Christine Phili

Greek mathematical publications in Vienna in the 18th–19th centuries

In: Martina Bečvářová (author); Christa Binder (author): Mathematics in the Austrian-Hungarian Empire. Proceedings of a Symposium held in Budapest on August 1, 2009 during the XXIII ICHST. (English). Praha: Matfyzpress, 2010. pp. 137–148.

Persistent URL: http://dml.cz/dmlcz/400826

**Terms of use:**

© Bečvářová, Martina

© Binder, Christa

Institute of Mathematics of the Czech Academy of Sciences provides access to digitized documents strictly for personal use. Each copy of any part of this document must contain these *Terms of use*.

This document has been digitized, optimized for electronic delivery and stamped with digital signature within the project *DML-CZ: The Czech Digital Mathematics Library* http://dml.cz

# GREEK MATHEMATICAL PUBLICATIONS IN VIENNA IN THE 18TH–19TH CENTURIES

CHRISTINE PHILI

**Abstract:** In the Austro-Hungarian empire, the Greek community played an important role in scientific as well as in social life. Many scientific books and journals saw the light of day in the Hapsburg capital, which contributed to the introduction of the Greek people to the European Age of Enlightment by transferring in to Greece. Vienna became a scientific publishing centre for the Greek nation which lay under Ottoman rule. Through translations and compilations, the Greeks of the Diaspora tried to spread new scientific theories, in the belief that education constitutes the greatest driving force for a people striving ardently to achieve its freedom. To transmit scientific knowledge was an imperative need, a supreme duty for the benefit of Greeks starved of education. Many mathematical books such as Euclid's Elements by Benjamin of Lesbos or the classic translation of Bourdon's Elements of Arithmetics by I. Carandinos provided a substantial foundation for mathematical education in Greece. Journal such as Literally Mercure (Vienna, 1811–1821) offered to the Greek reader a panorama of scientific progress and information on new editions.

## 1 Introduction

Due to the advent of the industrial Revolution in the West, at the end of the 17th century the Ottoman Empire entered a period of economic stagnation and decay.

The Hapsburg dynasty[1] tried to conquer the markets of the East. Balkan merchants[2] from Greece, mainly orthodox, started moving, either by sea to cities such as Odessa, Marseille, Livorno and Amsterdam, or by land to cities such as Leipzig, Lvov, Budapest and Vienna. Trade thereby evolved in the 18th century mainly in Central Europe, beginning to attract merchants of the Ottoman Empire.[3] Moreover the river Danube was ideal for the transportation of commercial goods.[4] Austria became interested in the Ottoman Empire as its ally in its wars against Prussia and thus showed indulgence to the Ottoman merchants. Moreover the Hapsburg Dynasty took over the markets of the East which offered its well known porcelains, crystals, mirrors, books and house furnishings as well as armaments in

[1] R. Okey: *The Hapsburg Monarchy c. 1765–1918*. New York, 2001.
[2] T. Stoianovich: *The conquering Balkan Orthodox Merchant*. Journal of Economic History 20(1960), pp. 259–263.
[3] O. Cicanci: *Le rôle de Vienne dans les rapports économiques et culturelles du Sud-Est européen avec le centre de l' Europe*. Revue des Etudes Sud Est Européennes 24(1986), pp. 3–16.
[4] J. E. Boquert: *Austro-Hungarian Maritime Trade with the Ottoman Empire 1873–1895: A commercial History with diplomatic considerations*. Vol I. (n. p.) 1976; V. I. Tapie: *Monarchie et peuples du Danube*. Paris, 1969.

exchange for tobacco, furs, carpets, cotton, leather goods, spices, oil, wine, sugar and coffee.

Emperor Charles VI (1711–1740) and his successor Maria Theresa[5] (1740–1780), Joseph[6] II (1780–1790) and Leopold II sought to strengthen the Austro-Hungarian Economy by stimulating industry and trade.

