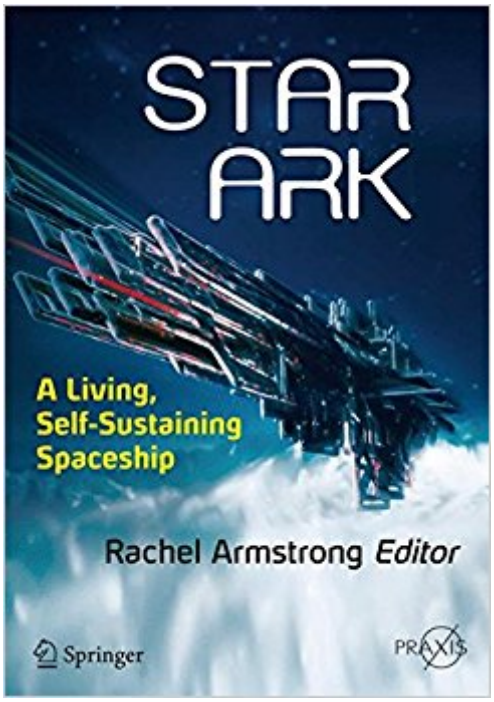
Star Ark: A Living, Self-Sustaining Spaceship (Springer Praxis Books)



Synopsis

As space ventures have become more numerous, leading scientists and theorists have offered ways of building a livingÂ habitat in a hostile environment, takingÂ an â ˆecosystemsâ ™ view of space colonization.Â The contributorsÂ to this volume take a radical multi-disciplinary view of the challenge of human space colonization through the ongoing project Persephone. This book fundamentally challenges prevalent ideas about sustainability and proposes a new approach to resource austerityÂ and conservation and providingÂ truly sustainable approaches that are life-promoting.Â Readers will learn the details ofÂ the plans for Persephone â “ a real project that is part ofÂ the company Icarus Interstellarâ ™s plans for the design and engineering ofÂ a living interior on a worldship to be constructed in Earthâ ™s orbit within 100 years.Â Â Although the timeframe itself is only an estimate, since it is contingent on many significant developments, including funding and technological advances, the industry consensus is that within 100 years we will see manned space exploration beyond our solar system. This notion is shared by organizations such as the Initiative for Interstellar Studies and the DARPA-funded 100-year starship project. This book specifically develops the principles for the construction of a living habitat within a worldship â “ a multi-generational starship that contains its own world that supports colonists as it travels across great distances between stars at a speed much slower than light. Â Far from being a sterile industrialÂ setup, such as the ISS, or even being a bucolic suburbia as proposed by Gerard Oâ ™Neill in the 1970s, thisÂ worldshipÂ will provide the pre-conditions for sustaining life beyond Earthâ ™s environment, which may also lead to the evolution of non-terrestrial ecologies. Drawing on the principles of ecopoiesis and insights offered by the Biosphere 2 experiment that demonstrated what we have to learn about ecosystem construction, this book proposes first designing the soils of such a space. ItÂ shouldÂ then be possible toÂ set upÂ the conditions that a first generation of colonists may experience in leaving our solar system to find new worlds to settle - perhaps in spreading life throughout the universe. Â Although the book takes a unique view of ecology and sustainability within the setting of a traveling starship it is equally concerned with the human experienceÂ on artificial worlds. Â Chapters come from a range ofÂ multi disciplinaryÂ thinkers who shed light on the brave new future ahead from different angles.

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Customer Reviews

â œThis peculiar and interesting book is suitable if you are curious about the matter of long space travels, like e.g. hundreds of years, and the problem of the colonization of new worlds. The solution presented here is a serious study on the so-called â ˆgeneration shipsâ ™, which are well-known among science-fiction readers. â | An intriguing book about an unusual subject.â • (Gabriella Bernardi, Astrocom et al., astrocometal.blogspot.de, January, 2017)

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I learned a lot. Well written and thorough.

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