Foreword to : A Collection of Papers in Mathematics and Related Sciences, a festschrift in honour of the late Galaye Dia

I - From the Editor.

We are happy to see completed this *festschrift* or collection of mathematical texts in honor to our late colleague Professor Galaye Dia (1941 - 2013).

This *festschrift* is the logical continuation of the memorial conference in honor of Galaye Dia, organized at Gaston Berger University, July 28-29-30, 2015.

As a pioneer in Mathematics research and professor in the Senegalese and West African universities, he trained a significant number of students in General Mathematics (elementary probability theory, statistics, Geometry, Algebra, real Analysis) in the undergraduate level, in advanced mathematics (Measure Theory and Integration, Topology, Differential calculus, Probability Theory, Mathematical Statistics, Complex variable function) in the pre-level, level and in PhD courses (Random Analysis, Statistic of Stochastic processes, non-parametric estimation). He also supervised a large number of MSc Theses and PhD Dissertations.

On the administrative side, he will be remembered, for ever, as the founder and first chairman of the faculty of Applied Sciences and Technology of the University Gaston Berger of Saint-Louis .

We will learn more on that historical actor of Mathematics in Senegal in the next paper by Gane Samb Lo and Aboubakary Diakhaby.

We wish to encourage our youth to follow such a model, at the current time in which Mathematics is a very promising discipline in Senegal and

in Africa in General.

We are thankful to be part of that enterprise and we thank all the colleagues who participated into it, by a chapter.

We also reserve special thanks to the associated editors and to the technical editors whose works led to high quality of papers.

The SPAS-EDS, through the leadership of Professor Lo, and the platform *Euclid*, deserve our thanks.

Let us say how the book is presented in a few words.

At the arrival, the current *festschrift* includes thirty (30) contributions as chapters.

The first chapter is a brief summary of the life of Prof. Galaye Dia, as a teacher, a scholar, a researcher and a supervisor in Mathematics, especially in Probability Theory and Statistics. The others 29 chapters are distributed over sub-fields of Mathematics as follows :

Algebra (3), Analysis and Geometry (5), Mathematical Modelling and Applied Mathematics (5), Statistics and Data Sciences (8), Random Analysis and probability Theory (6), Cryptography and Number Theory (1), General Mathematics (1).

Each chapter is considered as a publication apart, cited as such in international bases (AMS MathScieNet and EMS Zentralblatt) and has a digital object identifier (**doi**) However, all the references are grouped at the end of the book. For a better use of the references, the bibliography of each paper will be added to each reprint for self-use.

By publishing this book in the prestigious platform of *Euclid*, which is available in all major research centers, the contents in it will have the maximum exposure and will attract the attention of the international scientific community. Beyond the scientific interest of the contents, this surely will help in keeping live the memory of Prof Galaye Dia, which is the ultimate objective.

Dakar (Senegal), Saint-Louis (Senegal), Calgary (Canada),
December 31, 2018
Professors Hamet Seydi, Aboubakary Diakhaby, Gane Samb Lo

From the SPAS-EDS.

This is the first book to be published by the SPAS-EDS. SPAS-EDS publishes e-books in the prestigious platform of *Euclid* (projecteuclid.org) which offers maximum exposure.

At the beginning, three categories of books are set :

SPAS TEXTBOOKS SERIES-EDS (STS) : textbooks to bee used for teaching in universities.

SAPS RESEARCH MONOGRAPHS SERIES (SRM) : Research monographs (research works too lengthy to be considered as an article).

SPAS BOOKS SERIES (SBS) : Other books (including review books, festschrifts, proceedings, research books, lecture notes, reading books, etc.).

Festschrifts (collection of Scientific texts) are particularly welcome because of the diversity of the contents. We suggest that each African country initiates a *festschrift* in honor of the first mathematicians in the country.

We hope that proposals of high level books will come from all countries of Africa and from outside Africa as well.

Professor Gane Samb LO
Founding Editor of SPAS-EDS.