

The Classical Theory of Fields Revision Project (CTFRP): Collected Papers Treating of Corrections to the Book “The Classical Theory of Fields” by L. Landau and E. Lifshitz

CALL FOR PAPERS

The “Course in Theoretical Physics” by L. Landau and E. Lifshitz has for decades served as a set of outstanding textbooks for students and reference for researchers. Many continue to learn their basic physics from this lucid and extensive exposition of physical theory and relevant mathematical methods.

The second volume of this series of texts, “The Classical Theory of Fields”, is a mainstay source for physicists learning or conducting research in General Relativity*. However, it has been realised over the years that “The Classical Theory of Fields” contains a number of serious theoretical errors. The errors are in general not peculiar to this book alone, but are fundamental misconceptions that appear routinely in all textbooks on General Relativity, without exception.

Save for the errors alluded to above, “The Classical Theory of Fields” remains an authoritative and skilful exposition of Einstein’s theory of gravitation. To enhance its already great standing in the scientific literature, the Editorial Board of Progress in Physics proposes a series of papers dealing with corrections of the now obsolete, although rather standard, erroneous arguments contained in “The Classical Theory of Fields”. Any person interested in contributing to this project is invited to submit, for the consideration of the Editorial Board, a paper correcting one or more errors in the book. All papers will undergo review just as any research paper, and be published in Progress in Physics if accepted.

It is envisaged that accepted papers will also be collected together as a supplementary pamphlet to “The Classical Theory of Fields”, which will be made available free as a download from the Progress in Physics website. Each author’s contribution will bear the author’s name, just like any research paper. All authors must agree to free dissemination in this fashion as a condition of contribution.

Should the pamphlet, at any future time, be considered

by the Publisher’s of the “Course in Theoretical Physics”, or any other publisher besides Progress in Physics, as a published supplement packaged with the “Course in Theoretical Physics”, all authors will be notified and can thereafter negotiate, if they wish, issues of royalties with the publisher directly. Progress in Physics will still reserve the right to provide the supplementary pamphlet free, from its website, irrespective of any other publication of the supplementary pamphlet by the publishers of the “Course in Theoretical Physics” or any other publisher. No author shall hold Progress in Physics, its Editorial Board or its Servants and Agents liable for any royalties under any circumstances, and all contributors will be required to sign a contract with Progress in Physics to that effect, so that there will be no dispute as to terms and conditions. The Editorial Board of Progress in Physics shall reserve all rights as to inclusion or rejection of contributions.

Those interested in making a contribution should express that interest in an email to the Editors of Progress in Physics who manage this project.

*Dmitri Rabounski, Editor-in-Chief
Stephen J. Crothers, Associate Editor
(the CTFRP organisers)*

*The first edition of “The Classical Theory of Fields” was completed in 1939, and originally published in Russian. Four revised editions of the book were later published in English in 1951, 1962, 1971, and 1975. (After Landau was severely injured in a car crash in 1962, Lifshitz alone expanded upon subsequent editions.) As a result the volume of the fourth edition doubled the volume of the first edition. Lifshitz, until his death in 1985, introduced numerous corrections, which are also included in the reprints. “The Classical Theory of Fields” was translated from the Russian, in all its editions, by Prof. Morton Hamermesh (University of Minnesota). Reprints of “The Classical Theory of Fields” are produced by Butterworth-Heinemann (Elsevier) almost annually.