Editorial Foreword

In recent years the concept of New Space is slowly getting ground even among the general public. It meant to highlight the advances and possibilities opening up to us with new technologies, novel ideas and economical possibilities. The number of satellites grew at a tremendous pace in recent years and even conservative estimates think that reaching 100,000 satellites before the decade comes to end is not a farfetched idea. But this new environment also opens up the possibilities of more accidents, more vulnerability to infrastructure on Earth and even the chance of an armed conflict in space is stepping out of the world of sci-fi and becoming a reality, as we can see in anti-satellite weapons test or the formation of new military units focusing on space. In order to secure the benefits provided by space and at the same time find a way to avoid conflicts in space is crucial to nations and humanity as a whole. Space assets can help us to tackle climate change, to increase agricultural output, to grant people access to online knowledge and education, to secure Earth from asteroids or forecast space weather. To optimise the results, keep and further develop space infrastructure we have to know what goes on in space. We need to plan based on that knowledge. We have to find answers to difficult questions and solve challenging problems. Innovation, research, new perspectives are the key to discover the best path forward.

The present book is a collection of essays, based on the presentations of researchers held at the Space Policy Student Symposium in 2022 at the Ludovika University of Public Service, following an international conference on the New Space Era. The speakers of the Symposium examined parts of the space puzzle in order to advance the joint efforts of the international community with their insights and ideas.

In the following pages the reader will find information about the history of space exploration how it grew into the complex environment we know today. The legal aspects show how states and organisations try to come to agreements about their space operations so they can avoid accidents, conflicts or the loss of life and equipment. They even tried to give guidelines for the future usage of space. Yet even the area of space law changes and instead of binding treaties and agreements states now increasingly rely on soft law documents to the extent that they might be the main source of space law and the engine behind its development. The characteristics of these types of legal documents is therefore important to understand this segment of space activity.

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Space law also aims to support the idea of sustainability. We need to develop our space activity in a way that can secure long-term usage. Contamination of the space environment or the surface of other celestial bodies proves to be a considerable challenge and a credible source of threat for space activity. Regulation can help to identify the threats to sustainability and also aid the solving of this problem. The methods and ideas used on Earth can provide a good basis to develop solutions for the space environment. The Space Sustainability Rating can also help to tackle this problem. To make it successful, the cooperation between private corporations, legislative bodies and governments is paramount.

While keeping space activity sustainable we also need to make sure the security and economic activity is also regulated, to enhance and protect the benefits arising from space activity and lay the foundation for future growth. The international system is mirroring itself in space as well, tensions and cooperation between different actors can manifest in space and at the same time can be enlarged with the multiplication effect of space assets. The combination and balance of hard power and legal instruments can also help to make space more secure. Humanity also has to find a way to make economic endeavours profitable and at the same time respect already existing laws and guarantee strong state and international oversight. Without these kinds of regulations there is too big of a chance for conflict, misunderstandings, damage to property and loss of life or just simply the collapse of the next phase in space activity.

The problems are difficult but not impossible to solve. One obvious example for a fruitful international cooperation is the International Space Station. It is not just a symbol but also a tool to make the next step possible in space activity. Since the start of the Russian–Ukrainian war in 2022, the future of the station became more uncertain. The strong messages and signals sent by the Russian Federation made the international community think and take steps to assure the safety and operability of the station. This issue can greatly influence the future of cooperation in space and contribute to a new geopolitical order.

Apart from major space powers like the United States, the countries of Asia, among them China, also expand and develop their space activity. Cooperation between the countries in the region is not only important for the nations covered in this endeavour but also for the whole space community. It is enough to consider that, with the exception of North Korea, the other three countries of Northeast Asia (China, Japan, South Korea) are among the top 10 nations of the world in terms of economic and/or military power.