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da Universidade de Lisboa
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**A Física dos Princípios e a Epistemologia
Científica: os casos de Mach, Hertz e Poincaré**
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Centro de Filosofia das Ciências da Universidade de Lisboa

International Meeting: Tribute to Henri Poincaré 100 years after

3 JULHO 2012 | AUDITORIO DA FFCUL, EDIFÍCIO 1, PISO 3



• 1854-1912 •

PROGRAMA

International Meeting • **Tribute to Henri Poincaré** • 100 years after.

10h00

Sessão de abertura/ Opening session

Isabel Serra (CFCUL)

10h30

Intuition and axiomatics in early 20th-century physics

Scott Walter (Univ. of Lorraine & Henri-Poincaré Archives, CNRS)

Abstract: David Hilbert's axiomatization of Euclidean geometry (1899) is often seen to signal the rise of formalist approaches to mathematics and the exact sciences in the early twentieth century. At the same time, however, Henri Poincaré extolled the virtues of intuition and physical instinct in the advance of theoretical physics. Drawing on studies by Herbert Mehrtens, Leo Corry, and Jeremy Gray, my talk will compare the views of Hilbert and Poincaré concerning the role of intuition in the exact sciences, and examine how these played out in the realms of relativity, dynamics, and quantum mechanics.

11h30

Mach against metaphysics

Augusto Videira (Univ. do Estado do Rio de Janeiro)

Abstract: In this talk I will discuss the following hypothesis: Ernst Mach (1838-1916) employed naturalism (a word he never used) — an attitude which has its origin in Mach's acceptance of Darwinism — as a weapon against metaphysics, since the former would try to establish evaluations criteria, including those necessary to choose scientific theories, capable of being used by human beings.

14h00

La nature des théories physiques d'après Henri Poincaré

João Paulo Príncipe (Univ. de Évora)

Abstract: Ici je m'en occupe de deux aspects des réflexions de Poincaré: la physique des principes et la notion de rapports vrais. Poincaré voit les sciences comme des systèmes de relations, le progrès correspondant à une extension de l'ensemble des rapports vrais et à sa systématisation conduisant à des degrés supérieurs d'unité. La notion de rapport vrai

PROGRAMA

Encontro internacional • **Homenagem a Henri Poincaré** • 100 anos depois

est complexe et Poincaré n'en donne aucune définition ; une loi particulière ou un principe peuvent être conçus comme des rapports vrais, bien que leur degré de généralité et leur rapport avec l'expérience puissent être divers. On accède aux rapports entre les choses par l'intermédiaire de rapports entre images qu'on est forcé de mettre à leur place ; ces images ce sont des analogies partielles. Les théories, avec leurs images, peuvent recéler les rapports vrais. Puisque la physique des principes écarte la connaissance des mécanismes inobservables (hypothèses indifférentes typiques de la physique laplacienne ou physique des forces centrales) elle semble dépourvue de ce genre d'hypothèses, ce qui représente un progrès dans le sens de l'économie et de l'unité

15h00

On the several kinds of convention in Poincaré's epistemology

María de Paz (CFCUL & UCM)

Abstract: The aim of this talk is to clarify some crucial aspects of Poincaré's philosophy of science, namely, the notion of 'convention'. This could lead to a better understanding of the different interpretations that have been made about his views and to reassess this philosophy of science one hundred years after his passing.

16h00

Lançamento de Livros/ Book Launch

Franco Oliveira (CFCUL) **Henri Poincaré-Filosofia da Matemática. Breve antologia de textos de Filosofia da Matemática de Henri Poincaré**

Hassan Tahiri (CFCUL) **Poincaré's Philosophy of Mathematics: Intuition, Experience, Creativity**

Isabel Serra (CFCUL) **Henri Poincaré Filosofia da Física. Breve antologia de textos de Filosofia da Física de Henri Poincaré**

Augusto Videira (UERJ) **Perspectivas contemporâneas em Filosofia da Ciência || Física mecânica e filosofia- O legado de Hertz**