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 details 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 so far only from a theoretical perspective but shall have soon to be tested in practice.

SPEAKER: Nari LEE, Hanken School of Economics.

12.30-14.00 / LUNCH

14.00-15.30 / MODULE 11

Module 11 will focus on blockchain technology and alternative, decentralised architectures that rely on peer-to-peer networks and distributed technologies to provide secure and autonomous platforms for online interactions and communications (BitTorrent, Bitcoin, 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. Existing implementation of blockchain technology for IP management include inter alia the music platform Muse and Ujo Music or the blockchain patent exchange Kyna. Finally, this module will consider liability that might emerge from managing and using these technologies, especially in the context of financial transactions.

SPEAKER: Jean-Marc DELTORN, EPO.
SPEAKER: Giancarlo FROSIO, CEIPI.

15.30-16.00 / FAREWELL

---

**Practical information**

**VENUE**

ESCARPE BUILDING / ROOM 339, 3RD FLOOR
CEIPI / UNIVERSITÉ DE STRASBOURG
11, RUE DU MARÉCHAL JUIN
67046 STRASBOURG CEDEX

**ACCESS FROM THE TRAIN STATION**

TRAMWAY / LINE C
DIRECTION / NEUHOF RODOLPHE REUSS
STOP / UNIVERSITÉ

---

For further information, please contact:

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

**MS. DIANA LAPLANCHE**
REGARDING REGISTRATION AND ADMINISTRATIVE ASPECTS
Tel. +33 3 68 85 80 82
dlaplanche@ceipi.edu
**DAY 1 — THURSDAY, 24 MAY 2018**

**9.00-9.30 | WELCOME ADDRESS**
Christophoros GERGGER, Professor of Law, Director General and Director of the Research Department, CENTER FOR INTERNATIONAL INTELLECTUAL PROPERTY STUDIES; CEPIL

**9.30-10.45 | MODULE 1**
**OVERVIEW | HISTORY AND THORY OF AI REGULATION**
Module 1 will provide an introduction to the training program in the first 30 minutes. The remainder of the class will discuss the theoretical, historical, and market landscape against which regulation of Artificial Intelligence (AI), Machine Learning (ML) and robots is emerging, with particular emphasis on machine-generated or computational creativity. AI’s disruptive effects on traditional business models will force a re-consideration of the Intellectual Property (IP) framework. In this context, this module will first present legal tools available to protect AI, including trade secrets, copyright and patent protection. Later, it will briefly introduce the landscape of normative efforts in multiple jurisdictions that starts coping with a potentially ground-breaking revolution. This module will also consider how alternative approaches to computational creativity regulation will have far reaching commercial implications, shifting incentives for developing AI.

**SPEAKER:** Giancarlo FROSIO, CEPIL

**10.45-11.00 | COFFEE BREAK**

**11.00-12.30 | MODULE 2**
**AI AND COPYRIGHT | AUTHORSHIP**
Artificial intelligence writers of code and news articles, composers music, digital artists, creates video-games, and makes paintings and other artworks. AI can engage in any creative activities as technology like 3D printing enables computers to create physical artifacts without the need of human intervention. Like Google’s Deep Mind, which generates and performs music or creates artworks, AI does so by listening to other music or analyzing previous artworks online. Which are the conditions for protection of creations generated by deep neural networks under the main copyright regimes? Is AI an author according to traditional copyright standards? Should traditional copyright standards such as originality apply, and perhaps machine-generated creative works fall in the public domain? This module will try to provide an answer to these basic issues surrounding AI’s creativity by looking into legislation implemented in several jurisdictions and relevant case law.

**SPEAKER:** TBC

**12.30-14.00 | LUNCH**

**14.00-15.30 | MODULE 3**
**AI AND COPYRIGHT: OWNERSHIP AND INFRINGEMENT**
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 confering ownership 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 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 between 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 ML algorithms to rewrite reality. ML tools can turn shots of horses into zebras, black bears into pandas, 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:** TBC

---

**DAY 2 — FRIDAY, 25 MAY 2018**

**9.00-10.30 | MODULE 5**
**AI, DATA AND BIG DATA | OWNERSHIP AND PROTECTION**
Module 5 will look into novel issues emerging in connection with AI and data management. Data and Big Data processing is indeed a fundamental portion of machine learning. On one side, data ownership might emerge as critical to be carefully considered when dealing with AI and ML systems. Developing AI and AI systems generally involves training using large datasets, so the system continuously improves 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 implications of the upcoming EU General Data Protection Regulation’s provisions on profiling and automated decision-making.

**SPEAKER:** Giancarlo FROSIO, CEPIL

**10.45-11.00 | COFFEE BREAK**

**11.00-12.30 | MODULE 6**
**PATENTING AN AI**
Module 6 will consider a vast array of issues related to patenting AI and ML systems. In this context, this module will review international legislation, case law and patent office practices, with special emphasis on EU-US comparative analysis. First, a fundamental challenge for protecting AI technologies with patents involves claiming subject matter 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, how 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 DELOTON, Patent examiner, European Patent Office, EPO

**12.30-14.00 | LUNCH**

**14.00-15.30 | MODULE 7**
**AI-GENERATED INVENTIONS | INVENTIVENESS AND OWNERSHIP**
What if an AI-enabled machine invents something? what if an AI—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? who 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 applicability and plausibility will be discussed, as well as the relation to article 4(2) EPC (where 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 inventive step and the (necessary) mention of the inventor on the title. This section will also expand upon the identification of the inventors and the difference between US and EU.

**SPEAKER:** Jean-Marc DELOTON, EPO

---

**DAY 3 — SATURDAY, 26 MAY 2018**

**9.00-10.30 | MODULE 9**
**AI | TRADE SECRETS, AND MEDICAL INNOVATION**
This module will consider trade secrets as an additional legal tool for protecting AI. In this respect, this module will contrast patent protection for AI inventions with trade secrets protection and consider potential shortcomings of patent protection. Unlike a patent, whose granting period might take a few years, trade secret protection arises automatically if 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 magnifying on some key jurisdictions. In particular, this module will discuss at privileged case study AI and trade secret protection in relation to medical innovation, with special emphasis on personalised medicine.

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

**10.45-11.00 | COFFEE BREAK**

**11.00-12.30 | MODULE 10**
**AUTONOMOUS DRIVING**
Module 10 will discuss connected and autonomous vehicles as an emerging field where AI might raise relevant IP, trade secrets, and liability issues. This module will first introduce the landscape of autonomous driving technologies and applications. It will map out present legislation and