

# User Friendly

December 2017



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Click [Here](#) to see our Meetup page, and [Here](#) to follow us on Twitter. See Page 8.



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Association of Technology  
& Computer User Groups

[www.apcug2.org](http://www.apcug2.org)  
[www.facebook.com/APCUG](https://www.facebook.com/APCUG)  
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[www.youtube.com/apcugvide](https://www.youtube.com/apcugvide)

## DECEMBER GENERAL MEETING

### HOLIDAY POTLUCK PARTY

Tuesday, December 12, 2017

6:30 to 9:00 P.M.

Westchester United Methodist Church

Fellowship Hall

8065 Emerson Ave., Westchester, L.A. 90045

What nicer way to begin the holiday season than with friends and a potluck dinner. This year our December General Meeting will give everyone an opportunity to get to better know each other while we share a meal. Members are encouraged to bring family and friends.

Sugary sweets are part of the holiday fun, but healthy fruits, nuts, salads and vegetables are better for us.

**Please RSVP** so we will have an idea of how many tables to set up. Tell us how many in your party and what dish you intend to bring. Main dishes, side dishes, salads, hors d'oeuvres, and desserts are needed. Please have your contribution "table ready" with any necessary serving pieces. The oven in the kitchen will be available for reheating, if necessary. We plan to begin serving at 6:30; so arrival of food before 6:30 will be appreciated.

Beverages and paper goods will be provided along with the makings for coffee and tea. Contact Leah at <leahjc@sbcglobal.net> or Sylvia at <sqdavis@pacbell.net> to RSVP or to ask questions.

Would you help us out by coming a little early, by 6:00, to help set up tables? Or, you may plan to stay after the festivities to tidy up. Either of these will be sincerely appreciated by the Hospitality Team.

The Computer Q & A Roundtable will not meet before this meeting. There will not be a gift exchange.



## FROM YOUR EDITOR

**Special Interest Groups (SIGs)**

**Please note**, there will be no SIG meetings in December.

If we want any of our present SIGs to continue after the New Year, or want any new SIGs, members need to be leaders. Members can share leadership, so it doesn't all fall on one person. We learn a lot from smaller groups with a common interest. Please think about it when making your New Year's resolutions!

**LACS Mail Lists**

If you subscribe only to the electronic version of User Friendly, and do not have a subscription to our mail lists, or don't have a linked Yahoo ID, you will be unable to download a copy from the LACSPC mail list. You will be able to download a copy from the LACS website a month after it's published, not getting up-to-date information.

Also, if you're not subscribed to the two mail lists, LACSPC and LACSLIST, you won't get the LACS communications, a leading benefit of membership. Only members can join, and the lists are secure. If you have questions or need help joining, please contact Karl Springer at [mailguy@lacspc.org](mailto:mailguy@lacspc.org).

*Happy Holidays to All  
LACS Members and Their Families*



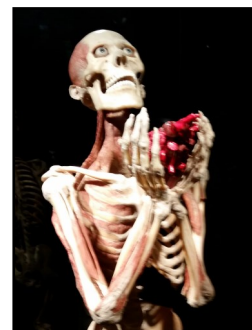
*Peace on Earth*

**California Science Center  
Field Trip**

On November 13, LACS members Leah Clark, Lee Freehling, Marcia Jacobs, Stephanie Nordlinger and Annette Tossounian were chaperones for a field trip for LACS president Stanley Johnson's Venice High students. About 200 students visited the California Science Center where they viewed the Space Shuttle Endeavour, the Body Works exhibit, and saw the 3D IMAX film, *Amazon Adventure*. The displays and film were wonderful, and we all almost managed to keep up with the energetic teenagers. It was a tiring, but rewarding day.



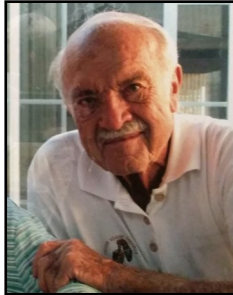
Space Shuttle Endeavour



Body Works

**IN MEMORIAM****Robert J. Mercer****November 1929 - September 2017**

Long time LACS member, Robert, was born on Thanksgiving Day 1929, in Gordon, Nebraska, the eldest child of two teachers, John and Helen Mercer.



In Fall, 1944, the family moved to Downey, California, where his father had found a job as a high school geometry and physics teacher. Robert attended Downey Union High School and was on the tennis team. He joined the YMCA and DeMolay (a Masonic organization for boys). He got a job as a "printers devil" (apprentice) at a Downey print shop. Robert loved the work and decided that he would like to attend Trade Tech and pursue a career in the news and printing business. His parents, having moved to California in part for the better educational opportunities, eventually convinced him to go to college, and he attended the University of California, Berkeley through the NROTC program.

Robert, a math major in the Class of '51, enjoyed college life, notably in Cal Hall, when not occupied with his NROTC duties. He worked in his dining co-op and as a math reader. After graduation, he served on Navy destroyers in Japan and Korea as an Assistant Gunnery Officer, Public Information Officer, and Combat Information Officer. He met Cynthia through a mutual friend while stationed in San Diego, and married her on New Year's Eve, 1952.

After leaving the Navy in 1954, Robert had a summer job at the Navy Electronics Laboratory on Point Loma, using an electronic analog computer. Deciding that this was what he wanted to do, he attended UCLA

as a graduate student from 1954-56, taking courses in Computation Methods at the Institute for Numerical Analysis. His Master's thesis, "Micro-Programming", was published in Volume 4 #2 of the Journal of the Association of Computing Machinery (ACM) in April 1957. A professor gave him a recommendation to Ramo-Wooldridge, and he got a job there.

Ramo-Wooldridge evolved into the Aerospace Corporation's Aerospace and Space Division. Robert was part of a team that wrote a satellite orbit determination program (TRACE) that has moved from the original IBM 704 to various successor computers and onto a PC. He worked up to be Director of Computing and Data Processing in the Threat Analysis Office, where he was in charge of all aspects of scientific computing and data management on a classified project, organized workshops, worked with the USAF on specialized computer programs, and published several technical papers and reports. In 1977, he went back to school and earned a Certificate of Specialization in Engineering and Applied Science in "Programming Languages and Systems" from UCLA.

Up until this year, Robert kept his hand in the field at the local Special Interest Group (SIG) and was still a casual Aerospace employee, although he retired at age 62. He kept up his memberships in Pi Mu Epsilon, the American Institute of Aeronautics and Astronautics, Sigma Xi, Association of Computing Machinery, Special Interest Group Numerical Analysis (SIGNUM), and Society for Industrial and Applied Mathematics (SIAM).

Robert had thought about a teaching career and taught various calculus and mathematics classes over the years at UCLA Extension, USC, and Loyola Marymount University, as well as tutoring students in math at Palms Middle School.