## 2 The Profile of the Greek Community in Vienna

At the turn of 18th century various political events such as the British-French, Russian-Turkish and Napoleonic wars created very favourable conditions for the Greek trade and its fleet. Furthermore, the various treaties signed, such as the Karlowitz[7] (1699) and Passarowitz (1718) ones, stabilized the European borders[8] of the Ottoman Empire. The treaty of Kutshuk Kainardji (1774) on the other hand, gave a great impetus to the expansion of commerce among the Greeks.

Until the first half of the 18th century the Greek merchant class held a marginal role in matters of transportation and local trade. However after the second half of the century, the Hellenic fleet acquired its independence and revealed its great potential. Thus Greek merchants functioned between Ottoman and European markets, controlling all the stages of production. At this point it is worth recalling that Austria became the most important commercial partner of the Ottoman Empire.[9]

The imperial decrees of the Hapsburg Dynasty gave to the Greeks the opportunity to form important commercial associations and companies, which became emblematic of the Greek community[10] in Austria. This saw its numbers increase from 79 members in 1767 to 4.000 in 1814.

Moreover due to their philanthropic generosity, Greek merchants were imbedded in the bourgeois class and the nobility and thus assented socially,[11] receiving titles of nobility. There are many examples illustrating the case, such as baron George Sinas,[12] a rich adversary of the Rotschild family, M. Doumbas,[13] who was made governor of the National Bank, as well as his brother Nicolas,

[5] P. G. M. Dickson: *Finance and Governement under Maria Theresa 1740–1780*. Vol. I., Oxford, 1987.
[6] E. Winter: *Frühliberalismus in der Donaumonarchie, Religiöse, nationale und wissenschaftliche Strömungen von 1790–1868*. Berlin, 1968; *Maria Theresia und Joseph II*. 3 Bd., Wien, 1970.
[7] *The Cambridge History of Turkey Vol. III The Later Ottoman Empire 1603–1839*. Ed. S. N. Faroqui, Cambridge, Cambridge University Press, 2006.
[8] M. L. Stein: *Guarding the Frontier: Ottoman Border Forts and Garisson in Europe.* London, 2007.
[9] A. Beer: *Die Orientalische Politik Österreichs seit 1774*. Prag – Leipzig, 1883.
[10] For more details see A. Peez: *Die Griechischen Kaufhute in Wien*. Separat-Abdruck aus der "Neuen Freien Presse", Wien, 1888; Fr. Dölger: *Wien und Neugriechenland*. Wien, 1943 [Wiener Wissenschaftliche Voträge und Reden 6]. See also, V. Seirinidou: *Greeks in Vienna 1750–1850*. Ph.D. thesis, Athens, 2002.
[11] G. Sinas offered his residence to house Vienna's Polytechnic School and financially supported the philanthropic activities of the Empress.
[12] See A. Lanier: *Die Geschichte des Bank und Handhouses Sina*. Frankfurt, 1998.
[13] E. Konecny: *Die Famile Doumba und ihre Bedeutung für Wien und Österreich*. Wien, 1986.

advisor to the Emperor Franz Joseph II. The Doumbas family, classic music lovers, sponsored the construction of the Musikverein's building.[14]

## 3 Mathematical Editions in Vienna

Moreover Vienna became a prominent publishing center of scientific editions of the Greek nation, as the censorship according to a decree promulgated by Joseph II (11 June 1781) became less stringent and the order which forbade the reprinting of books (Nachdruck) became redundant. Thus, as the obstacles were gradually being lifted and as costs decreased, many editors began establishing their businesses in Vienna.

Through translations and compilations the Greeks of Diaspora tried to spread new scientific theories, in the belief that education constitutes the greatest driving force for a people striving to achieve their freedom. To transmit scientific knowledge became an imperative need, a supreme duty for the benefit of the Greeks starved of education. The following fragment from the Greek review *Kalliopi* (Vienna, 1819–1821) is characteristic of this mentality:

*We steal ideas from philosophers and clothes from the erudite to dress our nation. For this reason we came to Europe ... to steal from the original sources, from the best sources of what we do not have.*[15]

