



DICAM
DEPARTMENT OF CIVIL, ENVIRONMENTAL AND MATERIALS ENGINEERING

Dear Students
Dear Colleagues

Dr. Francesco Gerali, Senior Research Fellow at the Oil and Gas, Natural Resources and Energy Center at the College of Law of the University of Oklahoma, will present two lectures at our Department.

- 1- Petroleum: good to nothing or indispensable feedstock? Centuries of blunders, and science.**
- 2- The day after: the inception of the modern oil industry in the Italian oil regions after the Pennsylvanian oil boom.**

The lectures will be held on Wednesday, 6th of December 2017, 11:00-13:30, Sala del Consiglio – Scuola di Ingegneria e Architettura, Viale del Risorgimento 2, Bologna.

Students, Faculty, and Staff are kindly invited to attend the seminars. Below find the lectures abstracts and a biosketch of the speaker.

Sincerely
Prof. Paolo Macini

Petroleum: good to nothing or indispensable feedstock? Centuries of blunders, and science

The numerous kinds of liquid, semisolid and solid petroleum substances were known, harvested and used for millennia. Several authors of the Classic Age and the Late Antiquity described petroleum, its utilizations, and proposed theories on the origin. However, the knowledge about its real nature and composition was very limited. Only in the Early Modern Age took shape the cumulative process of knowledge that gradually matured into the modern concept of crude oil. About four centuries passed between the “Geneva Pamphlet” (1480) on the medical uses of the *Pétrol*, the early innovative elements introduced in the study of crude oil by authors such as Georg Agricola (1546) and Andreas Libavius (1601), to the Michael Faraday’s discovery in 1825 of the chemical composition of benzene, derived from bituminous oil, as a compound of carbon and hydrogen. During such time, the studies on crude oil benefited of rapid advances and brilliant insights with authors like Volck (1625), Pomet (1694), D’Eyrinis (1721), Hoeffel (1734), and Maquer (1758), much as they had moments of stagnation, and disappointing regressions.

The presentation aims to frame and contextualize some of the theories and speculations proposed by natural philosophers, chemists, and early geologists in the modern age, highlighting also the contribution of the Italian geoscientists in the understanding of crude oil as a “new” material, the future feedstock for the 19th century energy revolution.

The day after: the inception of the modern oil industry in the Italian oil regions after the Pennsylvanian oil boom

In mid-nineteenth century, the newly born American oil industry sparked and influenced the development of the international Oil & Gas industry. The early European oil ventures established in the early 1860s, when the level of knowledge and technological education on petroleum drilling and



refining allowed the inception of the mass production and utilization of petroleum. At that time, Europe counted about 10 active oil regions, three of which were located in Italy.

The presentation compares the two main Italian oil-producing regions of the time (Emilia-Romagna and Abruzzo Apennines) with the northwestern area of the Pennsylvania, USA – the locus of the concept of mass crude oil production – during the 1850s and 1860s. The aim is to annualize the conditions, the people and the processes that made possible the transition of crude oil in Italy from a raw material of secondary importance, but with a long production history, dating back to the Classic Age, to the object of an innovative and energy production pattern.

BIO

Francesco Gerali is a Senior Research Fellow at the Oil and Gas, Natural Resources, and Energy Center at the College of Law of the University of Oklahoma and specializes in the history of the modern oil industry. He studied Modern History at the University of Genoa and earned his Ph.D. in the History of Science in 2009 at the University of Bari. Since then he worked in universities and special research collections in Italy, the United States, Mexico, Australia and France.

Francesco studied the cumulative process of knowledge and expertise that ignited the early oil industry in several countries and the following maturation of our 160-year's Oil Society. Francesco is also Honorary Research Fellow at the School of Humanities of the University of Western Australia, and his current research analyzes the scientific and economic aspects of the development of the unconventional Oil & Gas technologies in the United States.

