

Research Notes

The Society of Jesus and the Sciences in the Modern Era: A Finding List of Books by Jesuits in Mathematics and the Natural Sciences (1814–2015)

Agustín Udías SJ*

After 1814 — when the Society of Jesus was restored following its papal suppression in 1773 — a new chapter in the history of Jesuit contributions to the natural sciences began. In Europe, during the nineteenth century, there was a profound change in education, which increasingly came to be viewed as a public service to be delivered by the state. Thus, governments established new public institutions at all levels of education with peremptory official regulations and study programs at the three established levels (i.e., primary, secondary and tertiary or university). Private institutions also were bound to follow these regulations overseen by the state. Within these education programs, a pronounced emphasis was placed on the natural sciences. In the case of the newly-restored Society of Jesus, which had lost custodianship of the many schools and universities entrusted to it before the suppression, mainly in Europe (nearly six hundred in total) — Jesuits found they needed to adapt these programs to the new and restored institutions of the Society. As a consequence, many Jesuits became teachers and professors of natural sciences in their educational institutions (primary and secondary schools, colleges, and universities), both those that were new foundations as well as those with which they were associated before the suppression. In so doing, they were following a tradition already present in the Old Society.

Jesuit-run schools and colleges, especially at the secondary school

* Agustín Udías, Professor Emeritus of Geophysics at Universidad Complutense de Madrid, has held research and teaching posts at the University of California, Berkeley; Wolfgang Goethe Universität, Frankfurt am Main and Universidad de Barcelona. His published research deals with earthquake source mechanism, seismicity and seismotectonics of the Mediterranean region and the history of Jesuit scientists. Among his books, see *Principles of Seismology* (Cambridge: Cambridge University Press, 1999) and *Jesuit Contribution to Science. A History* (Dordrecht: Springer, 2015).

level, increased rapidly in number: today, there are 380 worldwide. The same happened with Jesuit universities: currently, there are 190 such institutions internationally.¹ Furthermore, after its restoration, from 1824, the Society had oversight of a total of seventy-four astronomical and geophysical observatories worldwide; some of these were linked to colleges and universities, while others operated as independent institutions, especially in mission countries.² However, from 1970 most of these observatories closed or their management passed to non-Jesuit, lay oversight. In the context of these institutions, many Jesuits engaged in teaching and research; several excelled in the sciences, especially mathematics, physics, chemistry, and biology, as well as in astronomy, meteorology, and geophysics, with work which continues today.³

Jesuit science teachers and professors at schools, colleges and universities, or scientists at observatories, published a large number of books in different fields of science, and of different types and levels (independently-published monographs are treated here as books), as well as contributing research articles to scientific journals (which are not included in this finding list). Some books were textbooks for all levels of study; others were more advanced research publications, or books popularizing science. Taken together, they are an important but relatively neglected component of the Jesuit contribution to science and, when viewed as a whole, they give a good idea of the broad and varied nature of that contribution.

Overview of the Finding List

This finding list presents 768 science books that were written by 254 Jesuit authors and published between 1814 and 2015. Naturally, the list is not complete, but it provides a representative sample of such books, offering the basis, it is hoped, for further searches and compilations of similar works in the natural sciences. The information has been collated from library catalogues, bibliographies, and references in publications, and, more rarely, through direct inspection of the books.

1 https://en.wikipedia.org/wiki/List_of_Jesuit_educational_institutions (accessed November 10, 2020). In this contribution, cited works are given in full in the footnotes, not as a separate list at the end of the article.

2 Udías, *Searching the Heavens and the Earth: The History of Jesuit Observatories* (Dordrecht: Kluwer, 2003).

3 Udías, *Jesuits and the Natural Sciences in Modern Times, 1814-2014* (Leiden: Brill, 2019) and by the same, "Jesuit Contribution to Science 1814-2000. A Historical Essay", *Jesuit Historiography Online*. http://dx.doi.org/10.1163/2468-7723_jho_COM_192552. First published online: 2016.

The method used for collating the material has conditioned the types of information provided in the list, with its focus being bibliographical rather than biographical. Also, while the finding list is necessarily partial, it is intended to provide readers with a starting guide for exploring the subject further. The list provides the author's name and the author's institution (in the case of different institutions across a lifetime, the list identifies as much as possible the institution at the time of writing); these are followed by the book's title and year of publication (when available). When there are several editions, the number (if known) is given. This number does not include translations.

For reasons of consistency, and with the aim of providing a large snapshot of this genre (which is at the same time manageable in terms of the amount of data), places of publication and names of publishers are not given in the finding list: the nature of many of these publications is such that information of this nature could not be found in all cases. Names of book co-authors are given, while Jesuit authors are identified with the initials S.I. In the alphabetical author lists, biographical information (full name, years of birth and death, and institution, are given for the main authors, and not for co-authors. In some cases, when translations into other languages from the original have been found, this is indicated, giving the titles, years, and when possible the names of the translators. A systematic search specifically for all translations has not been done: those given here have been identified as part of the search for the original books.

The finding list of books is divided into the following four categories by discipline:

1. Mathematics
2. Physics and Chemistry
3. Biology and Anthropology
4. Astronomy, Meteorology, and Earth-Sciences.

Each book in the list is identified according to the type of publication, provided after the title, thus:

- (A) textbooks for primary schools
- (B) textbooks for secondary schools
- (C) textbooks for universities
- (D) special research topics
- (E) science for general readership (or "science popularization")
- (F) science in relation to philosophy and theology

At the conclusion of the book lists, Jesuit authors are provided alphabetically according to the countries where they worked (for this reason, some authors appear under more than one country).

The list itself is partial: most books identified by the author were written in English, French, German, Italian and Spanish. Also, it reflects the research milieu of the author: for example, Spanish books and authors from Spain receive particular attention, while books by Jesuits from some countries, as, for example Poland, Hungary, and regions outside Europe are not included for lack of data available to the author.