The front ray of the erudite wrote or translated and edited useful scientific books which would transmit new theories to a nation which still lived under the yoke of illiteracy.[16] So, *they selected compiled, completed, modernized, adapted European texts to the needs of the Greek Society of the epoch. They assimilated and recomposed with such force, with such fervour and ability the borrowed knowledge, that we can consider them as renovators and creators*.[17]

These efforts were explicitly illustrated by Eythimios Filandros: *Almost all the best treatises from French, German, English and Italian are translated into Greek.*[18]

Furthermore, the modern theories were widely sought after *I know many Greeks who are interested in scientific books* stressed Daniel Philippidis in 1803 in the preface of J. Lalande's Astronomy.[19]

These efforts of the scholars to introduce the new scientific thought in Greece were called *Modern Greek Enlightenment*[20] and had only one target: to render novel theories and scientific knowledge accessible to as many people as possible.

---

[14] The street near the building carries his name (Doumbastrasse) to stress his offer.
[15] *History and Philosophy of Sciences in Greece (17th–18th centuries)*. Ed. Y. Karas, Athens, Metaichmio, 2003, p. 653 (in Greek).
[16] M. I. Gedeon: *The intellectual movement of the Nation during 17th and 18th century*. Athens, 1976, p. 248 (in Greek).
[17] *History and Philosophy of Sciences in Greece (17th–18th centuries)*. Ed. Y. Karas, Athens, Metaichmio, 2003, p. 51.
[18] Idem. p. 52.
[19] Idem. p. 53.

After the fall of Byzance the sciences became a marginal part of the curriculum,[21] as the Ottoman rule discouraged the diffusion of any contemporary theory and the Patriarchate remained staunchly faithful to theology and grammar as the only appropriate sources of education. During the first centuries after the fall, mathematical education was secured by Byzantine logistic manuals as well as by Emmanuel Clyzonios'[22] *Arithmetics* (Venice, 1568).

Before the war of Independence (1821–1827) there was a revival of philosophy and sciences, mathematics also gaining a prominent position in education thereof. Now mathematics was considered as the necessary instrument *for those who wish to force the impenetrable*.[23] As result many mathematical manuals were published having as their main aim the advancement of education and the awaking of the Greek Nation.

The question naturally following was as to the type and form these new manuals were to have. Of course any original work was out of the question as the cultural level in Greece was such that it didn't favour the reception of the results of new and novel research. So the scholars of Diaspora had but one choice: translation or compilation. To revive the ancient Greek heritage, transfer of knowledge was imperative, an endeavour which started in Vienna, as well as in many German cities (Iena, Leipzig, Halle), as well as in Paris, Venice, Iasi etc.

In 1794 Athanasios Psallidas in Vienna issued the translation of the first part of Georg Ignaz L. B. von Metzburg, *Mathematicae in usum Tironum conscriptae*.[24] In the preface Psallidas stressed: *I wanted to translate the book Mathematicae of the Professor of Mathematics, who taught here at the Academy [of Vienna] for more than twenty years, because this treatise is intelligible, methodic and succinct*.[25]

In 1800, Jean Claude Fontaine's (1715–1807) book, *Cours Encyclopédique et élémentaire de Mathématiques et de Physique* was edited in Vienna and in his translation of it, K. Koumas endeavored to introduce new elements from the books of abbé Saury,[26] E. Bézout[27] and S. F. Lacroix[28] as he explicitly says

---

[20] For more details see R. Demos: *The Neohellenic Enlightenment (1750–1821): A general survey*. Journal of the History of Ideas 19(1958), pp. 523–541; K. Th. Dimaras: *La Grèce au temps des lumières*. Geneva, 1969; P. M. Kitromilides: *The Enlightenment East and West: A comparative perspective on the ideological origins of the Balkan political traditions*. Revue Canadienne des études sur le nationalisme 10(1983), pp. 51–70.

[21] For more details see A. Tsigoni: *Mathematics during the period of Modern Greek Enlightenment*. Ph.D. thesis, Athens, 2005; M. Terdimou: *Mathematics in the Greek thought during Ottoman rule*. Ph.D. thesis, Athens, 2006.

