“This is one of the books John [Jackson] may have had in mind for publication after hundreds of man-years of collective research even two thousand years after the death of Jesus. It is unique in the depth of material covered that supports dating the Shroud progressively back to the first century.”

Robert W. Siefker
The Turin Shroud Center of Colorado, USA

“Prof. Fanti’s new book is a major new work in the field of literature on the Shroud. It is of great value as it provides the details and results of very interesting new research for which Fanti has been responsible. It is an essential addition to any library or collection of written work on the Shroud of Turin.”

Mark Ossay
Author of The Challenge of the Shroud

“After decades of dedicated research, Prof. Fanti and his colleagues have developed a new scientific method to date ancient linens whose result is consistent with the extensive scientific and medical evidence derived from the unique Shroud of Turin. Fanti’s result is also completely different from the Shroud’s medieval C-14 dating, constituting the first direct scientific challenge to the dating of this famous cloth.”

Mark Antonacci
Author of The Resurrection of the Shroud
Test The Shroud Foundation

“The chapter on numismatic investigation is very interesting because it gives a very clear indication that the Shroud existed before the period between 1260 and 1390 AD, established by the radiocarbon dating tests. The book is highly recommended.”

Petrus Soons
Shroud Researcher from Panama

“Fanti, for first time, experimentally proves that the threads of the Shroud can be 2000 years old. This book is a good opportunity to be updated on the Knowledge of the Holy Shroud.”

Cèsar Barta
Centro Español de Sindonología, Spain

The Shroud of Turin is the most important and studied relic in the world. The many scientific studies on the relic until today have failed to provide conclusive answers about the identity of the enveloped man and the dynamics regarding the image impressed therein. Easy to comprehend, this book not only addresses these issues in a scientific and objective manner but also leads the reader through new search paths. Many books on the theme have been already published, but none of them contains such a formidable quantity of scientific news and reports, the most important of which is the following: The result of the 1988 radiocarbon dating is statistically wrong and three other new dating methods demonstrate that the Shroud has an age compatible with the epoch in which Jesus Christ lived in Palestine. A numismatic analysis performed on Byzantine gold coins confirms this result. This book is, therefore, very important with respect to the Turin Shroud. It is unique in its genre and a very useful tool for those who want to study the subject deeply.

Giulio Fanti is associate professor of mechanical and thermal measurements at the Department of Industrial Engineering, University of Padua, Italy. Since 1995 he has directed his interest to the Shroud, especially with reference to the still scientifically inexplicable body image impressed on it. Prof. Fanti was responsible for a university research project concerning the most important relic of Christianity and has headed for more than 16 years the Shroud Science Group, consisting of about 140 dedicated scientists. He has published more than 130 scientific articles in international journals and has authored 8 books and over 50 scientific articles on the Shroud.

Pierandrea Malfi holds a master’s degree with honors in mechanical engineering from the University of Padua, Italy. His thesis was based on the mechanical dating of textile fibers, whose results have also been published in scientific journals. He has set up and computerized the Antonio Maria Traversi Physics Museum of Marco Foscarini High School in Venice, Italy, of which he has been scientific curator for more than 10 years.
The Shroud of Turin
The Shroud of Turin

FIRST CENTURY AFTER CHRIST!

Giulio Fanti
Pierandrea Malfi

With an in-depth study by Marco Conca
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Foreword

The use of the terms “first author” and “second author” in the book might come to the reader as a surprise. The reason is that two authors with different research paths and opinions about religion have collaborated constructively on the subject of the Shroud. The numerous discussions held together have both advanced them personally and improved the book’s content. Clearly, outside a strictly scientific context, religious considerations cannot merely be the outcome of an honorable compromise between authors. Whenever compromise is impossible, the opinions of each author are therefore distinguished. For the sake of simplicity, we will refer to them as first author and second author.
Preface

The Shroud of Turin, the linen sheet that according to tradition would have enveloped the body of Jesus in the sepulchre, is still the center of interest of public opinion, mass media, and the scientific world. Less than one year after the publication of his last work, written together with Saverio Gaeta, Professor Giulio Fanti, from the University of Padua, comes with a new book, this time written in cooperation with Pierandrea Malfi.

I am glad to be asked to write the preface to this further work of Professor Fanti, since I had the chance to know him also beyond his research.

One may ask, What is the point of publishing a new book about the Shroud? As it is well known, the scientific research on the Turin relic has been officially closed in 1988, the year of the radiocarbon test that decreed the controversial medieval dating. What news can still emerge? Actually, even if research is officially closed, many scholars are continuing their activities, carrying out increasingly accurate investigations, and putting forward new interesting hypotheses. In 2002 the so-called Shroud Science Group was formed. It is composed of more than 100 researchers of different nationalities, most of who are American, and is coordinated by Professor Fanti. The group discusses on the web the most interesting news about the Holy Linen: it already organized an international conference on the Shroud in Dallas in 2008 and another one, in the United States as well, was scheduled for 2014.