Brief Notes on the Finding List According to Discipline

1. Books on Mathematics

The early interest of Jesuits for mathematics is well known.⁴ This can be traced to the figure of Christopher Clavius (1537-1612), professor of mathematics at the Roman College, who was influential in the importance given to the teaching mathematics in the *Ratio Studiorum* (1599), the norm for all Jesuit colleges. The *Ratio* stated that there must be professors of mathematics in all major colleges. This was a novelty for the time, as mathematics was traditionally a secondary subject taught in the faculties of philosophy. Jesuits continued this tradition in their new schools and universities, where several excelled as professors of mathematics and published books on the subject. The list of Books on Mathematics identifies 148 books by sixty authors. Most of these are textbooks at both primary and secondary school level (83), and at university level (45).

Some Jesuits, especially in Spain and Latin America, wrote very elementary mathematics textbooks for primary schools. Textbooks on mathematics for secondary schools written by Jesuits are more abundant. They are the largest number of all mathematics books. They reflect the large number of Jesuit secondary schools established in modern times. In Colombia, for example, two Jesuits, Julio Henao (1897-1968) and José Ramón Becerra (1897-1985), together published nineteen textbooks for both primary (*primaria*) and secondary (*bachillerato*) schools. At this level, the books cover arithmetic, geometry, algebra, trigonometry, and elementary differential and integral calculus.

4 See for example: Ugo Baldini, *Legem impone subactis. Studi su filosofia e scienza dei gesuiti in Italia, 1540-1632* (Rome: Bulzoni, 1992); Antonella Romano, *La contre-réforme mathématique. Constitution et diffusion d'une culture mathématique jésuite à la Renaissance* (Rome: École Française de Rome, 1999); Udías, *Jesuit Contribution to Science*.

At the tertiary level Jesuits also published textbooks for university students, for example, at the American college-level, covering algebra, geometry, trigonometry, analytical geometry, and calculus. More advanced textbooks at university level also were written about mathematical analysis, differential equations, complex variable calculus, tensor calculus and statistics. For example, Alberto Dou (1915-2009), professor at the state university in Madrid (Universidad Complutense), published three textbooks on differential equations, both ordinary and on partial derivatives. More modern university textbooks covered topics such as linear algebra, adaptive algorithms, numerical methods and code programming.

In addition to textbooks, Jesuits also wrote books on special mathematical topics, although they are much fewer than the textbooks. A special case is the work by Maurice Potron (1872-1942), on the applications of mathematics to economy and on group theory. Jesuits also wrote about the connection between philosophy and mathematics, especially, concerning the logic of mathematics and the foundations and consistency of mathematics.

2. Books on Physics and Chemistry

Important progress was made in practically all fields of the natural sciences during the almost fifty years when the Society was suppressed (1773-1814). This was especially the case in physics and chemistry: during the nineteenth century, both sciences underwent significant developments that led to their present state. In the new Jesuit schools and universities, many Jesuits became professors of physics and chemistry and published books on both subjects. Books identified under Physics and Chemistry list 176 books published by seventy-six Jesuits. As in the case of mathematics, most of these are textbooks (134) produced for secondary schools and universities. The others are on specialised areas of physics and chemistry, or produced for general readership.

Early textbooks for the teaching of physics in general at the secondary school level were published by Jesuits, especially, in Spain and Latinamerica. Textbooks on physics, at the university level are not many: an interesting case is the popular textbook on physics by Theodor Wulf (1868-1946), originally in German and translated into English and Spanish. Jesuits, who were professors at the Instituto Químico de Sarriá, Barcelona (Spain), published several textbooks on chemistry and at the engineering school (ICAI) of the Universidad Pontificia Comillas, Madrid (Spain), books on subjects con-

nected with engineering applications of physics, such as, electrical motors and thermal and hydraulic turbines.

Jesuits also wrote books about particular subjects of physics at an advanced level, such as, molecular mechanics, particle physics, theory of relativity and on chemistry, such as, on dimethyl-cyclohexanones. The Italian Giuseppe Gianfranceschi (1875-1934) wrote early books on the molecular and atomic composition of matter, one translated into Spanish. Jesuits wrote also about the philosophical problems of physics, and on physical chemistry subjects, and on physics and chemistry subjects for general readership.

3. *Books on Biology and Anthropology*

During the seventeenth and eighteenth centuries, many areas of natural history, such as botany and zoology, were taught as parts of natural philosophy in Jesuit colleges and universities. In the mission countries of America and Asia, some Jesuits, such as José de Acosta (1540-1600), Bernabé Cobo (1580-1657), João Loureiro (1717-1781) and Georg Kamel (1665-1706), were among the first to study the flora and fauna of these countries and made them known in Europe, often for the very first time.⁵ The Jesuits of the restored Society continued this tradition in different ways.

At the beginning of the nineteenth century, biology and anthropology were formally established as sciences and became parts of science programs at all levels of education. The new Jesuit secondary schools, colleges, and universities incorporated their teaching, and Jesuit teachers and professors published books on both subjects. A considerable number of Jesuits became interested in observational studies of botany and zoology and published their findings. In the Books on Biology and Anthropology, a list is given of 245 books published by sixty-eight Jesuits. They cover many different subjects at different levels. Some (65) are general textbooks on biology for all education levels (31 books are written for secondary schools). Most of the books are on particular areas of biology, such as botany and entomology, presenting particular observations and studies. Books on general anthropology are few (5), with some on related philosophical problems. The subject of biological evolution and the origin of humans is treated in twenty-eight books at different levels and from various points of view. Other books are dedicated to problems

5 Ignacio Nuñez de Castro, *La quina, el mate y el curare. Jesuitas naturalistas de la época colonial* (Bilbao: Mensajero, 2021).

with philosophical links in biology and bioethics. Among the textbooks on general biology many are at secondary school level, generally written by professors of such schools. At a university level, textbooks on general biology are listed as well as on anthropology and special topics, such as, cytology, embryology, histology, and on problems linked with biology.

A notable number of Jesuits dedicated their work to the study of botany and published books on that subject. Special attention should be drawn to those on the flora of different regions of South America, such as, Brazil, Ecuador and Colombia. Jesuits in India produced a significant number of botanical studies and their application to agriculture and the environment, among the firsts, by Ethelbert Blatter (1877-1934) and Hermenegildo Santapau (1903-1970); these works continue to be relevant to the present day. They cover studies on the flora of different regions, such as, Purandhar, Khandala and Saurashtra, the Acanthaceae of Bombay, the Tamilnadu Carnatic, at the Palni Hills, and West Ghats.