[22] Emmanuel Glyzonios or Glyzounis (1530–1596) from the island of Chios studied medicine and letters in Italy. In Venice, where later, he was established, provided manuscripts for the King of Spain, Philip II. His *Arithmetics* was the passe partout which covered the daily needs of the people.

[23] Z. Karas: *Elements of Arithmetics and Algebra*. Iena, 1800, p. α'.

[24] Tom I., Vienna 1793. A few years later (1804) Michael Christaras translated the two volumes and edited them in Padova under the title *Elements of Arithmetics and Algebra*.

[25] A. Psallidas, Preface.

[26] Abbé Saury, *Cours Complet de mathématiques*. Vols I.–V., Paris, 1774.

[27] E. Bézout: *Cours de mathématiques à l' usage des Gardes du Pavillon et de la Marine*. Vols. VI, Paris, 1764–1769. In this book Bézout showed evidence of his abilities to teach mathematics as well as d' Alembert's influence and this of the *Encyclopédie*. For more details see L. Alfonsi: *Etienne Bézout*

himself: *About the infinitesimal calculus, the infinitesimals and the integrals, on which Fontaine did not largely expose, I took in the majority from Bézout's, Saury's and Lacroix's treatises*.[29]

Spyridon Assanis and Ionas Sparmiotis translated and published in 1802 in Vienna the well known book of Guido Grandi, *Sectionem Conicarum synopsis clar. Viri D. Guidonis Grandi et schematibus aucta Ad. Octaviano Cametti*.[30] This translation, as well as all the others had a very practise aim: to be useful to the nation.

Another book of Geometry appeared in Vienna in the following year. Spyridon Assanis and Constantin Koumas presented in Greek the third part of the Analytical Treatise of Conic Sections, the Greek translation from Latin of *Tractactus Analiticae de Sectionibus Conicus*[31] of Abbé de Lacaille. Two years later, in 1805, appeared the edition of a book which had been translated many years before by the famous scholar Eugenios Voulgaris (1716–1806), that of Andrea Tacquet, *Elementa geometriae planae et solidae et selecta ex Archimede Theoremata*.[32]

Ioannis Carandinos[33] (1784–1834), rector of the Ionian Academy, for the needs of his lectures endeavored to convey the scientific euphoria which reigned in France, by translating various books. Carandinos, after the edition of his treatise, Research on the nature of differential calculus[34] translated into Greek Bourdon's book, *Elements of Arithmetics*[35] in Vienna in 1828. In his preface he stressed the importance of Bourdon's book: *Twenty years of studies gave me the possibility to interpret Bourdon's ideas and these of Legendre, to cater for the needs of my homeland*.[36]

In this same preface Carandinos addressing his compatriots stressed the lack of a systematic manual of mathematics. He referred to books written by his "predecessors"[37] but he indicated two important impediments:

i) the translation in the ancient Greek language automatically caused problems to the diffusion of these books, as the obstacle of the language remained an insurmountable difficulty
ii) the books written in "modern" Greek are incomplete and unstructured, failing thereof to arouse a keen interest for the sciences in the public.

---

*(1730-1783): mathématicien, academicien et professeur au siècle des lumières*. Thèse Université de Paris VI., 2005.

[28] S. F. Lacroix: *Traité du calcul différentiel et du calcul intégral*, 1e éd., 3. Vols., Paris, 1797.

[29] K. Koumas: *Elementary series of mathematical and physical treatises*. Vienna, 1807. (In Greek.)

[30] Florence, 1750.

[31] *Algebrae et Geometriae in la num traductae ad. Editionem Parisinam*. 3e part, 1741.

[32] Antwerp, 1654.

[33] For more details see Ch. Phili: *Jean Carandinos (1784–1834). Initiateur des mathématiques françaises en Grèce*. Archives Internationales d' Histoire des Sciences 56(2006), No 156–157, Juin – Décembre, pp. 81–125; *La reconstruction des mathématiques en Grèce: l' apport de Ioannis Carandinos (1784–1834). L' Europe Mathématique*, Paris, 1996, pp. 305–319.

[34] *Recherches sur la nature du calcul différentiel*. Corfou, 1827.

