technological tools such as smart contracts.

SPEAKER: Jean-Marc DELTORN, Member of the Research Department, CEIPI.
SPEAKER: Andres GUADAMUZ, Senior Lecturer, University of Sussex, United Kingdom.

10:30-11:00 / COFFEE BREAK

11:00-12:30 / MODULE 10

**AI, DECISION MAKING AND ENFORCEMENT**

In the same way that AI challenges traditional concepts of authorship and inventorship, it also raises fundamental challenges to the concept of enforcement. The latter is generally understood as requiring the participation of the right holder and public authorities and is characterised by the implementation of fair trial basic tests. This session explores the possibilities arising from devices that automatically enforce intellectual property rights and what does self-enforcement mean for legal theory and in daily practice. This session will also present advances in deep learning relating to IP enforcement and how practice in courts and legal firms is being transformed by data analytics and AI.

SPEAKER: Xavier SEUBA, Associate Professor, CEIPI.

12:30-14:00 / LUNCH

14:00-15:30 / MODULE 11

**AUTOMATED COPYRIGHT AND TRADEMARK ENFORCEMENT ONLINE**

This module will focus on AI’s applications in content moderation on digital platforms. In particular, copyright and trademark enforcement has been increasingly dealt through automated filtering and other algorithmic means, whilst content governance online has become an issue that calls for extreme measures, taking down content through automated means poses challenges for online expression and access to information. In this scenario, governments and policymakers are heavily pressuring companies to take action and a few jurisdictions have already responded with new regulatory initiatives. Meanwhile, judicial decisions have highlighted the inconsistencies between automated enforcement and fundamental rights.

SPEAKER: Giancarlo FROSIO, Associate Professor, CEIPI.

15:30-16:00 / FAREWELL

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**Practical information**

**VENUE**

CEIPI / LE CARDO
7 RUE DE L’ÉCARLATE
CS 20024
67082 STRASBOURG CEDEX

**ACCESS**

TRAMWAY / LINE A DIRECTION ILLKIRCH GRAFFENSTADEN OR LINE D DIRECTION PORT DU RHIN

STOP / PORTE DE L’HÔPITAL

For further information, please contact:

**MR. GIANCARLO FROSIO**

REGARDING ACADEMIC ASPECTS
Tel. +33 3 68 85 83 32
gcfrosio@ceipi.edu

**MS. ISABELLE MAHOUDEAU**

REGARDING REGISTRATION AND ADMINISTRATIVE ASPECTS
Tel. +33 3 68 85 80 27
imahoudeau@ceipi.edu
Day 1: Thursday, 1 October 2020

9:00-9:30 / WELCOME ADDRESS
Yann BASIRE, Associate Professor at CEIPI, University of Strasbourg, Director General of the CEIPI and Director of the French Section of the CIPE

10:45-11:15 / MODULE 1
INTRODUCTION TO ARTIFICIAL INTELLIGENCE / TECHNICAL ASPECTS AND REGULATORY TRENDS
Module 1 will provide first an introduction to the training program. The remainder of the class will discuss the technical regulatory, and market landscape against which ‘Artificial Intelligence (AI), Machine Learning (ML) and robots are emerging, with particular emphasis on machine-generated or computational creativity. In this context, this module will first provide a simple technical introduction to basic notions such as AI, ML, and neural networks that will serve as a basis for discussing legal issues. Later, it will briefly introduce the landscape of normative efforts in multiple jurisdictions that starts coping with a potentially ground-breaking revolution.

SPEAKER: Giancarlo FROSIO, Associate Professor, CEIPI

11:15-12:45 / MODULE 2
AI AND COPYRIGHT / AUTHORSHIP
After reviewing standards for AI’s authorship, Module 3 will delve into complex matters related to ownership of machine-created works and infringement. Who owns the copyright in a work generated by a machine? Should specific arrangements conferring authorship to the agents spending skills, labour and efforts to create AI in the first place regulate the field? In this context, however, ownership might still be tricky to allocate. Does it belong to the person who built the system, the person who trained it, or the person who fed it specific inputs? Again, AI might engage into copyright infringement as a result of its creative activities. How does the dichotomy idea/expression, the notion of originality or the doctrine of fair use apply to computational creativity? Open questions become more complex in light of the growing power of AI algorithms to rewrite reality. ML tools can turn shots of horses into horses, black ears into pumas, dogs into cats, apples into oranges, and porn stars into celebrities, multiplying grounds for violation of economic and moral authorship rights and personality rights. Where to cast relevant liability for infringement in all these cases?

SPEAKER: Giancarlo FROSIO, Associate Professor, CEIPI

12:45-14:00 / LUNCH

14:00-15:30 / MODULE 3
AI AND COPYRIGHT / OWNERSHIP AND INFRINGEMENT
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SPEAKER: Giancarlo FROSIO, Associate Professor, CEIPI

15:30-16:00 / COFFEE BREAK

16:00-17:30 / MODULE 4
AI, DATA AND BIG DATA / OWNERSHIP AND PROTECTION
Module 4 will look into novel issues emerging in connection with AI and data management. Data and Big Data processing is indeed a fundamental part of machine learning. On one side, data ownership might emerge as critical issue to be carefully considered when dealing with AI and ML systems. Developing AI and ML systems generally involves training it using large datasets, so the system can continuously improve its decision-making abilities. Who owns the IP in the datasets which are used to train the system? Although data might be freely available online, it cannot be used for any purpose. Therefore, genuine issues of liability for use of proprietary data in ML processes might arise. On the other side, data protection regulations will play an important role in the evolution of AI and ML systems. This section will consider relevant legislation and case law, with particular emphasis on the interpretation of the upcoming EU General Data Protection Regulation’s provisions on profiling and automated decision-making.