Entomology, the study of insects, as well as the study of other phyla, like arachnids, have also been of special interest for Jesuits. They included the studies of Neuroptera or net-winged insects, and Raphidiopters. In particular, Pelegrín Franganillo Balboa (1873-1955), wrote a number of books about the study of spiders and arachnids in Cuba and the Iberian Peninsula. Other topics studied by Jesuits were animal psychology, and the behaviour of different types of animals.

Sociological and philosophical considerations of biological problems, especially in bioethics, were treated by some Jesuits, like in Portugal by Luís J. Archer (1926-2011). Other problems were also treated by Jesuit biologists, such as the nature of life, an attempt at "bio-philosophy", the different points of view on the origin life, and those about the relationship between biology and religion. Regarding anthropology, Vittorio Marozzi (1908-2005) touched on problems related to the meaning of life, and the position of humans in space and time.

Charles Darwin's presentation of the theory of biological evolution created a new view on biology and shortly thereafter a controversy began about its compatibility with Christian faith. In their publications, Jesuit biologists could not be silent about this problem. One of the first was Erich Wasmann (1859-1931), who published in 1904 a book with a wide circulation; it was reedited twice in the following years and translated into Italian and English. He claimed that the

theory of evolution was not opposed to the Christian faith. Jesuits treated the subject of evolution under many different points of view, for example, Jules Carles (1902-2000), with nine books dedicated to life and human evolution, through a variety of perspectives, including the future of man. The evolution of human beings is treated in five books by Paul Overhage (1906-1979): two of these were in collaboration with the Jesuit theologian Karl Rahner. Pierre Teilhard de Chardin (1881-1955), is famous for his many writings (published after his death in thirteen volumes) about the evolutionary vision of the world and humans, and its philosophical and theological implications, especially his famous, *Le phénomène humain*, translated into many languages.

4. Books on Astronomy and Earth Sciences

Astronomy is the science to which some of the first Jesuits, such as, Christopher Clavius, Christoph Scheiner (1575-1650), and Giovanni Battista Riccioli (1598-1671), made important contributions. They established early observatories at their colleges in Europe and brought modern European astronomy to China and India. This tradition was continued in the modern Society of Jesus with the creation of a worldwide network of seventy-four observatories, where meteorological and geophysical observations were also made. Jesuits working mainly at these observatories published a large number of books on astronomy, meteorology, seismology, terrestrial magnetism, and other earth sciences. In this they differed from Jesuits working in other fields of science, where the authors were mostly professors at schools, colleges, and universities. In Finding List 4 there are 199 books written by seventy-six Jesuits: they cover mainly astronomy (50), cosmology (22), meteorology (54), seismology (20), geophysics (21), and other earth sciences.

Among the first books on astronomy are those by Angelo Secchi (1818-1878), a pioneer of astrophysics who published eleven books on astronomical subjects, such as on the sun, the stars and their spectra, and the observation and nature of comets. Johann Georg Hagen (1847-1930), the first Jesuit director of the Vatican Observatory, published a work in seven volumes on variable stars which was continued by his successors in the Observatory. Guy Consolmagno (b. 1952), the present director, has published seven books, mostly on cosmological and astronomical subjects for general readership. Jesuits at the Observatorio del Ebro, Roquetas, Tarragona (Spain), also published several general books on astronomy and astro-

physics. Other Jesuits published books on cosmological and astronomical subjects for general readership.

Many Jesuit observatories had departments devoted to meteorology and some Jesuits published books on this subject, especially on the nature of cyclones.⁶ Among them, Benito Viñes (1837-1893), Observatorio de Belén (Havana, Cuba), who published three of the first books on the nature of Caribbean hurricanes and Federico Faura (1840-1897) at the Manila Observatory who published two early books on the nature of typhoons (Pacific Ocean cyclones). Jesuits at Havana, Manila and the observatories of Zikawei (Shanghai, China) and Antananarivo (Madagascar), continued this work with books on cyclones and on other meteorological studies.

At the beginning of the twenty century Jesuits established an early worldwide network of seismographic stations.⁷ For some time, Jesuits working in them contributed extensively with books on seismology. Among them, James B. Macelwane (1883-1956), at Saint Louis University, together with Frederick W. Sohon (1894-1972) at Georgetown University, published the first American advanced textbook on seismology. Other books were published by Jesuits working at seismographic stations in Spain, United States of America, Colombia, Bolivia and Philippines. Jesuits also published on other earth science topics, such as on earth gravity and density, terrestrial magnetism and ionospheric studies, and geology and paleontology.

Some General Observations about the Finding List

Although not complete, the Finding List of Books by Jesuits in Mathematics and the Natural Sciences (1814–2015), provides an overall picture of the Jesuit contribution to science. The books' titles give some idea of the wide variety of Jesuit contributions to science. They cover, practically, all the fields of mathematics and natural sciences at every level, from very elementary to very advanced: for example, in physics from general physics and classical mechanics to quantum, relativity and particle physics. A summary of the books, their subjects and types is given, below, in Table 1.

6 Udías, "Jesuit's contribution to meteorology". *Bulletin American Meteorological Society* 77 (1996), 2307-15.

7 Daniel Linehan, "Jesuits in Seismology". *Earthquake Information Bulletin* 16 (1984) 156-65; Udías and William Stauder, "The Jesuit contribution to seismology". *Seismological Research Letters* 67 (1996), 10-19.

