Preface

This book is a collection of papers presented at the 5th World Congress on Paraconsistency, which was organized at the Indian Statistical Institute (ISI), Kolkata, India, February 13–17, 2014.

A paraconsistent logic is a logic where there is a nonexplosive negation, i.e., from a proposition and its paraconsistent negation it is not necessarily possible to deduce anything. The expression "paraconsistent logic" was coined in a discussion between Newton da Costa and the Peruvian philosopher Francisco Miró Quesada. This expression had a booming effect as recalled by da Costa:

> Several years ago, I needed a convenient and meaningful denomination for a logic that did not eliminate contradictions from the outset as being false, i.e., as absolutely unacceptable. Miró Quesada helped me. On the one hand, it should be recalled that, by that time, all logics unavoidably condemned contradictions. The new logic in which I worked faced too much resistance, it was badly divulged, and those that got to know it were in general sceptics. By that time I wrote to Miró Quesada, who saw the new logic with great enthusiasm, requesting a name for it. I remember as it was today that he answered with three proposals: it could be called metaconsistent, ultraconsistent or paraconsistent. After commenting on these possible denominations, he stated that, from his viewpoint, he preferred the latter. The term paraconsistent sounded splendid and I began to use it, suggesting that people interested on this logic did the same. Two or three months later, the miracle took place; the term spread through the world, all the centres directly or indirectly related to logic, from northern to southern hemisphere, began to employ it. I believe that few times in the history of science (definitely in the history of logic) something similar has happened, for not only the word run the whole world, but the very logic called by Miró Quesada "paraconsistent" received a formidable push. It became one of the most discussed theories of logic of our time. (da Costa, "La Filosofia de la Logica de Francisco Miró Quesada Cantuarias," in *Logica, Razon y Humanismo,* Lima, 1992, pp. 69–78.)

Previous world congresses on paraconsistency were organized in the following locations:

- 1st Word Congress on Paraconsistency: Ghent, Belgium (1997)
- 2nd Word Congress on Paraconsistency: Juquehy, Brazil (2000)
- 3rd Word Congress on Paraconsistency: Toulouse, France (2003)
- 4th Word Congress on Paraconsistency: Melbourne, Australia (2008)

In India, paraconsistent logic is still not very well known, but people do have interest in the subject, and a few researchers have taken it quite seriously. In Indian ancient methodology, there was "chatuskoti," which had four corners of which one was both "yes" and "no." This implies that contradiction was not altogether rejected. That is why it was decided to organize the 5th edition of the world congress on paraconsistency in this country.

And to make paraconsistent logic better known in India, we decided to organize tutorials during this event. Three tutorials were given, and they are included in the first part of this book. The other parts of the books contain papers presented during the event, and a few others are by people who were not able to come.

The event was nice and relaxing. The ISI is a charming place surrounded by nature and with a convenient guest house. The people from ISI were enthusiastic and animated to organize this event. The members of the local organizing ISI team included Sisir Roy, Rana Barua, Probal Dasgupta, Kuntal Ghosh, and Guruprasad Kar. Kuntal led the team in an efficient manner, supported by some local students, who helped to make this event a success. One evening a beautiful cruise was organized on the Ganga.

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Jean-Yves Beziau
Mihir Chakraborty
Soma Dutta

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