[35] P. L. Bourdon, *Eléments d' Arithmétique*. 3e éd., Paris.

[36] Preface.

[37] See Yannis Karas, *The natural Sciences in the Greek area (15th–19th century*). Athens, 1991.

Nevertheless he paid tribute to a pleiade of veteran writers who lived in a very hard period as for example to Eugene Voulgaris,[38] Nikiphoros Theotokis,[39] Constantine Koumas,[40] and Benjamin of Lesbos.[41] *Nevertheless, continues Carandinos, either they did not exert themselves to translate the most perfect mathematical treatises or being aware of the inability of the nation to take in the great ideas of Descartes, Newton, Lacroix, they thought it would preferable to pass them in silence*.[42]

Nevertheless together with the translations various mathematical books were published in Vienna as compilations. In 1797, Emmanuel Kastoriano's manual *Essay of Arithmetic Elements* was published in Vienna. In his preface the author stressed the great advantages offered by Arithmetics in various professions and mainly in trading as daily experience showed. The following year Kosmas Balanos presented his book *Concise Exposition of Arithmetics, Algebra and Chronology*. In 1803 Dimitrios Darvanis, following Kastorianos' views on Arithmetics published his book *Arithmetics* offhand, emphasizing in the preface the significant position of this branch of mathematics which in reality *constitutes trade's foundation as exactly it is necessary for a building to have solid foundations*.[43] In this same preface Darvanis, descendant of a wealthy Greek family in Vienna, considered that Arithmetics accomplishes all human transactions, and makes the trade progress, both vital for the well being of civil society.[44]

In 1807, K. Koumas' *Series of Mathematical and Physical treatises* appeared in Vienna and three years later Athanasios Stageiritis' manual *Summary of Arithmetics* which had been composed for the needs of his lectures and "*tested out in the Greek School of Pest*.[45]

In 1816 Stephanos Doungas presented his *Elements of Arithmetics and Algebra*, where he stressed that anyone who wished to delve in mathematics must develop the fundamental ideas governing the field of this science and to this end, the definition of the concepts of time, space and movement is an absolute imperative.[46]

---

[38] Eugene Voulgaris (1716–1806) bishop and scholar studied in Italy. Invited by the tzarine Catherine the Great he lived firstly in Kherson and later in St. Petersbourg where he became member of the Imperial Academy. For more details see Ch. Phili: *Eugenios Voulgaris and his letter of introduction by Segner to Eule*r. Acta historiae rerum naturalium necnon technicorum, New series, vol. V., Prague, 2001, pp. 185–192.

[39] Nikiphoros Theotokis see his fundamental work: *Elements of Mathematics*. 1 vol. (Geometry and Arithmetics), 2 vol. (Trigonometry, Archimedean Theories), 3 vol. (Algebra), Moscow, 1798–1801 (in Greek).

[40] K. Koumas started to teach mathematics, as well as Greek in Thessaly in 1798, and there translated with Assanis Lacaille's *Conic Sections*. For more details see. Y. Karas: *Kairis-Koumas. Two vanguard teachers*. Athens, 1977 (in Greek).

[41] Benjamin of Lesbos (1762–1824) studied sciences and letters in Paris and in Pisa. He wrote many books in Greek.

[42] P. L. Bourdon: *Elements of Arithmetics*. Vienna, 1828. Preface.

[43] Preface.

[44] Idem. Preface.

[45] A. Stageiritis: *Summary of Arithmetic*. Vienna, 1810, p. 4.

[46] S. Doungas: *Elements of Arithmetics and Algebra*. Vienna, 1816, p. 1.

