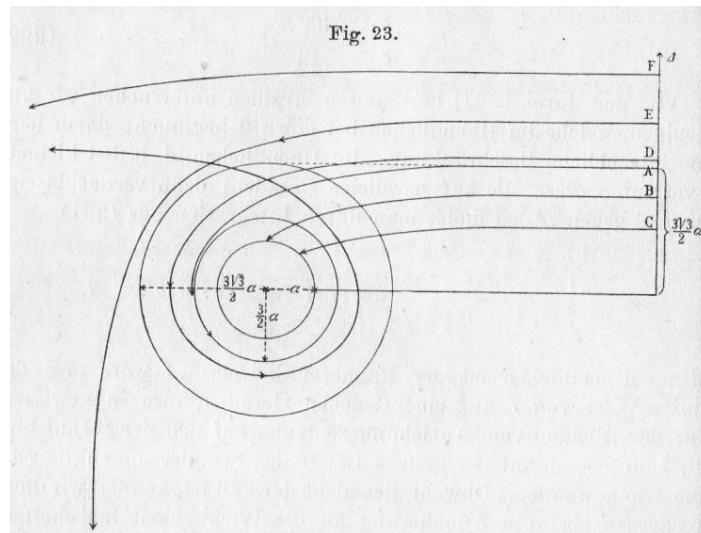


Call for papers

Thinking about Space and Time: 100 Years of Applying and Interpreting General Relativity

Bern (Switzerland), September 12 – 14, 2017

webpage: http://www.philosophie.unibe.ch/news/spacetime2017/index_eng.html



Exploring light ray geometry in Schwarzschild's solution of Einstein's field equations

(M. v. Laue, Die Relativitätstheorie. Bd. 2. Die allgemeine Relativitätstheorie und Einsteins Lehre von der Schwerkraft, Braunschweig: Vieweg, 1921, p. 226)

About one hundred years ago, in late 1915, Einstein came up with his gravitational field equations of the General Theory of Relativity. This is often celebrated as one of the most momentous events in the history of science, but at that time, a new theoretical understanding of gravitation had really only begun. No exact solutions to the field equations were known, and the implications of the theory were almost unexplored. It is no surprise, then, that the publication of the field equations gave rise to pioneering research – think of Karl Schwarzschild's black hole solution to the equations, Einstein's discussion about gravitational waves or his first relativistic world model. Since the theory has far-reaching implications for our understanding of space and time, the discovery of the field equations was also followed by intense philosophical discussions to which prominent proponents of positivism and neo-Kantianism, e.g. M. Schlick and E. Cassirer, made contributions of lasting importance. All in all it seems fair to say that, in November 1915, the theory had only just been born; what we now know and value as General Theory of Relativity with all its features only came into being during the investigations and discussions that ensued after the discovery of the field equations.

One hundred years after the first pioneering applications of, and reactions to, Einstein's momentous discovery, this conference aims at an integrated understanding of how Einstein's theory of relativity

gained momentum. The focus is on the early reception of Einstein's theory in physics and philosophy and on the systematic questions that emerged shortly after Einstein's discovery of the field equations. The conference brings together historians of science, philosophers, and physicists. Research topics include, but are not limited to,

- cosmological models
- black holes
- gravitational waves
- unified field theory
- metaphysics of space and time
- epistemology of space and time
- the relationship between spacetime and matter

Keynote speakers:

Ruth Durrer (physics, University of Geneva)

Marco Giovanelli (philosophy, University of Tübingen)

Sabine Hossenfelder (physics, Frankfurt Institute for Advanced Studies)

Dan Kennefick (physics, University of Arkansas)

John Norton (HPS, University of Pittsburgh)

Chris Smeenk (philosophy, Western University, Canada)

Jim Weatherall (logic and philosophy of science, University of California, Irvine)

Organizers: Claus Beisbart (Bern), Tilman Sauer (Mainz), Christian Wüthrich (Geneva)

The conference is generously supported by the Tomalla Foundation, the UBS Kulturstiftung, the Swiss National Science Foundation and the Albert Einstein Center for Fundamental Physics at the University of Bern.

We plan about 15 contributed talks of 30 minutes plus 15 minutes discussion time. Contributed speakers are paid up to 4 nights in a hotel in Bern. We further offer travel grants for contributed speakers. Priority is given to young researchers. If you wish to apply for a travel grant, please send an email to Claus.Beisbart@philo.unibe.ch, after you have been confirmed to contribute a talk.

If you are interested to present a talk, please submit

- an extended abstract of about 1,000 words
- a short abstract of 100 – 200 words (for the conference program)

The extended abstract should be included in one pdf-file prepared for anonymous peer review. The papers that are presented at the conference are selected with the help of an international scientific board (see webpage for information). Please submit your abstract via easychair:

<https://easychair.org/conferences/?conf=einstein2017>

Time schedule:

by April 3: Submission of abstracts

by April 21: Notification about decisions

September 12 – 14: Conference