

SCIENTIFIC REVOLUTION,

APPLIED MATHEMATICS

SUMMARY OF SCIENTIFIC DISCOVERIES

SCIENTIFIC REVOLUTION,

Applied Mathematics

Summary :

Personal scientific research work in applied Mathematics containing four books who are:
Analysis and/or functional Analysis, TS_{∞} space/a new world, The theory of the laws of
chance in natural philosophy and My first book on modern mathematics

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Mathspace

PERSONAL SCIENTIFIC RESEARCH WORK IN
APPLIED MATHEMATICS

Summary of scientific discoveries,

SCIENTIFIC REVOLUTION

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- * Ambiguous Democracy, an Endless Discourse; literary
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- * Electronics and electrical engineering; scientific

Work published in 2019.

Summary and overview of scientific discoveries

I - Important scientific discoveries

- 1) The field of artificial real numbers, which I have named \mathbb{R}_a ; a new field that would completely change the world and especially our way of calculating. We would now calculate according to classes, and our potentially sensitive digital data could now be effectively better protected against hackers (see Book II of the research document);
- 2) From the theory of the laws of chance in natural philosophy, I discovered the fundamental law of the general operating state of a machine-system (The certificate of chance, see Book III of the research document on page 124);
- 3) The Tossou clone function ($\frac{tsx}{1ax}, a > 1$) (see page 155 of book I of the research document);
- 4) Tossou's linear combination method with pivot equal to 1 for binomial development $(a+b)^n, n \in \mathbb{R}$ (see page 279 of book I of the research document).

II - Incidental discoveries

The incidental discoveries are as follows:

- 1) The inadequacy of the fundamental theorem of differential and integral calculus established by Newton (see page 343 of book I of the research document);
- 2) The quotient of two vectors is a scalar;

- $(\frac{\vec{u}}{\vec{v}}, \vec{v} \neq \vec{0})$, which would open the way to vector equations (see page 293 of book I of the research document);
- 3) TOSSOU'S limit theorem (see page 347 of book I of the research document);
 - 4) Transfinite real space (see page 118 of book I of the research document);
 - 5) NEPER'S real space for the study of functions of the type $\frac{v(x)}{u(x)}$ (see page 262 of book I of the research document);
 - 6) The domain extended on the \mathbb{R} set, or at least a new real space for functions of the form $\varphi(k + \alpha \cdot x) - \varphi(k)$, $\alpha \neq 0$ on the \mathbb{R} field (see page 362 of book I of the research document);
 - 7) The twin constants, $\bar{\omega}_1$ and $\bar{\omega}_2$ of TOSSOU (see page 60 of book I of the research document); and the value of the e number of JOHN NEPER (see page 356 of book I of the research document);
 - 8) The development α_x real of TOSSOU (see page 35 of the book I of the research document);
 - 9) Floating points (see page 51 of book I of the research document);
 - 10) TOSSOU'S binomial law (see page 304 of book I of the research document);
 - 11) How to calculate $\sqrt[n]{a}$ without using a calculator (see page 323 of book I of the research document).

III - New methods on the field of the \mathbb{R} real numbers

- 1) Methods and techniques for solving equations of the type : $a\alpha_m + b\alpha_n + c = 0$, $a\alpha_m^2 + b\alpha_m \cdot \alpha_n + c\alpha_n^2 + d = 0$ et $\sum_{i=0}^k C_k^i \alpha_m^{k-i} - 2^{n \times k} = 0$ (see book I)
- 2) Method or technique for solving equations of the first type on \mathbb{R} or \mathbb{R}^n space, or least on trans-finite real space (see page 128 of book I of the research document);
- 3) Tossou's logarithmic formula for the development of Newton's binomial (see pages 299 and 302 of book I of the research document)
- 4) Simplified formula for the binomial development of type $(1+x)^n$, $n \in \mathbb{N}$ over the field of artificial real numbers $(\mathbb{R} \times \mathbb{Z})$ using the operator (see page 145 of book II of the research document);
- 5) Solving the equation of type $x^n + bx + c = 0$ using Tossou's logarithmic method (see page 212 of book I of the research document); This now allows us, at least, to solve all kinds of third-degree polynomial equations without ambiguity;
- 6) A new formula for solving equations of the type $a^x = b$ ($a, b \in \mathbb{R}^*$) over the field of \mathbb{R} set real numbers, which I have named "equational tossoumaties" (see page 248 of book I of the research document);