Tennis was a big part of Robert's life. Starting in high school, he played regularly for over 60 years. For most of his life, he was on the courts three or four times a week. After he 'retired', the days he chose to work at Aerospace were the days he had a game to play. He once said that his ambition was to be the world's best 80-year-old tennis player. He wasn't the best at 80, but he was still playing.

In their final years, Robert and Cynthia were faithful members of a local wine tasting group and the Heels & Souls Square Dance Club. Although plagued by the loss of grip in both hands, he managed Cynthia's care after a stroke in 2012, and their move to Vintage Westwood Independent Living in April 2016. Since Cynthia's passing in January 2017, Robert had been fighting the good fight against the Watermark eviction of the residents in his building. He passed away unexpectedly in his sleep. Robert is survived by two daughters, Lucinda and Annette Mercer, and four grandchildren.

Donations in his memory can be made to KCRW Foundation – <https://join.kcrw.com/>  
 UCLA Foundation – <https://giving.ucla.edu>  
 UC Berkeley Foundation – <https://give.berkeley.edu>

*(Submitted by Annette Mercer, Robert's daughter) ❖*

### **BOB MERCER MEMORIAL SERVICE**

By **Bobbi Gold**, LACS

The service was held in the UCLA Faculty Center on the UCLA campus on Sunday, November 19. His two daughters, Annette and Lucinda, and his granddaughters spoke about Life with Dad/Granddad. Those who came knew Bob in many ways - from working with him at the Aerospace Corporation in El Segundo, from LACS, from tennis, square dancing, and friends and family members. Every speaker described

him as someone who tried to make every activity the best possible, from camping trips to workplace projects. Several people remembered the annual July 4<sup>th</sup> events at his homes over several decades, in which attendees not only ate hot dogs and burgers and drank beer but also spoke seriously on the meaning of the day by reading the Declaration of Independence and discussing current issues of liberty. It was a life well lived, not wasted much on TV (although my husband and I watched Davis Cup on TV at his house.) ❖

### **GENERAL MEETING REPORT**

**November 14, 2017**

By **Leah Clark**, LACS Editor

Speaker: **Professor William I. Newman**

**Catastrophic Meteorite Impacts on Earth**

This presentation was fascinating but quite technical. Here is just a short outline. Please go to the podcast at <http://lacspsc.org/category/audio-files/> to hear all of it and to <http://lacspsc.org/category/presentations/> to see his slides.

Dr. Newman mentioned two collaborators in his work: Dr. Philip Sharp, a professor of applied and computational mathematics at the University of Auckland where much of his work was performed in the supercomputer facility, an IBM Roadrunner with 20,000 processors; and Dr. Bruce Bills of the Jet Propulsion Laboratory.

Dr. Newman covered:

- The history of life on earth punctuated by extinction events
- The probable causes and how we can identify the correct one? Are we at risk?
- What does this have to do with computers? How is this connected to the Earth's origin and evolution?
- Computer application of laws of physics to identify what happens

- Advanced physics-theory to explain why and how often it happens

Earth is relatively small when compared to the other planets. Jupiter's mass is over 300 times that of Earth, Saturn 100 times, Uranus 14 Times, and Neptune is 17 times greater than us. So it should be evident that the actions of these bodies have a gravitational influence on what happens in the outer solar system.

Whenever you see a meteor shower, you're looking at the detritus left behind from comets that have lost material due to close approaches to the sun, or the ice that formed the glue that bonded together these materials. Our distance from the sun is referred to as one Astronomical Unit. So we refer to Jupiter's distance from the sun as 5.2 A.U., etc.

The history of life has been punctuated by large numbers of extinction events that have affected the formation of our planet. They were chaotic and disrupted the first half-billion years because of such impacts. We are talking about events tens or even hundreds of millions of years ago, trying to project into the future. So what are the possible causes, and how can we identify the correct ones? The more we can think of, the more likely we're going to find ones that work. With computers and advanced methodologies, we can calculate with remarkable precision the evolution of our cosmos over hundreds of millions of years. So we're going to perform computer-based investigations to look at the orbits of materials that are in the outer solar system and how they are influenced by the orbits of the planets. When we once see the pattern, we want to go back to advanced theory from physics to explain why and how often it happened.

There has been a tremendous disruption in the number of species over tens of millions, even hundreds of millions of years

ago. Can we understand how this occurred and how we can prevent this from happening in the future? A possible cause for this could be a pandemic. Volcanism has been suggested as one possibility, but the problem with volcanism is that the volume of ash and other materials produced by volcanos in the last few hundred million years is relatively limited. Volcanoes only produce 1% of the quantity of carbon dioxide that humans produce by burning fossil fuels.

Indisputable evidence has been found for dramatic impact events. Extra-terrestrial objects coming to us have compositions that are not the same as that of earth materials. A large meteorite coming down would blow a hole through our atmosphere. It would vaporize a substantial amount of rock that would spread out throughout the globe, and sit in the stratosphere for a long time. Professor Newman presented much detail to show the causes, mechanics, how the elliptical orbits of the planets and comets affect the amount of energy present, and how complex mathematics can determine how the planets would be affected by their interaction with these materials. Much of this was studied by using computer simulations. It was found that major collision events are rare, which is good for us. It was found that only one impact in five in 100,000 years would collide with Earth or Mars over a period of 100 million years. Some of the calculations went to half a billion years.

We use data to look for patterns; humans have to teach computers what to look for. 4.4 billion years ago there was a massive impact event. An object the size of Mars struck Earth. It has been simulated in Arizona with supercomputer codes. With computation evidence, we understand what happened, but we

*(Continued on Page 17)*

## DIGITAL PHOTO SIG REPORT

October 23, 2017

*Editor's note: This will be the last Digital Photo SIG unless someone else will take over the leadership. We thank Elliot for 14 years of leading this SIG with excellent presentations.*

By **Elliot Silverstein**, LACS

At the October 23 meeting of the Digital Photo SIG we reviewed and discussed the subject of the **Magic Wand** tool in the Photoshop Elements program. The initial incentive for this study was the need, expressed at the previous meeting, for removal of background imagery from portraits of presenters at LACS general meetings. There are several ways to accomplish this, and we decided that the Magic Wand was one of the promising ones. This tool makes a selection of a portion of a photo based on the colors present in the subject or in the background. It selects areas (either contiguous or separated), based on the colors and on a chosen color tolerance. Then either the selected areas or the inverse (the non-selected areas) can be manipulated in any way the user desires, for example, erased, painted over, or moved.

