

## Cranium Cruncher

DR. STEVEN E. EVERETT, GN&C TECHNICAL COMMITTEE CHAIR

## Challenge

Last month a logic puzzle was presented in which the crew positions of the members of a former Shuttle mission were to be determined based on several provided statements. Based on these statements, it may be determined that Brown is the Commander, Clark is the MS2, Jones is the MS1, and Smith is the Pilot. In solving the puzzle, the reader should have also discovered that the list of names in order of decreasing chess ability is Smith (PLT), Clark (MS2), Jones (MS1), and Brown (CDR); and that, in addition to Jones (MS1) and Smith (PLT) being neighbors, so are Brown (CDR) and Clark (MS2).



This month you are a materials scientist who has obtained two identical samples from the same rock from the first Mars sample return mission. Your job is to determine the crushing strength of this Mars rock using a destructive test at your facility that can test at any of 100 discrete levels of pressure. If a sample fails the test, it is destroyed and cannot be used again, but if it does not break at a given level of test, it can be assumed that it was not significantly weakened and can be retested. What is the least number of tests that must be performed so that the highest level of pressure that can be sustained may be determined before having destroyed both samples?

Email answers at [steven-dot-e-dot-everett@boeing-dot-com](mailto:steven-dot-e-dot-everett@boeing-dot-com).

## Membership

LISA VOILES, MEMBERSHIP CHAIR

Our current spreadsheet shows 1,088 members in AIAA Houston Section. Most list an organization, but 386 of them list no organization, though for some of those, we can deduce their affiliation by the organization name in their email address. Our Section attracts members mostly from NASA/JSC and its contractors, along with a large group from Texas A&M University. Two other universities in our Section with current or past AIAA Student Sections are Rice University and the University of Houston (UH), including the UH Clear Lake campus.

Membership grades include Members, Senior Members, Associate Fellows, Fellows, Honorary Fellows, Educator

Associates and Student Members.

Our largest membership group from a university is a group of 162 people. The other two universities mentioned above have 17 and 12 members.

Outside of academia, our largest member group about 185 members. The closest member groups in size to that one are one with 58 members, followed by groups of the following sizes: 29, 28, 26, 17, 12, 10, 10, and so on.

Join AIAA! Please see our [back cover](#) for additional information.

## History

TED KENNY, HISTORY TECHNICAL COMMITTEE CHAIR

Dr. Steven E. Everett, Norman Chaffee and Douglas Yazell volunteered to read for this audiobook project (below). If we can tie this in with the AIAA Houston Section Annual Technical Symposium (ATS 2013) of Friday, May 17, 2013, at NASA/JSC Gilruth Center (registration available via SATERN), so much the better. A draft program document is now available on the ATS 2013 web [page](#).

Since Skylab was launched on

May 14, 1973, our Section is also working to attract Skylab presentations from NASA/JSC veterans at ATS 2013. One contact person for that is Dr. Albert A. Jackson IV, whose contact information is on our organization [chart](#).

Since we will have recording equipment set up for our audiobook, we volunteered to help the NASA Alumni League JSC Chapter with oral history recordings, even if they are not transcribed in the near future.

*Suddenly Tomorrow Came... A History of the Johnson Space Center*, the Audiobook! (See page 22 of our [July / August issue](#), a 76-page PDF file available in [low](#) (23 MB) or [high](#) (87 MB) resolution.) The original 1993 book is [free](#) (PDF with great art!) via NASA.