In the same year the son of Balanos Vassilopoulos, who claimed to have solved the famous problem of the duplication of the cube presented his book *Antipelargises*[47] in which the author also describes his attempts to gain support for his solution amongst the international community of mathematicians, in particular Euler and the members of the St Petersburg Academy.[48]

In 1818 Benjamin of Lesbos published his *Elements of Arithmetics* where he emphasizes that the concept of the number emerges as an intellectual process as well as the predominant role of mathematics *which is conducive to the exploration of the mysteries of nature*.[49] Two years later Benjamin edited Euclid's Elements of Geometry.[50] For the distinguished scholar Euclid's Elements, constitutes the most fundamental treatise of all times, and he stressed that he brought to light this book to educate and train the young people.[51] According to him, geometry is the science that enables the dwellers of the Earth to explore heavens with their own hands.[52]

In 1820 Konstantine Doukas edited his *Practical Arithmetics,* where he did not scruple to stress that this *Arithmetical Bible is useful not only for the young students but for these who are involved in trade*.[53] In its annex we can find a list of coins from the most significant European countries, as well as a list of weights and measures including the Austrian ones.

We must also point out that for the needs of the trade many commercial books were published in Vienna. For example *List of Arithmetics* (1791). Two years later Dimitris Thomas, edited a book containing all the necessary procedures and operations as well as a list of weights and measures. The following year Thomas published a new book *Scritura or how to put order in the accounts*. In 1809 Constantine Kokkinides published the translation of Joseph Novak's book *Summary of the History of the Trade*.

It would be an omission here not to mention that various journals and periodicals were published in Vienna with the same objective: to function as a channel which would popularize knowledge.

These journals were:

- *Hermes the Scholar* (Vienna, 1811–1821)
- *Hellenic Telegraph or political, literary and commercial journal* (Vienna, 1812–1836)
- *Literary Telegraph* (Vienna, 1817–1821)
- *Kalliopi* (Vienna, 1819–1821)

[47] In Greek that means against the stork, a bird well known for the affection for its children. Using this title the son of Balanos Vassilopoulos emphasized his opposition to the theory of his father. See M. Lambrou: *Antipelargisis*, *new approximations*. In *Sciences in the Greek area*, ed. by the centre for Neohellenic Research. National Hellenic Research Foundation, Athens, 1997, pp. 149–178.
[48] G. N. Vlachakis: *The Greek Enlightenment in Science: Hermes the scholar and its contributions to science in early nineteenth century Greece*. Historia Scientarum 37(1999), p. 337.
[49] Benjamin of Lesbos: *Elements of Arithmetics*. Vienna, 1818, p. i.
[50] After the Renaissance Euclid's Elements saw the light in M. Anthrakitis Balanos Vassilopoulos' treatise *Mathematical Way* (Venice, 1749).
[51] Benjamin of Lesbos: *Elements of Geometry.* Vienna, 1820, preface.
[52] Idem. p. 1.
[53] Preface.

Among them a significant role was played by *Hermes the Scholar* which acted as a bridge diffusing the western European ideas in the East. Anthimos Gazis (1758–1828) first editor of this journal, declared the targets of *Hermes the Scholar* in the first issue:

*The present literary journal undertakes first and foremost ... to offer literary news pertaining chiefly to the knowledge of science and erudition, to observations on the Greek language ..., to information on newly published books, in Greek and in foreign languages, which bear on Greek literature, to new inventions in the arts and sciences, to archaeology, geography, history, chronology, economics, and to other similar practical subjects. Thus it will contribute to the progress of erudition.*[54]

The main aim of the *Hellenic Telegraph*, according to the proclamation of the editorial board is, to republish news, papers and essays from various journals,[55] while this of the *Literary Telegraph* is to present *the new books in Greek or foreign ones which referred in Greek literature, or on new unknown to the nations inventions or on new useful systems*.[56]

In conformity with this state of mind was the edition of *Kalliopi*, which appeared in 1819 to counteract[57] *Hermes the Scholar*. Its editor Athanassios Stageiritis, Professor of the Greek language in the Imperial Academy of Oriental Languages in Vienna, in the first issue explicitly reveals its aims, that this review will be publish news concerning the edition of books in Greek and in foreign languages for the benefit of Nation and in his first address he stresses: *Bearing in mind our imperative duty to contribute to the benefit of our brothers ... offering periodically various items of necessary and useful knowledge arising from the observations and inventions of younger European scientists, from the History of Sciences and Arts and their progress from the beginning until our century*.[58]

The subscriptions system became a prominent concern for the authors as well as for the editors. The first notified the reading public of their new editions in the journals already mentioned, while new editions reached their readers via the network formed by the Greek merchants operating in central Europe and the Ottoman Empire.