One other topic was explored. This was the use of **Viveza2** of the **Nik Collection** for editing the colors, brightness values, contrast, etc. of pictures. We had looked into this at a previous meeting, but decided that a review would be useful. The Nik Collection was formerly sold as a sophisticated and costly editing tool. Later it was acquired by Google, who made it accessible at no cost. It is inserted into programs such as Lightroom, Photoshop, or Photoshop Elements, to be used within these programs as an aid to editing. We showed several tutorials for Viveza2 to demonstrate its features and capabilities.

Its most interesting feature is the use of control points, which can 'intelligently' select regions of the photo to be modified. The modifications are then selected by the user.

## BASICS & BEYOND SIG REPORT

November 13, 2017

By **Leah Clark**, LACS

Paula Van Berkom introduced the password management program **MySecurityVault** by WhiteCanyon Software. It looked like an excellent easy-to-use program. But I learned from WhiteCanyon that it is no longer available, and they will no longer support those who already use it. This is a bummer.

Then Paula gave us some hints for **bookmarking websites**. When viewing a website, press Ctrl-D or click on the Star button on the right side of the address bar. If you want, install the bookmarks toolbar which will sit under the address bar. Place frequently used sites in the toolbar for quick access. You can create folders to keep related bookmarks together. There are many ways to manage and organize your bookmarks. Press Ctrl-H to see a history of recently viewed sites.

To **select a homepage**, you can choose the current page, or go to Control Panel, type in your preferred site's address, click Apply, then OK.

To choose where to **save downloads**, make a downloads folder and save it wherever you want it. The default location is Computer (Win7) or This PC (Win10) → Downloads. When in Downloads select New Folder, name it and save it. You can then save downloads to that folder.

To find the distance between two or more points anywhere on the earth, go to **Google Maps Distance Calculator**.

Right-click on your starting point, choose Measure Distance, left click anywhere on the map to create a path to measure. The straight-line distance is shown in miles and kilometers.

There are a lot of other things to do in Google, like translate text from one language to another, currency exchange, etc.

Go to

[https://www.google.com/advanced\\_search](https://www.google.com/advanced_search) to narrow down your Google search.

There were ten members at this meeting. ❖

## NITE IZE

**A review by George Harding, Treasurer**  
Tucson Computer Society, June 2017

[www.aztcs.org](http://www.aztcs.org)

georgehardingsbd (at) earthlink.net

This company has a wide range of useful products and the list keeps getting longer. The employees think up more and more useful things for us to use.

One of their products, **Gear Tie**, is a most useful product and comes in a range of sizes, from the tiny 3-inch ones to the 64-inch monsters. Each has its uses.

I use the 6-inch Gear Ties to tame my charge cords. I believe these cords have wrestling matches while they are packed away! They always come out tangled, no matter how carefully I pack them.



Some of the Gear Ties come with a rubberized surface, to provide more friction in their restraining job.

Of course, color is an option as well as length. You can have yellow, blue, black or red.

There are variations in design, too. Some have a ring fastened at the end, which gives you the option to cinch, twist, hang

whatever it is that needs that feature.

Other Gear Ties have a clip at one end, to make attachment to loops, bars and O-rings easy.

The 64-inch Gear Tie is great for cinching down stuff to your car roof or truck bed.



All in all, the Gear Tie line is versatile and flexible to meet all your needs.

Another useful product is the **Inova line of LED flashlights**. These range from 110 lumens to 1075 lumens. The body is tough plastic and is longer than a common flashlight. It is easy to hold and has a switch that allows a selection of beams: very bright, flashing, normal light but circular, and more.

I received a T5 1075 lumen Inova flashlight for review and I was quite impressed with it.

The body is 9 inches long and produces a very strong light, capable of reaching over 900 feet! It is



hard to describe the very high intensity of the light. The body has a cross-hatched surface, which makes it very easy to hold on to, even when wet. The flashlight is well balanced, as well.

A nice extra feature of Nite-Ize products is that they are 100% guaranteed. If there is a problem, just call them for repair, replacement or exchange.

Nite-Ize products

[www.niteize.com](http://www.niteize.com)

The price of Gear Ties varies from \$3 for a 4 pack of 3 inchers to \$6 for the 64 inch (Amazon).

The price of the Inova T5 flashlight is \$84 on Amazon. ❖

## LACS NOTICES

## WELCOME ALL

**George Wolkon**

Database Manager, LACS

**New Members (0)****Renewals (8)**

Deborah Alpert

John Schaefer \*

Leonardo Israeli

Charlotte Semple

Roger Kohn \*

Julia Sumpton

Robert McDonald

Joan Wilder

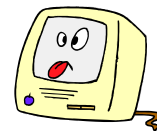
Charlotte Semple

\* Contributor



## FIX YOUR PC FOR FREE?

**Jim McKnight** has an open offer to all LACS members to diagnose, repair, disinfect, or upgrade members' PC's for free.



There are certain limitations to Jim's offer, so see the details by clicking the "Fix my PC for Free?" link at [www.jimopi.net](http://www.jimopi.net).

Non-members can wisely invest in a one-year Regular LACS membership (\$40.00), and Jim will fix your PC problem, too.

## HOW TO CHANGE YOUR CONTACT INFORMATION

Go to [www.lacspc.org](http://www.lacspc.org). Click on **Member Forms** in the bar under the picture. Under **Membership Update**, select **Click Here** for either the DOC or PDF form. Fill it out and bring it to a meeting or mail it. Or email your changes to [membership@lacspc.org](mailto:membership@lacspc.org).

## GENERAL MEETING PRESENTATIONS

**December 12:** Holiday Potluck**January 9:** Google Photos

Note: This schedule is subject to change. Check your email and *User Friendly* for updates.

## LACS HAS JOINED MEETUP

Our Meetup group is called:

**"Los Angeles Computer Society and Technology Meetup."**

Go to <http://www.meetup.com/Los-Angeles-Computer-Society-and-Technology-Meetup/>

and click on **"Join Us."** Also, **RSVP** for our general meetings. Please join - it's free. If others see that a lot of people are interested, they will be encouraged to join LACS. We hope this will result in new members.

We need someone to contact those who have expressed an interest, but have not come to a meeting.

## PODCASTS

Listen to the podcasts of our general meetings. Go to <http://www.lacspc.org/category/audio-files/>. Click on the session you want to hear.

## GENERAL MEETING SNACK SCHEDULE

By **Sylvia Q. Davis**, Hospitality Chair

Refreshments and socializing will be at **7:00**, with the meeting starting at **7:30**. Please bring refreshments at **7:00**.

**December 12:** Holiday Potluck**January 9:** T through Z**February 13:** A through D**March 13:** E through I**April 10:** J through N**May 8:** O through S

Bring **finger-food** treats such as fresh fruit, veggies, nuts, cookies, cold drinks and the like. LACS provides hot drinks.