Table 1. Type of book and subjects

Type	1. Mathematics	2. Physics & Chemistry	3. Biology & Anthropology	4. Astronomy & Earth Sciences	Total
A Primary	21	---	---	---	21
B Secondary	62	54	31	7	154
C University	45	80	34	16	175
D Research	15	29	118	126	288
E General R.*	1	13	34	44	92
F Phil. Theol.**	4	---	28	6	38
Total	148	176	245	199	768

With regard to subjects, the largest number of books are in biology and anthropology (245), followed by those in astronomy and earth sciences (199). The largest number of books are textbooks at the three levels (350), with the highest number (175) being university textbooks. Textbooks are more abundant for physics and chemistry (134), followed by mathematics (128). For primary schools, the only textbooks are in mathematics. The second highest number of books after textbooks are those on research subjects (288), with the highest number in astronomy and earth sciences (126), followed by biology and anthropology (118). A considerable number (92) of books deal with science for general readership. Books on the relationship between science and philosophy and theology are few (38), mostly with reference to biology and mainly on the subject of evolution.

A total of twenty-nine important books were translated into other languages, some into four languages. Nine correspond to physics and chemistry and ten to both biology and anthropology, and astronomy and earth sciences. Special cases are the books by Secchi, Teilhard and Wasmann, translated into several languages. An interesting feature is the number of books written in collaboration (97), mainly with laypeople. This shows that Jesuit scientists did not work in isolation but formed part of research groups and joined non-religious professionals in their work. The presence of women scientists among the co-authors deserves mention, here, constituting a valuable record of women's contribution to science and of Jesuit collaborations with them.

The chronological distribution of the books, according to the year of publication (split into periods of twenty years), is given in Table 2 (for some books there were no year of publication so the total number

* General Readership.

** Philosophy and Theology.

is different as in Table 1). The first publication comes only a little after the restoration of the Society in 1814. The number of published books by Jesuits increased from the nineteenth century (96 books), to those published during the twentieth century (593 books).

Table 2. Year of publication and subjects

	1. Mathematics	2. Physics & Chemistry	3. Biology & Anthropology	4. Astronomy & Earth Sciences	Total
1800-1819	1	-	-	-	1
1820-1839	-	1	-	-	1
1840-1859	2	3	-	2	7
1860-1879	3	13	4	14	34
1880-1899	9	4	9	31	53
1900-1919	6	18	29	26	79
1920-1939	20	37	44	44	145
1940-1959	27	37	56	31	151
1960-1979	25	29	47	18	119
1980-1999	9	12	30	15	66
2000-2015	2	2	17	12	33
Total	104	156	236	193	689

The period with the greatest number is from 1920 to 1959 (296 books), with numbers increasing up to those years. During that period, the largest number of books (100) is of those on biology and anthropology. From 1960 the number begins to decrease. The tendency is the same for all subjects. It can be said, then, that, measured by the number of published books, Jesuit productivity in science began to decrease from 1960. This is confirmed by other studies and has been attributed in part to the change in apostolic priorities after the Society’s 32nd General Congregation and an increased interest for pastoral work and spirituality.⁸

Acknowledgements

The author wishes to acknowledge the following institutions and individuals: the Peter-Hans Kolvenbach Library at the Society’s General Curia (Rome) – the main source for this study – and the librarians there that assisted with the research; the archivists from a number of Jesuit Provinces and fellow Jesuits who helped to trace science books, especially José M. Bernal (Curia Generalizia). Thanks, also, to Joseph Munitiz who corrected the language, and to the anonymous reviewer for helpful suggestions. Note that, due to the

8 Udías, *Jesuits and the Natural Sciences*, 89-91.

specific nature of this contribution's data, there is some variation in the presentation of the Finding List with respect to the usual House Style of the journal.

Summary

A list and introductory explanation are given here of 768 scientific books written by 254 Jesuits in modern times (1814-2015). Information is provided under headings according to subject area, followed by author, provenance, title, year of publication, and intended audience. There is also a concluding list of authors by countries of work. The four subject group headings under which the books are listed are: (1) mathematics, (2) physics and chemistry, (3) biology and anthropology, and (4) astronomy, meteorology, and earth sciences. The different types of books are listed according to academic grade: textbooks for primary and secondary schools and universities; advanced books on specific research subjects; also listed are books on scientific topics for general readership, as well as books that explore connections between science, philosophy, and theology. The aim of the finding list is to provide an overall picture of Jesuit contribution to science in modern times.

Sumario

En este trabajo se presenta una lista de 768 libros científicos publicados por 254 jesuitas en época moderna (1814-2015). La información se presenta primero bajo la materia, seguido de los autores, afiliación, título, año de publicación y audiencia a la que está dirigido. Sigue una lista en orden alfabético de los autores, divididos por los países de proveniencia y/o donde hicieron su trabajo científico. Los libros se han dividido de acuerdo con su materia en cuatro grupos: (1) matemáticas, (2) física y química, (3) biología y antropología y (4) astronomía, meteorología y ciencias de la tierra. Los libros incluidos en las listas pertenecen a diferentes clases: libros académicos de texto de educación primaria, secundaria y universitaria; libros de carácter avanzado sobre temas específicos de investigación, libros de popularización de la ciencia; libros sobre la relación entre ciencia filosofía y teología. El fin de la lista de libros presentada es la de procurar dar una visión general de la contribución de los jesuitas a la ciencia en la época moderna.

Finding List of Books by Jesuits in Mathematics and the Natural Sciences (1814–2015)

1. Books on Mathematics

1. **AGUSTÍ I SEGARRA, Josep Maria (1931-)** – Colegio San Ignacio, Barcelona (Spain)
 - 1.1. *Conjuntos y números. 1er curso de bachillerato.* (with A.Vila) (1968) (A)
2. **ARCIDIACONO, Vincenzo (1910-2001)** – Pontificia Università Gregoriana, Rome (Italy); Osservatorio Sismico-Meteorologico, Istituto Nazionale di Geofisica, Messina (Italy)
 - 2.1. *Numeri e forme. Armonie del pensiero matematico.* (1987) (D)
3. **ARECHA VALETA, Eduardo (1867-1928)** – Colegio San Ignacio, San Sebastián (Spain)
 - 3.1. *Elementos de análisis numérico y de la teoría de los números.* 2 vols. (1921) (B)
4. **BARTRA, Clemente (1924-2017)** – Colegio de la Inmaculada, Lima (Peru)
 - 4.1. *Matemáticas elementales. Grado preparatorio. 1er grado. 2º grado.* 3 vols. (1965) (A)
 - 4.2. *Hojas de problemas. Correspondientes al libro de matemáticas elementales. Grado preparatorio.* 5 vols. (1965) (A)
 - 4.3. *Matemáticas elementales. Libro del maestro correspondiente al grado preparatorio. 1er grado.* 3 vols. (1965) (A)
5. **BAYMA, Joseph (1816-1892)** – Santa Clara University, Santa Clara, California (USA)
 - 5.1. *Elements of Geometry for the Use of Beginners.* (1885) (C)
 - 5.2. *Plane and Spherical Trigonometry.* (1886) (C)
 - 5.3. *Analytical Geometry.* (1887) (C)
 - 5.4. *Elements of Infinitesimal Calculus.* (1889) (C)
 - 5.5. *Algebra.* (1890) (C)
 - 5.6. *Geometry.* (1895) (C)
6. **BECERRA, José Ramón (1897-1985)** – Colegio San Ignacio de Loyola, Medellín (Colombia)
 - 6.1. *Aritmética y geometría. 2º curso de primaria.* (1968) (A)