SPEAKER: Andres GUADAMUZ, Senior Lecturer, University of Sussex, United Kingdom

17:30 / WELCOME COCKTAIL

Day 2: Friday, 2 October 2020

9:00-10:30 / MODULE 5
PATENTING AI
Module 5 will consider a vast array of issues related with patenting AI and ML systems. In this context, this module will review international legislation, case law and patent offices’ practices, with special emphasis on an EU-US comparative analysis. First, a fundamental challenge for protecting AI technologies with AIs or AIs involving claims that is patent eligible. Also, this module will consider how to identify what contributed to the development of an AI-related patent for the purposes of determining whether someone was an inventor. Further, satisfying disclosure requirements can be challenging when seeking patent protection for AI-based inventions. What should be disclosed in AI inventions to meet the requirements? Again, an AI-based invention claim should be drafted? How does the doctrine of equivalents apply to AI inventions? Do different standards apply to rule-based systems and neural networks?

SPEAKER: Jean-Marc DELTORN, Member of the Research Department, CEIPI

10:30-11:00 / COFFEE BREAK

11:00-12:30 / MODULE 6
AI-GENERATED INVENTIONS / INVENTIVENESS AND OWNERSHIP
What if an AI-enabled machine invents something? What if an AI algorithm—without any human intervention—develops a new business method, a drug, a machine, or other invention? What if an AI develops a technical improvement of itself? In this respect, as well as in the copyright domain, AI challenges the most basic patent notions. Can a robot be an inventor? What owns AI-generated inventions? This section will present the conditions under which the products of AI processes/systems can be granted protection. The issue of industrial aplicability and plausibility will be discussed, as well as the relation to article 4(2) EPC (when the AI parent process is patentable). The problem of inventive step will be discussed too as well as the issue of defining the person skilled in the art when machines are imbued with an increased level of autonomy (and technical) creativity. The second part of the presentation will be devoted to the issue of inventiveness and the (necessary) mention of the inventor on the title. This section will also expand upon the identification of the inventors and the differences between US and EU.

SPEAKER: Giancarlo FROSIO, Associate Professor, CEIPI

13:00-14:30 / LUNCH

14:30-16:00 / COFFEE BREAK

16:00-17:30 / MODULE 7
AI, TRADE SECRETS, AND MEDICAL INNOVATION
Module 7 will consider trade secrets as an additional legal tool for protecting AI. This module will contrast patent protection for AI inventions with trade secrets protection and consider potential shortcomings of patent protection, in general. Unlike a patent, whose granting period might take a few years, trade secret protection automatically is secrecy of information creates a competitive advantage and there are reasonable measures in place to maintain secrecy. In this regard, trade secret protection may be especially well-suited for fast developing and changing AI inventions, whose improvements occur at an extremely rapid pace. This module will consider the international protection of trade secrecy for AI by looking into recently adopted EU trade secrets directive, with some legislative examples. In particular, this module will discuss a case study where a trade secret and patent protection play an increasingly interchanging role in relation to medical innovation, with special emphasis on personalized medicine.

SPEAKER: Nari LEE, Professor, Hanken School of Economics, Finland

17:30-18:00 / COFFEE BREAK

Day 3: Saturday, 3 October 2020

9:00-10:30 / MODULE 9
BLOCK CHAIN, DRM AND SMART CONTRACTS
Module 5 will focus on blockchain technology and alternative, decentralized architectures that rely on peer-to-peer networks and distributed technologies to provide secure and autonomous platforms for online interactions and communications (blockchain, Bluetooth, Ethereum, etc.). This module will analyse the legal framework in which these platforms operate, as well as alternative governance models combining regulation by code, contracts and social norms. ‘Distributed ledger technologies’ (of which the blockchain is one instantiation) will also be discussed in relation to patentability (and exclusion thereof) either as mathematical method, business methods, or computer programs. In addition, this module will highlight how blockchain technology provides opportunities for both infringement and enforcement. Blockchain allows to track ownership transactions, effect payments, integrate data, and provide transparency. This module will be considering existing implementation of blockchain technology for IP management as well as other

SPEAKER: Jean-Marc DELTORN, Member of the Research Department, CEIPI

12:30-14:00 / LUNCH

14:00-15:30 / MODULE 8
AUTONOMOUS DRIVING
Module 8 will discuss connected and autonomous vehicles as an emerging field where AI might create relevant IP, trade secrets, and liability issues. This module will first introduce the landscape of autonomous driving projects and market applications. It will map out present legislation and emerging policy proposals to regulate autonomous driving. This module will discuss relevant issues related to the licensing, transfer and protection of autonomous driving technology. IP rights will play a critical role in enabling industry players to establish, and maintain, a position within this emerging market, with thousands of possibly competing patents being sought. The race to achieve market share will inevitably lead to a flurry of IP disputes, on the basis of patent, trademark, design, copyright or trade secrets infringements, as the Uber/Waymo case might already show. Finally, this module will consider in detail, IP liability that might arise from autonomous driving enabled machines. Under which standards liability should arise? To whom liability should be attributed for damages caused by machines and vehicles autonomously operated by an AI? These are all very novel questions that have been considered for far only from an atheoretical perspective but have soon to be tested in practice.

SPEAKER: Nari LEE, Professor, Hanken School of Economics, Finland