|  |  |
| --- | --- |
| **Publication Details for the MPRL and EOS series** (Please replace the sample texts marked in green) | |
| **Full title** | Main Title: Recent Approaches to the Foundations of Quantum Mechanics |
| **Author/editor(s)** | Tilman Sauer and Adrian Wüthrich (eds.) |
| **Brief description**  Provide a succinct statement in no more than **50 words** that concisely describes your book. | Recent approaches to long-standing questions concerning the foundations of quantum mechanics |
| **Detailed description**  Please provide a description of your book which will be used for the website, the cover, and for marketing purposes. In no more than **250 words**, describe your book, discussing what is most important, what distinctive contributions it makes to your field, the method of approach, and the main conclusions you have drawn.  A description of the series will be featured as the final paragraph. | Quantum theory has been a subject of interpretational debates ever since its inception. The Einstein-Podolsky-Rosen paradox, the empirical violation of Bell’s inequalities, and recent activities to exploit quantum entanglement for technological innovation only exacerbate a long-standing philosophical debate. Despite no-signaling theorems and theories of decoherence, deep-rooted conflicts between special relativistic principles and observed quantum correlations as well as between definite measurement outcomes and quantum theoretical superpositions persist.  This collection of papers, first presented at an international symposium at the University of Bern in 2011, highlights some recent approaches to the old problems of a philosophy of quantum mechanics. The authors address the issues from a variety of perspectives, ranging from variations of causal theory and system theoretic interpretations of the observer to an empirical test of whether entanglement itself can be entangled. The essays demonstrate that the discussion about the foundations of quantum mechanics is as lively and interesting as ever. |
| **Edited volumes**  A permission to publish form will be sent to the editors. It should be sent out to and signed by all contributing authors. | Provide a list of contributors |
| **Keywords**  (ca. 5) | EOS/MPRL, open access, quantum mechanics, philosophy of science, history of science, no-signaling, decoherence, causality |
| **Short CV of author/editor(s)**  Maximum 500 characters per author/editor (this information is not required for authors contributing to an edited volume) | Year of birth: 1963 (optional)  Tilman Sauer received his PhD in theoretical Physics at the Free University Berlin in 1994 and obtained a Habilitation in history of science at the University of Bern in 2008. He is a Senior Research Associate in History at the California Institute of Technology in Pasadena, USA, a Co-Editor of the Collected Papers of Albert Einstein, and a Lecturer in History and Philosophy of Science at the University of Bern, Switzerland. He is interested in the reconstruction of research heuristics and methodologies and in the analysis of the relationship between physics and mathematics. |
| **Reviews**  Please provide contacts and addresses of any journals you think would be suitable to approach for a review of your book. |  |
| **Electronic Promotion**  We invite you to become a follower on our Twitter and Facebook pages. To help us to promote your book, it would be helpful to learn if there are any social networks where you are active. We invite you to provide that information. | Your web page URL:  Your LinkedIn URL:  Twitter handle:  Instagram handle:  Facebook URL:  Your blog URL:  Your ORCID:  Other URLs to social networks where you are active in posting: |
| **Marketing**  Please provide any other information that may be relevant in promoting your book. |  |
| **Information for front matter** | |
| **Cover image**  Please provide a high-resolution image for the book cover, preferably in landscape format. The image should have no copyright restrictions, or permission will have been secured by the author/editor. | Details of image and acknowledgements if applicable to appear in the Frontmatter. |
| **Sponsors**  Information concerning sponsoring institutions or sponsors can also be given in the front matter. |  |
| **Dedication**  *A short dedication page can also be created.* |  |
| **Editorial Team**  Information concerning the editorial team, translators, etc., can also be given in the front matter. |  |
| **ISBN number**  *Will be provided by MPRL/EOS* |  |
| **Page count**  *Will be provided by MPRL/EOS* |  |
| **Funding Institution / details for billing of print edition** |  |