- 6.2. *Aritmética y geometría. 4º curso de primaria.* (1966) (A)
- 6.3. *Mi aritmética para el cuarto año de primaria.* (A)
7. **BRANDE, Edward W. (1931-2003)** – Saint Peter’s University, Jersey City, New Jersey (USA)
- 7.1. *The Representations of Binary Quadratic Forms by Quinary Quadratic Forms.* (1968) (D)
8. **CASOLARO, Vincenzo (1906-1995)** – Istituto Pontano, Palazzo Cariati, Naples (Italy)
- 8.1. *Geometria razionale per il ginnasio superiore, 1º liceo scientifico - 1º magistrale superiore.* (1945) (B)
9. **CERRO CORCOLES, Francisco (1857-1945)** – Colegio del Sagrado Corazón, Sucre (Bolivia)
- 9.1. *Trigonometría y trigonométrica.* (1925) (B)
- 9.2. *Geometría plana y del espacio.* (B)
- 9.3. *Trigonometría plana y esférica.* (B)
- 9.4. *Topografía militar.* (C)
10. **CHACÓN XERICA, Enrique (1905-1993)** – Universidad de Deusto, Bilbao (Spain)
- 10.1. *Econometría. Tomo I. Aplicaciones del cálculo diferencial a la economía.* (1944) (C)
- 10.2. *Análisis matemático.* (1946) (C)
- 10.3. *Curso de estadística* (with E. Chacon Oreja). (1955) (C)
11. **DE SINNO, Giovanni Battista (1811-1879)** – Primo Real Collegio di Napoli, Naples (Italy)
- 11.1. *Corso completo di matematiche pure.* (1842) (B)
12. **DOU, Alberto (1915-2009)** – Universidad Complutense, Madrid (Spain)
- 12.1. *Ecuaciones diferenciales ordinarias.* (1969) (C)
- 12.2. *Ecuaciones en derivadas parciales.* (1970) (C)
- 12.3. *Ecuaciones en derivadas parciales y su resolución numérica* (with A. Mendizábal). (1973) (C)
- 12.4. *Fundamentos de la matemática.* (1974) (D)
13. **ECHAGUIBEL, Emiliano de (1879-1954)** – Colegio Máximo San Francisco Javier, Oña, Burgos (Spain)

- 13.1. *Principios matemáticos. El problema fundamental de análisis.* (1921) (C)
- 13.2. *Principios de análisis matemático. Algoritmos auxiliares y complementarios.* (1922) (C)

14. **ECHEVARRÍA, Antonio de (1904-1976)** – Colegio San Calixto, La Paz (Bolivia)
 - 14.1. *Aritmética. Texto adaptado al programa oficial del nuevo plan de enseñanza media.* (B)

15. **EGIDI, Giovanni (1835-1897)** – Nobile Collegio Mondragone, Frascati, Italy
 - 15.1. *Compendio di aritmetica ragionata.* (1881) (B)
 - 15.2. *Trattato elementare dei determinanti e loro applicazioni.* (1883) (B)

16. **EPPING, Joseph (1835-1894)** – Escuela Politécnica de Quito, Quito (Ecuador)
 - 16.1. *Geometría plana.* (1873) (C)
 - 16.2. *Geometría del espacio.* (1874) (C)

17. **FEDERICI, Stanislao (1860-1947)** – Istituto San Francesco Saverio, Livorno (Italy)
 - 17.1. *Corso elementare di algebra. Parte prima. Calcolo algebrico.* (B)

18. **FERNÁNDEZ DE CASTRO, Manuel María (1905-1985)** – Colegio Inmaculado Corazón de María, Sevilla (Spain); Colegio San Ignacio, Las Palmas de Gran Canaria (Spain)
 - 18.1. *Matemáticas (3^o-7^o cursos)* (with J. L. Jiménez). (1944) (B)
 - 18.2. *Ejercicios y problemas para bachillerato y examen de estado* (with A. Gimeno and J. L. Jiménez). (1945) (B)
 - 18.3. *Matemáticas (4^o curso).* (1958) (B)

19. **FERNÁNDEZ DE RETANA, José (1919-2001)** – Universidad Pontificia Comillas, ICAI, Madrid (Spain)
 - 19.1. *Matemáticas. 2^o curso de maestría industrial* (with J. Ramón So-
dupe). (1966) (C)
 - 19.2. *Matemáticas. 1er curso de maestría industrial* (with J. Joaquín
Aguinaga). (1966) (C)
 - 19.3. *Matemáticas. Primer curso de ingenieros técnicos* (with A. López
de la Rica, S.I.). (1967) (C)