See your email for updates and reminders. Please pick up your leftovers and serving pieces at the end of the meeting.

## LACS IS ON TWITTER

On **Twitter**, follow us at:

[https://twitter.com/LA\\_CompSoc](https://twitter.com/LA_CompSoc)

The LACS board voted to discontinue the **Facebook** page for now.



**DECEMBER 2017**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4 Board Meeting 7:00 PM	5	6	7 	8	9
10	11	12  Holiday Party 6:30 PM	13	14	15	16
17	18	19	20	21 Winter Begins	22	23
24  31	25 	26  Kwanzaa	27	28	29	30

There will be no SIG meetings in December

This Calendar may change.

Check your e-mail or with the SIG leader before attending a meeting.

**General Meeting:** Fellowship Hall on the 2nd Tuesday of the month at 7:30 PM.

Most SIGs will meet at the Santa Monica Collage Bundy Campus, currently in room 236.

The **Daytime SIG** meets at the Felicia Mahood Senior Center.

The **Board** may meet at Charlotte Semple's home or at Santa Monica College. Members in good standing are welcome to attend.

**SPECIAL INTEREST GROUPS (SIG's)**

The Daytime and Basic & Beyond SIGs may resume in January **IF** there is enough interest. Please contact the leaders to make your wishes known, or to offer ideas or help. New SIGs can be created if there is sufficient interest and leadership.

**Basics & Beyond SIG** Paula Van Berkomp 310-398-6734 2nd Mon. 7 PM SMC, Bundy Campus

**Daytime SIG** Jim McKnight 310-823-7829 4th Tues. 1 PM Felicia Mahood Center

**ADDRESSES**

**Felicia Mahood Senior Center**, 11338 Santa Monica Blvd., West LA 90025 (at Corinth)

**Fellowship Hall**, Westchester United Methodist Church

8065 Emerson Ave., Westchester 90045

**Charlotte Semple**, 3474 Beethoven St. LA 90066

**Santa Monica College Bundy Campus**, 3171 S. Bundy Drive, LA 90066.

Go west on College Dr. (1 block South of Airport Avenue, 2 blocks North of Rose.) Drive to the back to park in the lot behind the building. Our room number may change each semester. Look for it on a sign opposite the elevator on the first floor.

## MEMBERS HELPING MEMBERS

LACS members volunteer to help other members solve hardware and software problems by telephone during the hours listed below. Select the topic from the list and then call a person whose number is listed next to it. Or you may use a Helper's e-mail address, found in your LACS Roster. We hope that you find this free service useful. **If you are experienced using a particular program or topic, please volunteer to be a consultant. You don't have to be an expert.** To volunteer for this list or to make corrections, please e-mail or call Leah Clark at Leahjc (at) sbcglobal.net or at 310-677-2792. More Quick Consultants, and more categories are always needed. You may decline or postpone a call if it comes at an inconvenient time.

Adobe Creative Suite: PDF, InDesign, PhotoShop, etc. - 17	LACS Mail List - 6	Photoshop - 17
Android Smartphones - 5	Linux - 11	QuickBooks -18
Apple devices - 15	Lotus Word Pro, Approach - 12	Quicken - 3, 5
Anti Malware - 12	Mozilla Firefox - 12	Thunderbird - 12
Digital Imaging, Editing - 8	MS Excel - 3, 15	Visual Basic - 13
Digital Photography - 8	MS Word - 3, 4, 10	Websites - 13
Dragon Naturally Speaking - 4	MS Outlook - 5, 15, 17	Windows 7 - 16
Genealogy - 5, 7	MS PowerPoint - 15	Windows - 5, 12
Hardware - 12	MS Publisher - 7	WordPerfect - 5

No.	Name	Preferred Phone for Calls	From	To
3	Wilder, Joan	310-472-8445	9:00 AM	9:00 PM
4	Hershman, Irv	310-397-9453	11:00 AM	11:00 PM
5	Nordlinger, Stephanie	323-299-3244	5:00 PM	10:00 PM
6	Springer, Karl	424-646-3410	10:00 AM	10:00 PM
7	Clark, Leah	310-677-2792	7:00 AM	5:00 PM
8	Silverstein, Elliott	310-670-1544	10:00 AM	10:00 PM
10	Beckman, Loling	310-471-7893	10:00 AM	6:00 PM
11	Hughes, Bill	424-259-1818	Any	Any
12	McKnight, Jim	310-823-7829	8:00 AM	7:00 PM
13	Ialongo, Gilbert	310-641-7906	9:00 AM	5:00 PM
15	Van Berkomp, Paula	310-398-6734	9:00 AM	5:00 PM
16	Johnson, Carol	310-372-8535	10:00 AM	9:00 PM
17	Rozek, E. J.	310-823-3811	Noon	8:00 PM
18	Semple, Charlotte	310-398-5052 M-F	9:00 AM	5:00 PM

**OFFICERS, DIRECTORS AND LEADERS**

<b>Title</b>	<b>Name</b>	<b>Term</b>	<b>Telephone</b>
President	Stanley Johnson	2017	424-216-6984
Past President	Maurice Stephenson	2017	310-625-0450
Vice President	Stephanie Nordlinger	2017	323-299-3244
Secretary	Lee Freehling	2017	310-837-4022
Treasurer	Charlotte Semple	2017	310-398-5052
Director	Leah Clark	2018	310-677-2792
Director	Jim McKnight	2018	310-823-7829
Director	E. J. Rozek	2018	310-823-3811
Director	Annette Tossounian	2018	310-559-2847
Director	Paula Van Berkom	2017	310-398-6734
Director	George Wolkon	2017	310-459-2671
Car Pool Coordinator	Freda Sanders		323-230-3278
Change of Address	Karl Springer		424-646-3410
" "	George Wolkon		310-459-2671
Corporate Counsel	Stephanie Nordlinger		323-299-3244
CCSC Computer Lab	Loling Beckman		310-471-7893
Hospitality Chair	Sylvia Davis		213-924-4927
Asst. Hospitality Chair	Freda Sanders		
Membership Database	George Wolkon		310-459-2671
Newsletter Editor	Leah Clark		310-677-2792
Program Chair	Stephanie Nordlinger		323-299-3244
" "	Stanley Johnson		424-216-6984
Publicity Chair	Annette Tossounian		310-559-2847
Publicity - Press	Mark Presky		310-398-0366
Quick Consultants	Leah Clark		310-677-2792
Webmaster	Paula Van Berkom		310-398-6734
Welcome Chair	Irene Mussack		310-672-3077
Asst. Welcome Chair	Linda La Roche		310-645-4546

**Website** [www.lacspc.org](http://www.lacspc.org)**Voice Mail** 1-310-398-0366**E-mail** ContactUs (at) lacspc.org**Newsletter Editor** Leahjc (at) sbcglobal.net**Webmaster** sitemaster (at) lacspc.org**Change of Address** membership (at) lacspc.org

The **ContactUs (at) lacspc.org** address goes to our **president** and **vice-president**.

