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SPACE

NASA'S MARTIAN HABITAT CONTEST ENTERS FINAL STAGE

With the 'virtual construction' stage complete, competing teams are now set to face each other in a final 'build-off'



The winners of the penultimate stage of NASA's 3D-Printed Habitat Challenge – a competition launched in 2015 to create sustainable shelters suitable for use by settlers on the Moon, Mars or beyond using resources available on-site – have been announced. In this 'software modelling' stage, each of the 11 teams was awarded points based on the architectural layout, efficient use of interior space and constructability of their design, with SEArch+/Apis Cor, Zopherus and Mars Incubator bagging the top three spots and sharing \$100,000 (£76,600) in prizes. The teams will now compete for a prize purse of \$800,000 (£613,150) in a head-to-head print-off to create scale models of their designs at the final in Peoria, Illinois on 1-4 May.

TEAM SEARCH+/APIS COR, TEAM ZOPHERUS, AI SPACEFACTORY



1. This rather striking beehive-like structure was the design submitted by the team from AI SpaceFactory, an architectural practice based in New York. The design (named 'MARSHA') missed out on a prize this time around.

2. SEArch+/Apis Cor's chimney-like design took first place in the software

modelling round. The unique shape of their habitat allows it to be continually reinforced, and lets light in through trough-shaped ports on the building's sides and top.

3. Second prize in the software modelling stage went to Team Zopherus from Rogers, Arkansas. Their design would be

constructed by an autonomous roving printer; once it has completed one structure, it can move on to the next site.

4. After they've been 3D-printed, Zopherus's buildings can be insulated with materials gathered on-site from the Martian regolith.

5. This modular structure made up

of interlocking polyhedral pods was the brainchild of Mars Incubator. Based in New Haven, CT, the team were awarded third place in the software modelling round for their efforts. Along with the other two prize-winning teams, they will now build the structure for real in the competition final in May.