- 20. GAYA Y BUSQUETS, Fernando (1884-1962)** – Colegio San José, Valencia (Spain)
- 20.1. *Prácticas comerciales. Ejercicios de aritmética, álgebra y teneduría de libros.* (1916) (B)
- 20.2. *Prácticas aritméticas. Ejercicios con números enteros.* (B)
- 21. GÓMEZ-PALLETE, Manuel (1910-1989)** – Colegio San José, Villafranca de los Barros (Spain)
- 21.1. *Álgebra y trigonometría acomodados a los cuestionarios oficiales. Quinto año de bachillerato.* (1941) (B)
- 21.2. *Tablas de logaritmos.* (B)
- 21.3. *Matemáticas. Cuarto curso de bachillerato (Acomodado al cuestionario oficial y aprobado por el Ministerio).* (B)
- 21.4. *Matemáticas (Ampliación del álgebra y de la geometría).* (B)
- 21.5. *Matemáticas. Álgebra y trigonometría.* (B)
- 22. GONZÁLEZ REGÚLEZ, Jesús (1889-1979)** – Colegio San José, Valladolid (Spain)
- 22.1. *Mi librito de cálculo.* (3 eds.) (A)
- 22.2. *Mi librito de aritmética y geometría.* (A)
- 23. GOREUX, François (1905-1991)** – St. Xavier's College, Kolkata (India)
- 23.1. *Introduction to tensor calculus.* (C)
- 24. HAGEN, Johann Georg (1847-1930)** – Observatory of Georgetown University, Washington, D.C. (USA); Vatican Observatory (Vatican City)
- 24.1. *Synopsis der höheren Mathematik.* 4 Vols. (1891-1930) (C)
- Arithmetische und algebraische Analyse.* (1891)
- Geometrie der algebraischen Gebilde.* (1894)
- Differential- und Integralrechnung.* (1905)
- Metrische Differentialgeometrie der Ebene und des Raumes.* (1930)
- 25. HENAO, Julio de Jesús (1897-1968)** – Colegio San Ignacio de Loyola, Medellín (Colombia)
- 25.1. *Aritmética. Año primero de bachillerato.* (with R. Becerra S.I.) (1950) (B)
- 25.2. *Aritmética. Año segundo de bachillerato.* (with R. Becerra S.I.) (1950) (B)
- 25.3. *Tablas de logaritmos.* (1951) (B)

- 25.4. *Curso de álgebra*. (4 eds.) (B)
- 25.5. *Mi aritmética. Para los años cuarto de primaria y bachillerato preparatorio*. (A)
- 25.6. *Mi aritmética. Primer año de bachillerato*. (B)
- 25.7. *Mi aritmética, para el primero de primaria*. (A)
- 25.8. *Mi aritmética, para el segundo de primaria*. (A)
- 25.9. *Mi aritmética, para el tercero de primaria*. (A)
- 25.10. *Mi aritmética, para el cuarto de primaria*. (A)
- 25.11. *Mi aritmética, para el quinto de primaria*. (A)
- 25.12. *Aritmética. Año primero de primaria*. (with R. Becerra, S.I.) (A)
- 25.13. *Aritmética. Año segundo de primaria*. (with R. Becerra, S.I.) (A)
- 25.14. *Aritmética. Año tercero de primaria*. (with R. Becerra, S.I.) (A)
- 25.15. *Aritmética. Año cuarto de primaria*. (with R. Becerra, S.I.) (A)
- 25.16. *Mi aritmética. Para los años de cuarto de primaria y bachillerato preparatorio*. (with R. Becerra, S.I.) (A)
26. **JANSEN, Christian J.A. (1900-1961)** – Aloysius College, The Hague (The Netherlands)
- 26.1. *Een involutie in de kegelsneden-ruimte*. (1933) (D)
27. **JIMÉNEZ, Amador (1904-1971)** – Colegio de Belén, Havana (Cuba)
- 27.1. *Elementos de geometría y trigonometría rectilínea*. (1943) (B)
28. **JIMÉNEZ TARRONI, Enrique (1876-1950)** – Universidad Pontificia Comillas, ICAI, Madrid (Spain)
- 28.1. *Elementos de cálculo diferencial*. (1913) (C)
- 28.2. *Elementos de cálculo infinitesimal*. (1923) (C)
29. **KOLBERG, Joseph (1832-1893)** – Escuela Politécnica, Quito (Ecuador)
- 29.1. *Álgebra superior*. (1872) (C)
30. **LACOUTURE, Henri (1838-1913)** – Collège Le Caousou, Toulouse (France)
- 30.1. *Géométrie élémentaire*. (1891; 3 eds.) (B)
31. **LARGUIER, Everett (1910-2000)** – Spring Hill College, Mobile, Alabama (USA)
- 31.1. *Fundamental Concepts in Mathematics*. (1953) (C)
- 31.2. *Introductory Topology*. (1955) (C)

- 31.3. *Mathematical Publications, on the Occasion of his Seventieth Birthday.* (1980) (D)
- 31.4. *Brouwerian Philosophy of Mathematics.* (1940) (F)
- 31.5. *Comparing Forests. An Excursion in Mathematics.* (1979; preliminary edition, part I) (F)
- 32. LEACH ALBERT, Javier (1942-2016)** – Universidad Complutense, Madrid (Spain)
- 32.1. *Matemática discreta y lógica matemática* (with M. T. Hortalá González and M. Rodríguez Artalejo). (2001) (C)
- 33. LEGGIO, Serafino (1871-1934)** – Istituto Pontano, Naples (Italy)
- 33.1. *Geometria intuitiva ad uso della scuola media secondo i vigenti programmi.* (1933) (B)
- 33.2. *Elementi di algebra ad uso della scuola media secondo i vigenti programmi* (with Giuseppe Sorrentino, S.I.). (1937) (B)
- 33.3. *Elementi di aritmetica pratica ad uso della scuola media secondo i vigenti programmi* (with Giuseppe Sorrentino, S.I.). (1937) (B)
- 33.4. *Elementi di trigonometria piana ad uso del liceo classico e dell'istituto tecnico superiore.* (1942) (B)
- 33.5. *Geometria ad uso dei licei classici e scientifici* (with Emilio Tomassi). (1948) (B)
- 34. LÓPEZ DE LA RICA, Antonio (1939-)** – Universidad Pontificia Comillas, ICAI, Madrid (Spain)
- 34.1. *Matemáticas. Primer curso de ingenieros técnicos* (with J. Fernández de Retana, S.I.). (1967) (C)
- 34.2. *Funciones de variable compleja* (with J. Fernández de Retana, S.I.). (1968) (C)
- 34.3. *Problemas sobre funciones de variable compleja.* (1969) (C)
- 34.4. *Geometría diferencial* (with Agustín de la Villa Cuenca). (1995) (C)
- 35. MANZANAL MAESTRO, Francisco (1928-)** – Colegio de San José, Valladolid (Spain)
- 35.1. *Matemáticas. Primer curso del plan 1957.* (1957) (B)
- 36. MARTÍNEZ CÁRDENAS, Alberto (1905-1988)** – Jesuit Mission, Lu'an City, Huoshan county, Anhui province (China)
- 36.1. *Aritmética con nociones de geometría.* (1944) (A)