If the message is for another board member, they will forward it to the correct person.

To contact other officers, directors, leaders or members directly, members may use our roster for phone numbers and e-mail addresses.

## GNU OCTAVE

By **Dick Maybach**,

Brookdale Computer Users' Group, NJ

BUG Bytes, June 2017

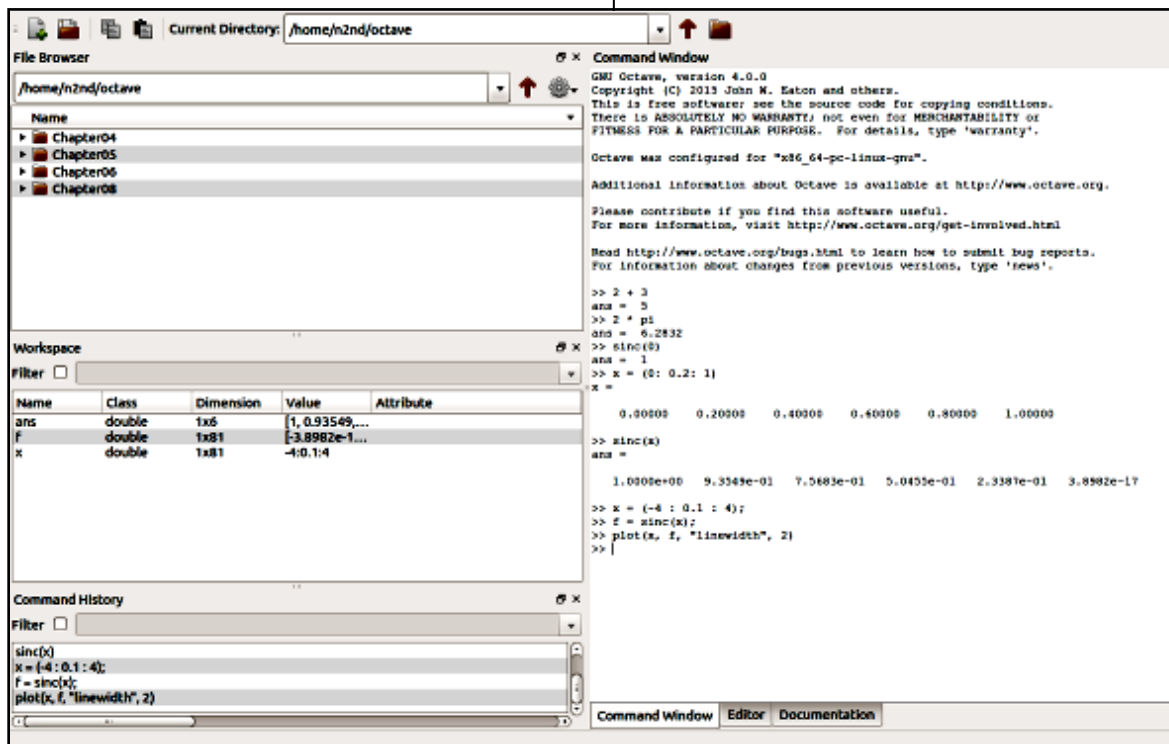
[www.bcug.com](http://www.bcug.com)

n2nd (at) att.net

Engineers, scientists, and educators use computer math tools extensively, and students would also find these helpful, but their costs are often a barrier. Fortunately, free programs such as **GNU Octave**, <http://www.gnu.org/software/octave/> and **Scilab**, <http://www.scilab.org/> provide similar power to their commercial kin, and both are available for Windows, OS X, and Linux. They are modeled after the popular commercial program **Matlab**, <https://www.mathworks.com/>), which sells for \$50 for the student version and up to \$2,150 for the standard one. If you are a parent, you may be concerned that if your student uses such a tool, he or she may use it to avoid learning math, but in my experience, this doesn't happen. While teaching

engineering, I found that many in my class had not mastered basic math, and I introduced computer tools to provide them with alternate approaches. However, the only students who made use of these were those already skilled in math. Apparently, people who had the initiative and talent to master computer math had already used these same assets to learn what was being taught in the math classroom, and they used the computer tools to gain additional advantages over their slower friends. Life isn't fair.

I'll discuss GNU Octave in this article, mostly because it is closer to the widely-used Matlab than is Scilab. Indeed, many Matlab programs will run without change on Octave. Becoming proficient with any math tool takes considerable time, and if possible, you should choose one that gives you skills you can transfer later. Octave is basically a programmable scientific calculator; that is, you enter a math relation, and it computes a numerical result. **Figure 1** shows the program in operation.



**Figure 1. Gnu Octave Window**



Its window has four panes:

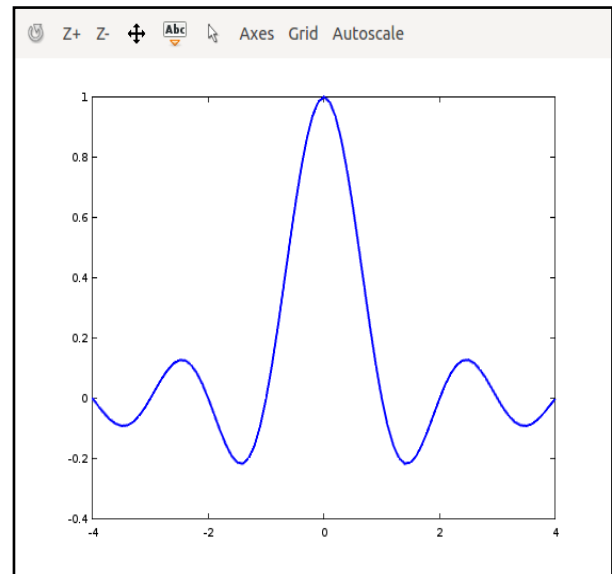
- Upper-left – file browser
- Center-left – workspace, showing the active variables
- Lower-left – command history
- Right – commands and results

The command pane is where you work and is essentially a view into a command-line terminal. You can do only primitive editing here, usually with the arrow keys, backspace, and delete, but you can also copy and paste. The “>>” character pair is the command prompt. Note the tabs below the command pane, which give you access to a real editor and extensive help.

Let’s look at the simple examples shown in **Figure 1**.