- 7) Establishing the formula for the generalized first derivative for irrational functions of the type $\sqrt[n]{f(x)}$, $n \in \mathbb{Z}^* \setminus \{1\}$ (see page 250 of book I of the research document);
- 8) Tossou's chameleon technique for studying functions (see page 265 of book I of the research document);
- 9) Tossou's formulas and methods for calculating $\binom{n}{p}$ based on LCM method of Tossou with a pivot equal to 1 (see page 282 of book I of the research document);
- 10) New formula for calculating the factorial of an integer number ($n!$) (see the book I of the research document);
- 11) Development by the linear combination method with pivot equal to 1 (LCM with pivot equal to 1) of the binomial $(a+b)^n$, $n \in \mathbb{R}^+ \cap \mathbb{N}$, called the Tossou binomial (see page 306 of book I of the research document);

IV - The mathematical properties of the course that should undergo modifications

- 1) The current property of the course on the direction of variation of a function (see page 107 of book I of the research document);
- 2) The current property of the course on infinite branches of a function (see page 89 of book I of the research document);
- 3) The fundamental theorem of differential and integral calculus (see page 344 of the research document).

V - Important demonstrations

- 1) The inadequacy of the fundamental theorem of differential and integral calculus established by Newton (see page 344 to page 356 of book I of the research document);
- 2) The proof: The quotient of two vectors $(\frac{\vec{u}}{\vec{v}}, \vec{v} \neq \vec{0})$ is a scalar (see page 293 of the book I of the research document);
- 3) The demonstrations labeled Γ and Γ' (see page 239 and page 327 of book I of the research document respectively);

VI - Important mathematical formulas or scientific relationships established

- 1) Equational tossoumatics ($T_{\frac{30}{181}}$) (see page 248 of book I of the research document);
- 2) The certificate chance (TOSSOU'S CET formula);
- 3) TOSSOU'S formula for the normal credit of an event (see page 90 of book III of the research document); etc.

VII - New mathematical functions

- 1) The transfinite and transordinary real functions of the transfinite real space of the real field \mathbb{R} (see page 115 of book I of the research document);
- 2) Mongolian functions and multiform functions with infinite variables (see respectively page 233 and page 236 of book II);
- 3) How to draw and represent a wall of cloned functions (see book IV of the research document)

VIII - Newly established laws, mathematical properties, theorems, and axioms

1) Theorems and axioms on the real field (\mathbb{R}): several of that (see book I, book III, and book IV of the research document);

2) Newly established laws, mathematical properties, theorems and axioms on the artificial real field (\mathbb{R}_{α}): several of that: several of that (see book II of the research document);

IX - section of some unsolved mathematical problems on the artificial real field (\mathbb{R}_{α})

1) How to solve polynomial equations of the type: $ax^{\alpha 2} + b \otimes x \oplus c = 0$, $a \otimes x^{\alpha 2} \oplus bx \oplus c = 0$, $ax^{\alpha 2} + b \otimes x \oplus c = 0$ (etc.), a, b , and c all real numbers but are not equal all to zero;

2) How to study polynomial functions of the form: $x \mapsto a \otimes x^{\alpha 2} \oplus bx \oplus c$;
 $x \mapsto a x^{\alpha n} \oplus bx + c$ (etc.); a, b , and c all real artificial numbers but are not equal all to zero.

X - Scientific Research is still ongoing

Several research projects are still underway, the most important of which is called "Tossou's cartographic method" to circumvent the first derivative and to easily study all real functions.

15- La maquette de la nouvelle et future calculatrice du monde

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