37. **MARTÍNEZ SANCHEZ, Jorge (1945-)** – Universidad Autónoma de Querétaro, Santiago de Querétaro (Mexico)
- 37.1. *Manual de didáctica de las matemáticas.* (1972) (C)
- 37.2. *Desarrollo intelectual y aprendizaje de las matemáticas.* (1991) (C)
38. **MEIGNE, Maurice (1905-1975)** – Université Saint-Joseph, Beirut (Lebanon)
- 38.1. *Recherches sur une logique de la pensée créatrice en mathématiques.* (1964) (F)
- 38.2. *La consistance des théories formelles et le fondement de mathématiques.* (1957) (F)
39. **MOCOROA MÚGICA, Agustín M. (1912-2000)** – Colegio Seminario Menor, Javier, Navarra (Spain)
- 39.1. *Geometría del espacio. Cuestiones y problemas sistematizados y solucionados.* I-IV (B)
- 39.2. *Aritmética. (Cursos 3º y 4º). Cuestiones y problemas sistematizados y solucionados.* (1960) (B)
40. **MORENO A., José Luis (1950-)** – Colegio Ibero, Tijuana (México)
- 40.1. *Álgebra.* (2002) (B)
41. **O'HARA, Carl W. (1886-1967)** – Manresa House, Roehampton, London (United Kingdom)
- 41.1. *An Introduction to Projective Geometry* (with D. R. Ward, S.I.). (1937) (C)
42. **OLABARRIETA, Luciano (1879-1960)** - Universidad de Deusto, Bilbao (Spain)
- 42.1. *Geometría y trigonometría.* (1929, 1945, 1952, 1957) (B)
- 42.2. *Apuntes de geometría y trigonometría.* (1932) (B)
- 42.3. *Ejercicios de geometría moderna.* (1936, 1944) (B)
- 42.4. *Ejercicios y problemas de geometría y trigonometría.* (1953) (B)
43. **ORTELLS y CERDÁ, Antonio (1861-1951)** – Colegio de la Inmaculada Concepción, Santa Fe (Argentina)
- 43.1. *Tratado elemental sobre la representación gráfica de las ecuaciones y de las funciones algebraicas de primero y segundo grado.* (1915) (B)
- 43.2. *Elementos de aritmética y nociones de álgebra.* (1921) (B)
- 43.3. *Tratado de aritmética.* (B)

- 44. ORTIZ RESTREPO, Carlos (1893-1975)** – Colegio de San Bartolomé, Bogotá (Colombia)
- 44.1. *Tablas de logaritmos para algebra y trigonometría.* (1912) (B)
- 44.2. *Trigonometría rectilínea.* (1922) (B)
- 45. PEREIRA, Richard A. (1912-2007)** – Saint Mary's High School, Mumbai (India); St. Xavier's College, Delhi (India)
- 45.1. *Pattern and Power of Mathematics.* (C)
- 45.2. *Elective Mathematics. Book One* (with D. Pinto, S.I.). (B)
- 45.3. *Elementary (Core) Mathematics for Standards IX and X. Part 2* (with D. Pinto, S.I.). (B)
- 45.4. *A First Course of Statistics* (with D. Pinto, S.I.). (C)
- 45.5. *Mathematics Evaluation at Eighth Standard Level. (Through Check Up Exercise)* (with D. Pinto, S.I.). (B)
- 46. POTRON, Maurice (1872-1942)** – College Saint Geneviève, Paris (France)
- 46.1. *Les groupes d'ordre p^6 .* (1904) (D)
- 46.2. *Exercices de calcul différentiel et intégral. Vol. 1: Résumé théorique et énoncés d'exercices. Vol. 2: Solutions des exercices.* (1926-1927) (B)
- 46.3. *Les groupes de lie.* (1936) (D)
- 46.4. *Théorie des groupes abstraits* (with Jean Armand de Séguier). (1938) (D)
- 47. RIGGE, William F. (1857-1927)** – Creighton University, Omaha, Nebraska (USA)
- 47.1. *Harmonic curves.* (1926) (D)
- 48. SCHWEITZER, Paul A. (1937-)** – Pontificia Universidade Católica do Rio de Janeiro, Rio de Janeiro (Brazil)
- 48.1. *Differential Topology, Foliations and Gelfand-Fuks Cohomology.* (1978) (D)
- 49. SÉGUIER, Jean de (1862-1935)** – Residencia Parisiensis, Paris (France)
- 49.1. *Formes quadratiques et multiplication complexe. Deux formules fondamentales d'après Kronecker.* (1894) (D)
- 49.2. *Théorie des groupes finis. I. Eléments de la théorie des groupes abstraits.* (1904) (D)