- You do simple arithmetic just by entering an expression followed by a tap of the Enter key. Here, we see that  $2 + 3 = 5$ .
- There are built-in constants such as  $\pi$  (“pi” in Octave-speak), which you can use in your expressions, and we see that  $2\pi = 6.2832$ . Note that multiplication must be declared explicitly using the “\*” character.
- Higher-level functions are available, such as `sinc(x)`, which is defined as  $\sin(\pi x)/(\pi x)$ , except that `sinc(0)` is defined as 1.0. (This exception is needed because  $0/0$  isn’t defined.) Figure 1 shows this verified.
- When using Octave, you will often be working with vectors, arrays, and matrices, and there are shortcuts to help in defining these. The example shows one, where `x = (0 : 0.2 : 1)` defines `x` as an array with values starting at 0, increasing by 0.2, and ending at 1.
- We can use this array as an argument for `sinc`, to find `sinc(x)` for `x = 0, 0.2, 0.4, 0.6, 0.8, and 1.0`.
- Finally, we can redefine `x` to be an array

with values from -4 to +4 and separated by 0.1 and plot the sinc function. (The arguments “linewidth” and 2 make the trace thicker than its default, which I felt was too thin.) The result appears in **Figure 2**.



**Figure 2. Plot of the sinc function**

You can often gain more insight from a simple plot than from an expression or a table of values.

Let’s show a more complex example using the sinc function, as shown in **Figure 3**.

Figure 3 shows the following steps. (If your math is rusty, the details may be gibberish, but that’s unimportant. The point here is that defining a plotting complex function is easy and provides insight that is difficult to achieve by just looking at the expressions.)

- Define an array `x` with values from -2 to +2 in steps of 0.1. (The semicolon at the end of the line prevents printing the 41 values.
- Define a second array `y` with the same values as `x`.
- Define a two-dimensional array `[X Y]` with each element being a pair of

numbers from  $x$  and  $y$ . Its top row is  $(-2, 2)$ ,  $(-1.9, 2)$ , ...  $(2, 2)$ ; its second row is  $(-2, 1.9)$ ,  $(-1.9, 1.9)$ , ...  $(2, 1.9)$ ; and so on.

- Evaluate  $\text{sinc}$  for every element of  $[X \ Y]$ . Note that the expression  $X.^2$  causes the elements of the array to be squared individually. If instead, we had used  $X^2$  (without the  $."$ ), we would have multiplied the entire array

of  $X$  values by the same array. With the operation shown,  $f$  is a 41 by 41 array whose elements are the sum of the squares of the elements of  $[X \ Y]$ . This is shown in the Workspace pane.

- We make a surface plot of the result, shown in **Figure 4**. (The button at the upper-left corner of the screen enables rotating the plot by dragging its corners.)

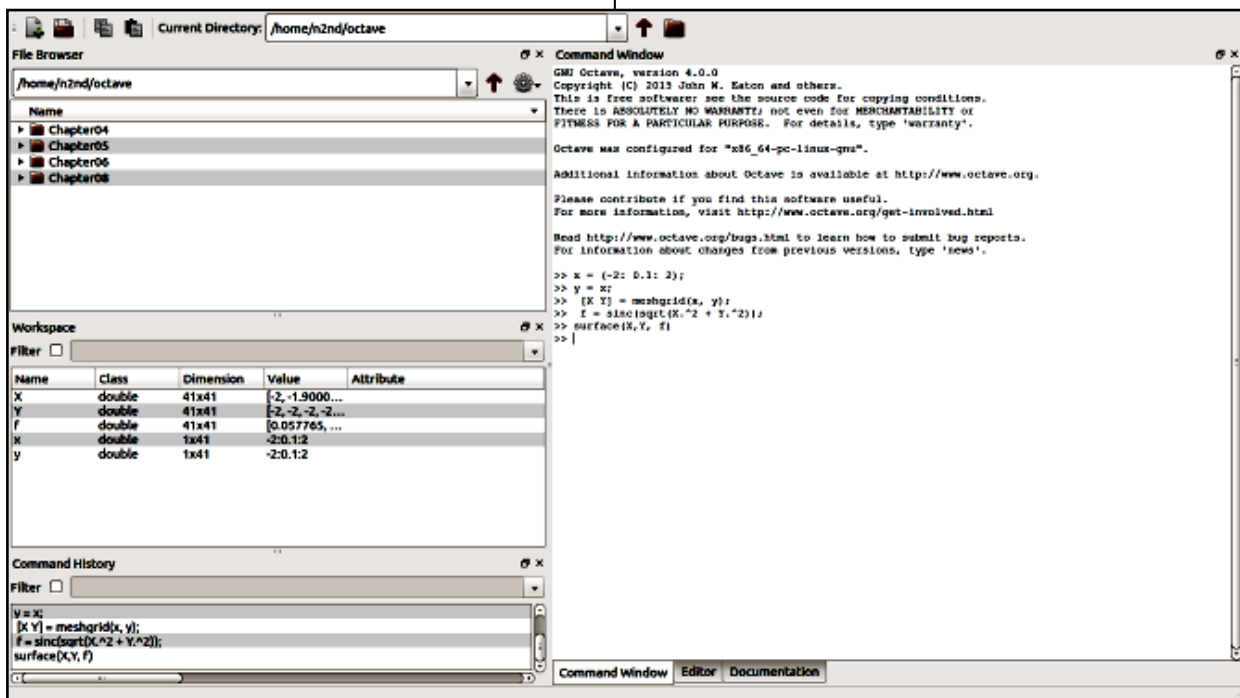


Figure 3. Three-dimensional Plotting Commands

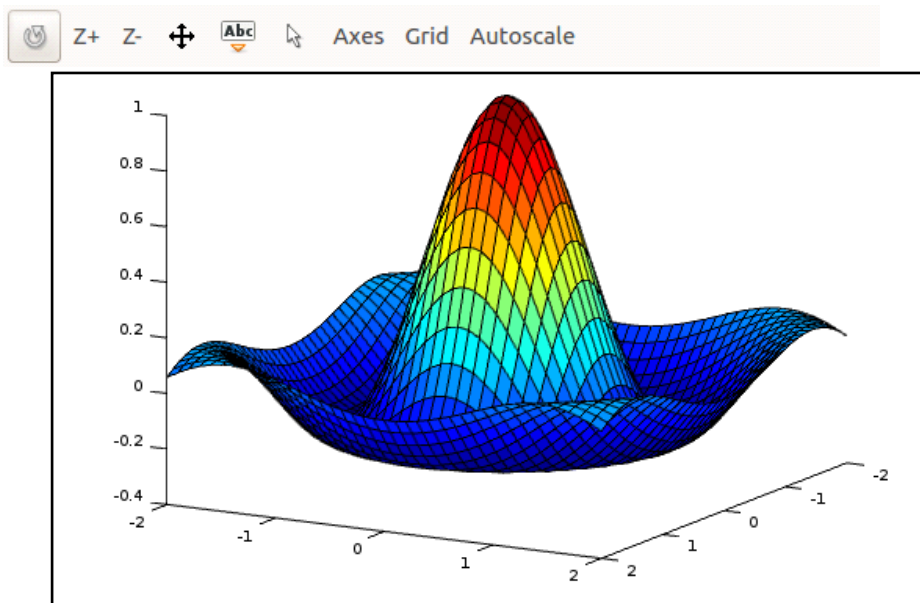


Figure 4. Surface Plot of the Sinc Function

Octave can also solve simultaneous linear equations (beloved by algebra teachers and feared by their students). **Figure 5** shows an example.