Many Greek scholars in Vienna found refuge in Vienna as Mosiodax, Gazes, Koumas, Doukas, Pharmakides and the Hapsburgian capitale was on the top of the list of subscribers so it was not a surprise that it became one of the most important editorial centres for the Greeks of Diaspora.

## 4 Conclusions

All these editorial activities marked the birth of modern intellectual Hellenism. Under Ottoman rule Greece at the periphery of Europe struggles to gain its cultural identity. Distinguished Greek Scholars living abroad became familiar

[54] G. Vlachakis, op. cit. p. 325.
[55] *Hellenic Telegraph*, 15 October 1816.
[56] Idem 18 July 1817.
[57] As it expresses views against Korais' ideas.
[58] Idem. pp. 11–13.

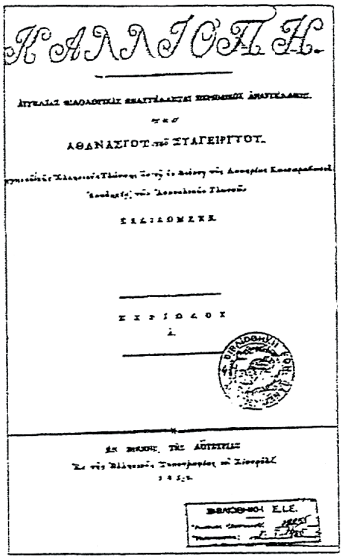
with the scientific theories and considered as an imperative need the diffusion of the new ideas to the uncultured people.

This way they believed, sooner or later original scientific research would be introduced and conducted in Greece. History justified their decision.

The Greek language, eternal bridge between the past and the future, became the source of wisdom and learning, underpinning the continuity of the Greek Nation.

**Address**

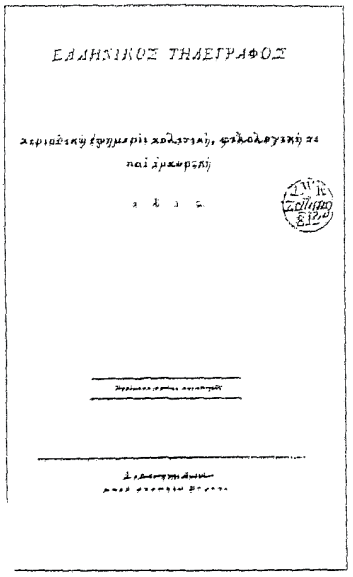
Christine Phili
National Technical University
School of Applied Mathematical and Physical Sciences
Department of Mathematics
Zografou Campus
Athens
Greece
e-mail: *xfili@math.ntua.gr*



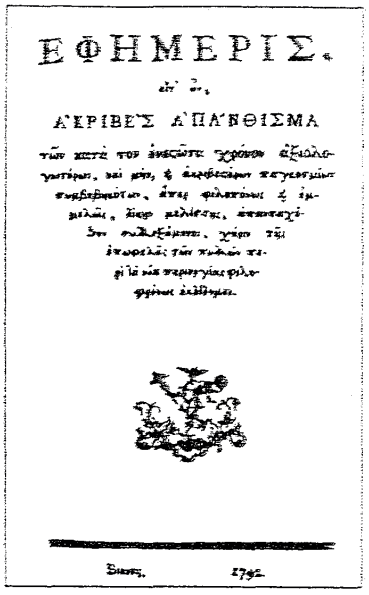
ΚΑΛΛΙΟΠΗ.

ΑΘΑΝΑΣΙΟΥ ΤΟΥ ΣΥΡΑΓΕΡΙΤΟΥ.

ΣΧΕΔΙΑΣΜΑΤΑ.

