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## Editorial

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**Biographical notes:** Steve Cornelius is a Professor and the Head of the Department of Private Law at the University of Pretoria and the Director of the Centre for Intellectual Property Law. He holds the degrees BLuris LLB (Unisa) LLD (Pret). He is admitted as an Advocate of the High Court of South Africa, fellow of the Association of Arbitrators of Southern Africa and member of the South African Academy of Science and Art.

Monica Steffen Guise Rosina is a Full Professor at Fundação Getulio Vargas Law School in São Paulo. Her areas of expertise are intellectual property, fashion law, law and technology and digital democracy.

Ugo Pagallo is a former lawyer and current Professor of Jurisprudence at the Department of Law, University of Turin, Italy. He is a Faculty Fellow at the Center for Transnational Legal Studies in London, UK and NEXA Fellow at the Center for Internet and Society at the Politecnico of Turin. He has been a member of many EU projects and researches, and is currently working with the European Institute for Science, Media, and Democracy (Atomium), in order to

set up AI4People, the first global forum in Europe on the Social Impacts of Artificial Intelligence.

Ivory Mills is a Law and Science Fellow and a dual degree candidate pursuing a PhD in Media, Technology, and Society and a JD at Northwestern University School of Law. With interests in both theory and practice, she investigates international information and communication technology (ICT) market organisation and regulation from organisational and interorganisational perspectives. She holds a BA in International Studies from Spelman College (2012), a MA in Media, Technology and Society (2014), and is a Fellow with the Institute for International Public Policy, Cohort 16.

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## 1 Introduction

We live in a time of tremendous technological innovation. Never before have so many discoveries, new inventions, developments and innovations had such a profound impact on our world and the way we live. It seems that each new technology spawns multiple new developments and itself gives rise to further innovation and development. As a result, it seems as if the pace of technological development simply keeps on increasing at an exponential rate, to such an extent that some predict that we will soon reach a state of singularity where the pace at which new technologies develop will become almost infinite and its society as we know it, will cease to exist. This is perhaps an over-simplification and simply assumes that technological advances can continue unabated, ignoring the fact that all technologies have inherent limitations which eventually impose limits and inhibit development beyond a certain extent. It also assumes that technological development will be an ongoing process and ignores the historical reality that time of great technological advancement was often followed by times of great stagnation or decline.

Whether the advances in technology will eventually take us to a dystopian future in which we will transcend our human nature, or lead to a time of stagnation and decline, one thing is certain. The current rate of technological innovation poses many legal challenges that have to be overcome. However, the development of the law is a notoriously slow process. When it comes to changing the law, lawyers tend to be very conservative and amendments are usually done in a slow, measured and deliberate way. Legislative processes often take years to complete, and where reliance is placed on judicial precedent, courts are even more reluctant to embrace change. The law mostly lacks the capacity to adapt quickly to new technological innovations. The result is that current law is often inadequate or inappropriate to deal with the challenges that the use of new technologies brings.

Over the past years, especially in the fields of AI and robotics, it is noteworthy that some legal systems have adopted a number of pro-active measures in order to cope with the pace of technological innovation. Consider such legal techniques, as the ‘experimental federalism’ doctrine, that aim to flesh out the content of the rules that shall govern individual behaviour through a beneficial competition among legal systems. Along with the EU’s regulation on data protection at its best possible light, this is what occurs in the USA, in which there are several different laws permitting the operation of autonomous cars in the e.g. States of Nevada, California, Florida, Michigan, Hawaii,

Washington and Tennessee and the District of Columbia. Also, reflect on the creation of special zones for AI and robotics empirical experimentation and development in both Japan and Europe, where some member states have endorsed this kind of approach. Whereas, Sweden has sponsored the world's first large-scale autonomous driving pilot project, so that self-driving cars use public roads in everyday driving conditions, Germany has allowed a number of tests with various levels of automation on highways, e.g., Audi's tests with an autonomous driving car on highway A9 between Ingolstadt and Nuremberg.

Yet, the current pace of technological development also has another consequence. We also live in a time of increasing redundancy and obsolescence. Never before have so many relatively new technologies been overtaken by the development of other newer technologies. Just think of the telegraph, steam powered machines, typewriters, floppy discs and fax machines, to name a few. This means that the law must not only adapt to new technologies, but also the demise of old technologies. Sometimes, the law would hardly have caught up with a particular technology, only for that technology to be superseded by newer technologies, leaving the law yet again in a state of limbo. Legal rules or principles that may have made perfect sense in the context of certain technologies simply become absurd when those technologies disappear.

It is for this reason that the Law Schools Global League established a Working Group on New Technologies and the Law. The aim was to promote research on various new technologies and the way in which the law should adapt to meet the legal challenges posed by such new technologies. The Working Group first met in Cape Town in July 2015 and set the agenda for research. Colleagues from the respective law schools were invited to submit research papers on any topic dealing with new technologies and the law. The proposals were reviewed and the best ones were selected. The authors were then invited to prepare their papers and attend a workshop that was held in Pretoria in February 2016. The Working Group again met in Chicago in July 2016 to present the results of the Pretoria workshop at the academic conference of the Law Schools Global League. The papers were subsequently again peer reviewed and the deserving papers were selected for publication in this special edition.

We trust that this special edition will assist in enhancing the various debates around the various new technologies and the law.

The Working Group also expresses its appreciation to attorneys Adams & Adams, who sponsored the Pretoria workshop and made their facilities available for the meetings. Their hospitality is greatly appreciated.