$$\begin{aligned} 2x_1 + x_2 - 3x_3 &= 1 \\ 4x_1 - 2x_2 - 2x_3 &= 3 \\ -x_1 + 0.5x_2 - 0.5x_3 &= 1.5 \end{aligned}$$

**Figure 5. Simultaneous Equations**

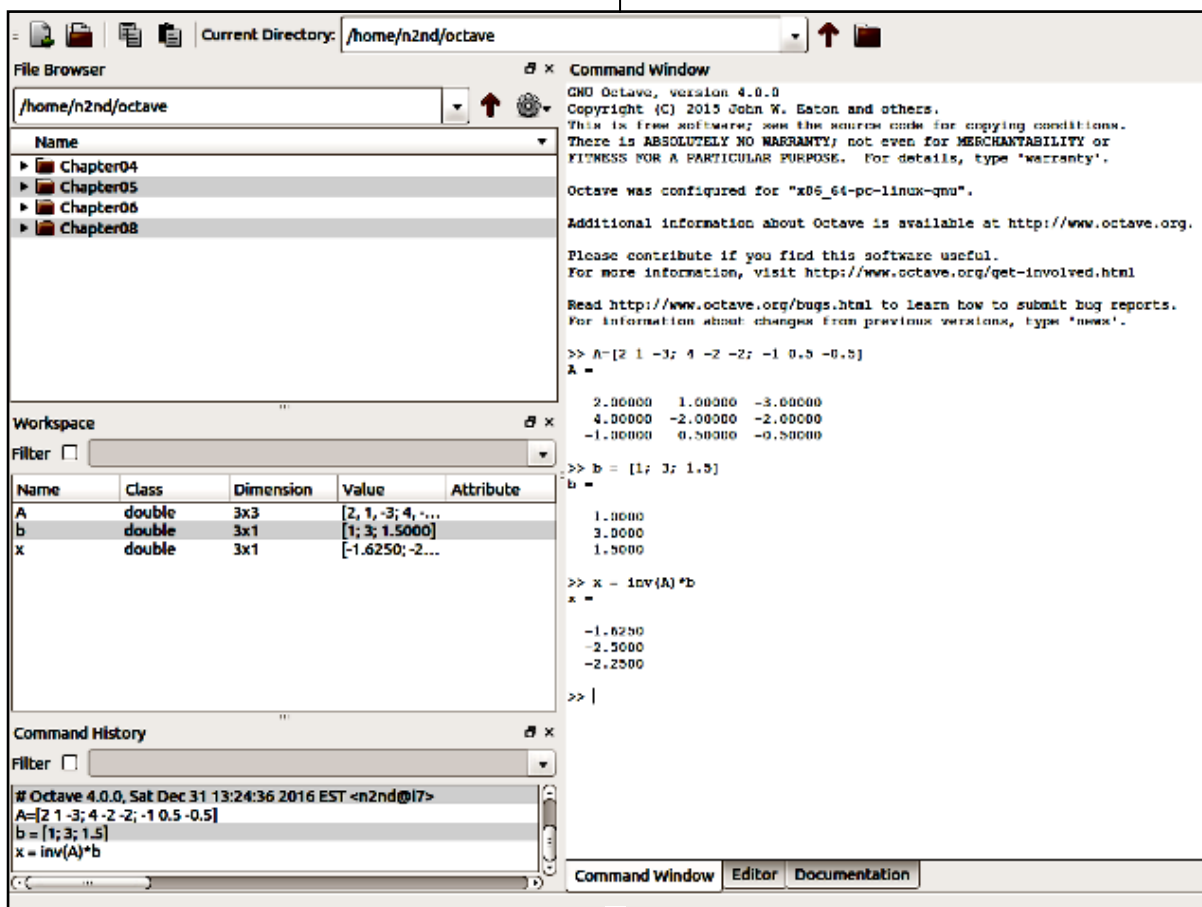
We can restate this, using matrix notation, as  $Ax = b$ , where the matrices are defined as shown in **Figure 6**. Compare Figures 5 and 6, and you'll see that  $A$  contains the coefficients of the equations. Its top row holds those of the top algebraic equation and so on. Matrix  $b$  is similarly defined by the constants on the right.

$$A = \begin{bmatrix} 2 & 1 & -3 \\ 4 & -2 & -2 \\ -1 & 0.5 & -0.5 \end{bmatrix} \quad b = \begin{bmatrix} 1 \\ 3 \\ 1.5 \end{bmatrix} \quad x = \begin{bmatrix} x_1 \\ x_2 \\ x_3 \end{bmatrix}$$

**Figure 6. Simultaneous Equation Matrix Definitions**

Again, using matrix notation, the solution is  $x = A^{-1}b$ , where the -1 exponent indicates that the matrix  $A$  is inverted. (Using Octave commands, this becomes  $x = \text{inv}(A)*b$ .) Finding the inverse of a matrix, even only a 3 by 3 one, using paper and pencil is time-consuming and error-prone. As a result, those of us who were educated BC (before computers) relied on algebra instead. All this changed when personal computers and mathematics programs became available.

**Figure 7** shows this problem solved using Octave.



**Figure 7. Simultaneous Equation Solution Using Octave**

As you can see, it required entering only three lines, one to define A, one to define b, and one to request the solution, which is  $x_1 = -1.6250$ ,  $x_2 = -2.5$ ,  $x_3 = -2.25$ .

This has been a brief introduction to Octave with the goal of letting you know what it is and the sorts of things it can do, and I've covered only a very few of its capabilities. In particular, I haven't discussed Octave programs, which you can write to solve complex problems. Although it can't compensate for a lack of math skills, it can be invaluable for those that have them. There are many applications packages that add additional capabilities. These are listed on the Octave Website, and some are discussed in the references below.

A good starting tutorial for learning more is the 280-page *GNU Octave Beginner's Guide* (<http://jordi.platinum.linux.pl/octave/Jesper%20Schmidt%20Hansen%20-%20GNU%20Octave%20for%20Beginners.pdf>), which you will also see available in print. The user interface has evolved since this was written, but the commands are unchanged and its examples work.

