Please submit articles for publication to rick.ross@verizon.net no later than the 10th of February, May, August, or November for publication the following month. Please contact mhueschen@gmail.com to subscribe or unsubscribe.