Further than this, in the last decade around 20 articles describing new hypotheses and scientific acquisitions on the Shroud have been published in specialized international reviews. It does not appear that other relics, considered as such by the Catholic religion or other
confessions, ever had the honor of such consideration in specialized reviews.

This is an overview that well paints a picture of how the Shroud is important also from the scientific point of view, despite the closing of official investigations in 1988.

How is it possible that the studies go on if the official research is closed, no analyses in situ are allowed, and no authorization for sample taking is granted? One has to be reminded that modern scientific tests do not need to handle samples of big dimensions and it is not always necessary to have the object of the research on hand (though it would be obviously more advisable). The number of photographs, from those taken in the past years to the recent ultrahigh-resolution ones taken by the Italian company Haltadefinizione, together with the samples officially taken in the past and now in possession of the various scholars throughout the world are sufficient, according to these researchers, for carrying on new analyses.

It is well known that the same Professor Fanti came into possession of some samples collected during the famous examinations carried out in 1978, the year in which also the Shroud of Turin Research Project (STURP) and the Italian group led by Giovanni Riggi di Numana and Pierluigi Baima Bollone took other samples. These consist of a few threads and linen fibers collected from different areas of the Shroud, but they are, according to the first author, more than enough for the microscopic tests needed to unveil the mysteries still concealed in the holy cloth.

Starting from the analyses of the chemical and mechanical properties of some Shroud samples, Professor Fanti, in a research project of the University of Padua, in cooperation with other professors of the University of Bologna, Modena, Parma, and Udine, sustains to have demonstrated that the radiocarbon dating test carried out on the Shroud in 1988 is unreliable from a statistical point of view. Therefore, results would be scientifically meaningless.

So, what are the innovations described in this book? Besides the as much understandable as possible description of the alternative linen dating methods, one of the most interesting chapters refers to an innovative numismatic investigation that would lead to further Shroud dating to the first millennium A.D.
The author’s analysis involved the research and study of very rare coins minted during the Byzantine Empire and depicting the face of Christ. These faces have been compared to that of the Man of the Shroud. The surprising result, considering the number of figurative matches, was that the engravers should have been taken the Shroud face as a sample for reproducing the face of Christ during the centuries of the Byzantine coinage.

On the basis of this probabilistic counting, a theme highly supported by Professor Fanti, authors affirm that the Byzantine engravers would have seven chances in one billion of billions to hit all the particular features identified on the faces portrayed on the coins without having seen the Shroud. It is like saying that, referring to the roulette, it would be much easier to hit for 10 consecutive times the number 36 rather than an engraver having depicted the face displayed on the coins without having seen the Shroud.

Some typical details of the Shroud reproduced on the coins, such as the skewed nose, the eyes shut, asymmetric length of the hair, longer on the right side, closed eyes, and a long nose, are hints of the reference to the Shroud model. These particulars are according to the authors unthinkable to be reproduced by an artist who wanted to depict “the most handsome of the sons of men” (Psalm 45:2) instead of the tortured Jesus of the Shroud.

Also, pages that go through the different hypotheses of the body image formation do not miss, with an explanation on the most reliable possibility, that, according to Professor Fanti, it was an intense electric charge that, through the so-called corona discharge, could have reproduced many image peculiarities. Even if it was like that, the question about what would have triggered this high electric charge still remains.

Authors sustain, therefore, that radiocarbon dating is not reliable and that the Shroud is dating back to the first century A.D., accordingly compatible with the age in which Jesus lived. It is also known that the Man of the Shroud shows wounds and blows perfectly matching with the signs of the Passion of Christ described in the Gospels.

A good Christian knows that God’s method leaves Man’s freedom always untouched. Therefore, it would be a serious mistake to think of “demonstrating” something with the Shroud—least of
all, demonstrating the basis of Christianity, the Resurrection of Jesus. It is true that until the present days no Gospel's verse has been contradicted by scientific discoveries; rather, as the historical, archeological, and epigraphic studies made progress in the last decades, new confirmations about the historicity of the Gospels came. But it is likely that even in the future, the same light will be shining for people who want to believe and will be too faint for people who do not want to believe, this particularly for artifacts like the Shroud of Turin.

At the same time, it is positive that there are scientists and researchers willing to face all the questions remaining open. Science goes on for trials, hypotheses, discussions, and debates.

For example, the increase of the doubts of medieval dating is noteworthy. Asking questions, formulating hypotheses, trying to give answers,... we always will need it. Here is why any contribution based on honest research is welcome.

Andrea Tornielli
Acknowledgments

We gratefully thank the Holy Father Francis for the great interest shown towards the Italian version of this book.

Many thanks to all those who have contributed to this book. We gratefully acknowledge the following persons who collaborated in the translation: Giulia Azzari, Tommaso Caniato, Sara Guth, Federica Paglialunga, and Ira Sohn.
PART I

DESCRIPTION AND TRACES OF THE SHEET THAT CHALLENGES SCIENCE