

IAF SPACE EXPLORATION SYMPOSIUM (A3)  
Interactive Presentations - IAF SPACE EXPLORATION SYMPOSIUM (IP)

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FASHION AND HABITABILITY FOR SPACE, THE MOON AND MARS

**Abstract**

Evoking the shadow of Protàgoras, when presented with the image of the technological world, we share the conviction of living in an environment which is "on a human scale"; everything that surrounds us seems created for Man and therefore Man is the measure of things, as the philosopher Abdera explained. Countless millennia of natural selection and spontaneous technologies have "adapted" Man to the environment and the environment to Man. However, what happens when we design something that has never been designed before? This is the challenge we face when we want to send someone into interplanetary space. A study on "Fashion" in Space, however, requires us to develop a multidisciplinary investigation with creative, scientific, and technological commitment.

The Creative Aspect, the core tenet of Fashion, regards not only creating new clothing designs strongly influenced by the extreme environmental and technological constraints, but also by the cultural impact of science fiction designs, for example, the art and costume designs in starting from Fritz Lang's Metropolis films. This aspect is, however, the basis and leitmotif of this project, considering not only the different situations involving intravehicular (IVA) and extravehicular (EVA) activities, but also the situations of transition from one condition to another. The Semantic Aspect is equally fundamental in order to define situations of Roles, Ranks, Functions, and recognition of People. The anthropometrical aspect should also involve any natural and/or medical metamorphosis, that includes (as from the recent ESA astronaut call) different body shapes, such as very short stature, or limb differences. A key anthropological aspect is the need, choice, or desire (and hopefully not the obligation) to express (or not) one's gender, one's ethnicity/nationality/origin/religion/membership/national identity/military background/university etc. with symbols, friezes, flags or anything else and (we hope) not with invasive

bodily interventions, unless dictated by ancient and accepted traditions. The Tailoring Aspect is obviously the substantial function of the construction of the garment, from the underwear to the space suit. Here we must contemplate in particular the fundamental anthropometric point of view along with specific tailoring technologies regarding the space technological-industrial environment.

Those are the considerations involved based in for the development of a student's work on fashion and habitability for outer space. The final paper presents the result elaborated by the design courses of the Italian Accademia di Belle Arti e Design Poliarte of Ancona in collaboration with other universities to gain a multidisciplinary project for the design of future space fashion.