Also, see the 300-page and more up-to-date *Octave at BFH-TI Biel* (<http://web.ti.bfh.ch/~sha1/Labs/PWF/Documentation/OctaveAtBFH.pdf>). It shows the current user interface, but has a more academic approach than the Beginner's Guide. Unfortunately, both documents don't always use standard ASCII characters. For example "\*" is not always the asterisk that Octave uses for multiplication. As a result, pasting the examples into the program often produces errors; you will quickly find what to look for.

The official manual is the 1000-page *GNU Octave* (<https://www.gnu.org/software/octave/>). This too is up-to-date, but its heavy reading and is a command reference rather than a tutorial.

Finally, an Internet search will turn up

several getting-started guides.

A math program like Octave won't compensate for deficient math skills, but it will add insight and speed up finding solutions for those who already have them. ❖

### THE HDMI CABLE AND CONNECTORS

By **Jim Cerny**, Forum Leader

Sarasota Technology User's Group, FL

Sarasota Monitor, April 2017

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As technology changes, hopefully for the better, more and more devices are available to us. For most of us who use technology for personal and home use, we would like to connect some devices to our TVs to enjoy the big screen video and great sound experience. The latest connection cable type that does this for us is HDMI which stands for "High Definition Media Interface". The cable connectors (the standard size and a mini size) are shown in the photo. They have a shape to them that allows them to be in-



serted only one way, so do not force it into the port, try turning it over (180 degrees) and try again.

The purpose of HDMI is to replace different kinds of connectors and cables with one type that, hopefully, can handle all your device connections. Do you



remember the old days when there were separate audio/stereo and video cables? Today almost all of the newer devices (laptops, TV's, DVD players, etc.) will come with at least one HDMI connector port. The older style connectors may also be present, but if possible, HDMI should be your first choice to make those connections.

Your TV remote control will have a button labeled "input", and when you press this button different input options (that is, what is coming INTO your TV) will be displayed and allow you to select which one you want. One option will be "cable" which means your TV will show your cable programs – the cable you pay for each month. But other choices will include one or more HDMI inputs, usually labeled HDMI-1, HDMI-2, etc.

If you have more than one device connected to your TV it is best for each device to connect to its own HDMI port on the back of the TV. You select which of the inputs you want to view on your TV by using the "input" button on your remote. Of course, there must be something (video and sound) coming into that port to the TV for you to see anything. For example, you may have a DVD player connected to HDMI-1, but if your DVD player is not on and playing something, you will not see anything on your TV when you select that input option. If you have some older devices which may not have an HDMI connector, you can purchase a converter device to allow it to connect.

Lastly, I am always amazed by the cost of cables – after all, they are just wires with plugs on the ends, right? If you checkout the prices of cables at stores and the prices on the internet, you will be shocked at the high prices they can charge for these things. Yes, some cables are higher quality than others and may come with better "shielding" to protect the signal, but most

prices are much too high for what you get. My advice would be to shop on-line and get the cheapest cable that meets your needs, but make sure you can return it if you are not happy with it. If it doesn't work for you, then return it and move up to the next higher-priced (and hopefully better quality) cable.

You can find out more about HDMI cables and connectors by asking Google, of course. But connecting them is easy, even for us amateurs. ❖

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### **(General Meeting Report)**

*(Continued from Page 5)*

want to know why. Everything discovered leads to another prediction and another thing to check. With very accurate computer simulations, it was determined that only one impact in 100,000 would make it in and actually hit us. Applying astrophysical theories, mechanics, etc. a lot of the data became crystal clear. Science operates by developing different conjectures to try to explain observed phenomena. Facts are proposed, tested, and predictions are made. In the end, it's the evidence that's collected that matters. So today we have a much deeper understanding of these issues than we had just a couple of decades ago.

So, the good news is we have nothing significant to worry about regarding impact events near Earth. As time passes, we will develop the wherewithal to deflect such objects.

Jupiter and Saturn were first on the scene. They prevented that stuff from coming in to make an absolute mess of the solar system at about four billion years ago. We can breathe easier! ❖

Happy  
Holidays!

**CASH FLOW**

as of October 31, 2017

Charlotte Semple, Treasurer

<b>Total Assets</b>	\$	9,400.40
<b>Receipts</b>		
Member Dues	\$	320.00
<b>Total Gross Receipts</b>	\$	320.00
<b>Expenses</b>		
Newsletter		170.95
Facilities Rental		60.00
Verizon Wireless		50.08
Meetup		89.94
<b>Total Expenses</b>	\$	370.97
<b>Current Total Assets</b>	\$	9,349.43

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<https://apcug2.org/discounts-special-offers-for-user-groups/> for discounts and special offers for User Groups Members. Avast Anti-virus and Acronis True Image, as well as several book, media and training sites, offer discounts, including the two mentioned below.

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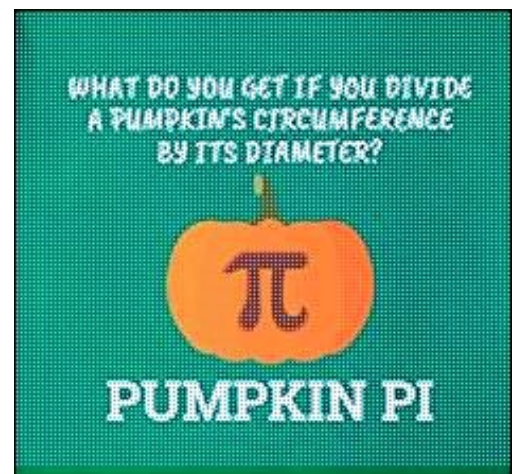
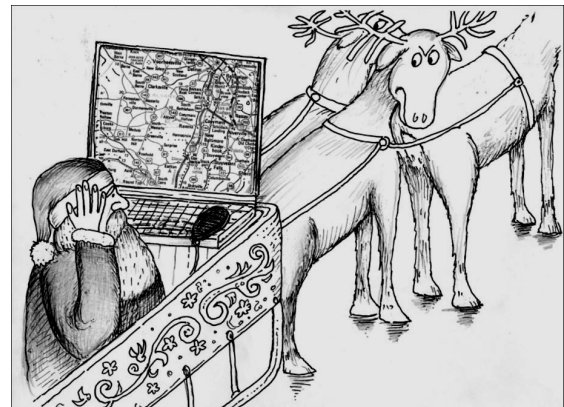


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The Editor of *User Friendly* accepts contributions of any suitable length from members. Send articles to Leahjc(at)sbcglobal.net as plain text in an e-mail message or as a Word document by the **20th of the month.**

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**In addition to monthly general meetings, members enjoy these special benefits:**

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### **From the North:**

Take Sepulveda Blvd.  
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mile to Emerson Ave. Turn  
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