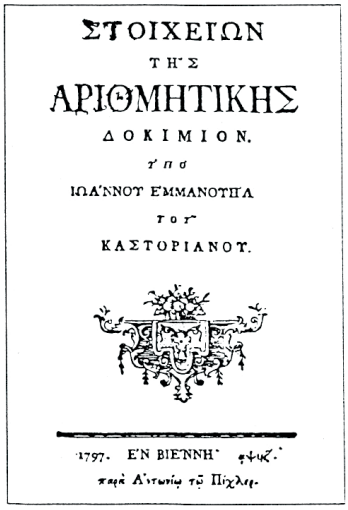


ΕΛΛΗΝΙΚΟΣ ΤΗΛΕΓΡΑΦΟΣ



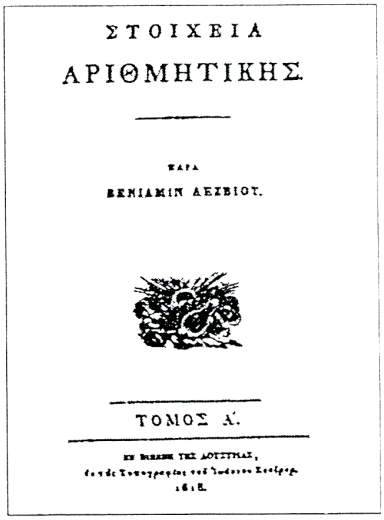
ΕΦΗΜΕΡΙΣ.

ΑΚΡΙΒΕΣ ΑΠΑΝΘΙΣΜΑ



ΣΤΟΙΧΕΙΩΝ
ΤΗΣ
ΑΡΙΘΜΗΤΙΚΗΣ
ΔΟΚΙΜΙΟΝ.
ΥΠΟ
ΙΩΑΝΝΟΥ ΕΜΜΑΝΟΥΗΛ
ΤΟΥ
ΚΑΣΤΟΡΙΑΝΟΥ.

1797. ΕΝ ΒΙΕΝΝΗ· ᾳψυζ.
παρὰ Ἀντωνίῳ τῷ Πίχλερ.

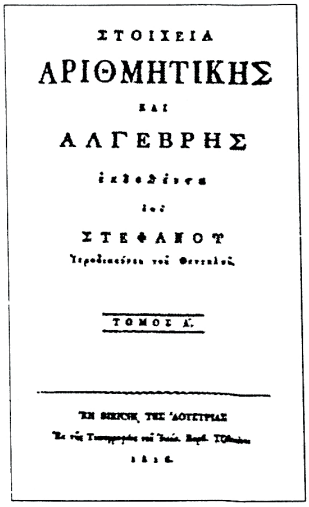


ΣΤΟΙΧΕΙΑ
ΑΡΙΘΜΗΤΙΚΗΣ.

ΠΑΡΑ
ΒΕΝΙΑΜΙΝ ΛΕΣΒΙΟΥ.

ΤΟΜΟΣ Α'.

ΕΝ ΒΙΕΝΝΗ ΤΗΣ ΑΟΥΣΤΡΙΑΣ,
ἐκ τῆς Τυπογραφίας τοῦ Ἰωάννου Σταύρου.
1818.



ΣΤΟΙΧΕΙΑ
ΑΡΙΘΜΗΤΙΚΗΣ
ΚΑΙ
ΑΛΓΕΒΡΗΣ
ἐκδοθέντα
ὑπὸ
ΣΤΕΦΑΝΟΥ
Ἱερομοναχοῦ τοῦ Θεοτοκοῦ.

ΤΟΜΟΣ Α'.

ΕΝ ΒΙΕΝΝΗ ΤΗΣ ΑΟΥΣΤΡΙΑΣ
Ἐκ τῆς Τυπογραφίας τοῦ Ἰωάν. Βαρθ. Τζόπιδος
1816.

ΕΡΜΗΣ
ἢ
ΛΟΓΙΟΣ.
ἢ
ΦΙΛΟΛΟΓΙΚΑΙ ΑΓΓΕΛΙΑΙ.
1814.

ΠΕΡΙΟΔΟΣ Δ.

ΕΝ ΒΙΕΝΝΗ ΤΗΣ ΑΥΣΤΡΙΑΣ,
Ἐκ τῆς Τυπογραφίας τοῦ Ἰωάννου Βαρθ. Σταύρου.

**Nada Razpet**