- 50. SMITH, James F. (1930-2016)** – Le Moyne College, Syracuse, New York (USA)
- 50.1. *Structure Theorems for Certain Scalar-Product Algebras*, (1959) (D)
- 50.2. *Modern Calculus* (with Thomas S. Frank). (1970) (C)
- 51. SMOLARSKI, Dennis C. (1947-)** – Santa Clara University, Santa Clara, California (USA)
- 51.1. *Optimum Semi-Iterative Methods for the Solution of Any Linear Algebraic System with a Square Matrix*. (1981) (C)
- 51.2. *Computing the Roots of Complex Orthogonal and Kernel Polynomials* (with Paul E. Saylor). (1986) (C)
- 51.3. *The Essentials of FORTRAN*. (1989) (C)
- 51.4. *The Essentials of Data Structures I, and II*. (1990) (C)
- 51.5. *Implementation of an Adaptive Algorithm for Richardson's Method* (with Paul E. Saylor). (1990) (D)
- 52. SOHON, Frederick W. (1894-1972)** – Georgetown University, Washington D.C. (USA)
- 52.1. *The Stereographic Projection*. (1941) (D)
- 53. SOLER, Pablo (1902-1989)** – Colegio Inmaculada Concepción, Madrid (Spain)
- 53.1. *Elementos de geometría*. (B)
- 53.2. *Aritmética y álgebra*. (B)
- 54. STELLA, Antonio (1877-1966)** – Colegio de Granada, Managua (Nicaragua)
- 54.1. *Elementos de álgebra*. (1941) (B)
- 55. TALPAIN, Leon (1915-1991)** – Collège Sainte-Geneviève, Paris (France)
- 55.1. *Mathématiques. Classe de second C (programme de 1965)*. (1966) (B)
- 55.2. *Mathématiques. Classe de première D (programmes de 1966)* (with Hubert Delorme). (1968) (B)
- 56. THEISSEN, Augustine D. (1877-1949)** – West Baden College, West Baden Springs, Indiana (USA)
- 56.1. *First Course in Algebra* (with Louis A. McCoy). (1936) (C)
- 56.2. *Second Course in Algebra* (with Louis A. McCoy). (1937) (C)

- 57. THIO de POL, Santiago (1938-2022)** – Universidad de Barcelona, Barcelona (Spain)
- 57.1. *Primos o algunos dislates sobre números*. (1976) (E)
- 57.2. *Hacia la matemática-3* (with Adolfo Negro and Santiago Pérez-Cacho). (1977) (B)
- 57.3. *Hacia la matemática-2* (with Adolfo Negro and Santiago Pérez-Cacho). (1981) (B)
- 58. TURNER, Guglielmo (1807-1852)** – Panormitana Domus Probationis, Palermo (Italy)
- 58.1. *Elementi di geometria*. 2 vols. (1813) (B)
- 58.2. *Istituzioni di algebra elementare*. (1847) (B)
- 59. VOISIN, Jacques (1936-)** – Université Officielle de Bujumbura, Bujumbura (Burundi); Collège du Saint-Ésprit, Bujumbura (Burundi)
- 59.1. *Leçons sur les espace finis. Cours d'algebre speciale*. (1968) (C)
- 60. WEINBERGER, José (1900-1968)** – Colegio Inmaculada Concepción, Madrid (Spain)
- 60.1. *Matemáticas. Sexto curso de bachillerato. Combinatoria y geometría analítica*. (1938) (B)
- 60.2. *Repaso de matemáticas elementales. Séptimo curso de bachillerato. Preparación del examen de estado*. (1950) (B)
- 60.3. *Matemáticas. Cuarto curso de bachillerato. Algebra y geometría*. (B)
- 60.5. *Matemáticas. Quinto curso de bachillerato. Complementos de algebra y trigonometría*. (B)
- 60.6. *Matemáticas. Séptimo curso de bachillerato, cálculo diferencial e integral*. (B)

2. Books on Physics and Chemistry

1. **AGUINAGA MORENO, Rafael de (1928-2017)** – Universidad Pontificia Comillas, ICAI, Madrid (Spain)
 - 1.1. *Mecánica* (1990) (C)
2. **ALBUQUERQUE-PAI, George (1882-1962)** – St. Aloysius College, Mangalore (India)
 - 2.1. *Intermediate Practical Chemistry*. (1937) (C)
3. **ANAYA DUARTE, Gabriel (1935-2017)** – Universidad Iberoamericana, Ciudad de México (Mexico)
 - 3.1. *Dinámica del cuerpo rígido* (with J. Flores Valdés). (1989) (C)
4. **BARNOLA, Joaquín M^a de (1870-1925)** – Instituto Químico de Sarria, Barcelona (Spain)
 - 4.1. *Autodidaxis de química práctica. 500 experimentos al alcance de todos*. (1913, 1943) (C)
5. **BASAURI RETOLAZA, Daniel (1897-1967)** – Colegio Externado de San José, San Salvador (El Salvador)
 - 5.1. *Apuntes de química* (1948; 2nd ed.) (B)
6. **BAYMA, Joseph (1816-1892)** – Stonyhurst College, Clitheroe, Lancashire (United Kingdom); Santa Clara University, Santa Clara, California (USA)
 - 6.1. *The Elements of Molecular Mechanics*. (1866) (C)
7. **BRAVO SANTOS, Jaime (1914-1999)** – Colegio de San José, Valladolid (Spain)
 - 7.1. *Teoría y práctica de la nomenclatura química y formulación del símbolo químico a la reacción nuclear*. (1955)
 - 7.2. *Química general y aplicada a la industria*.
8. **BRICARELLI, Carlo (1857-1931)** – Pontificia Università Gregoriana, Rome (Italy)
 - 8.1. *Ottica física e ottica artística*. (1914) (C)
9. **BRUGIER, Eduardo (1838-1919)** – Colegio San Ignacio, Santiago (Chile)
 - 9.1. *Tratado de física elemental* (7 eds.) (B)

10. **CANUDAS, Antonio (1814-1891)** – Colegio de Manresa, Manresa (Spain)
 - 10.1. *Tratado elemental de física*. (1864) (B)
11. **CARRERAS, Rosendo (1904-1989)** - Colegio Sagrado Corazón de Jesús, Sucre (Bolivia)
 - 11.1. *Química general e inorgánica. Moderno resumen*. (B)
 - 11.2. *Coefficientes de las reacciones químicas*. (B)
12. **CASTRO, Maturino de (1890-1940)** – Colegio de Belén, Havana (Cuba)
 - 12.1. *Física. Primer curso: mecánica y termología*. (1927) (B)
 - 12.2. *Física. Primer curso: mecánica-termología-acústica. Segundo curso: Óptica. Magnetismo. Electricidad*. (B)
13. **CASTEX, Mariano R. (1932-)** (left the Society of Jesus in 1970); Observatorio de Física Cósmica de San Miguel, San Miguel (Argentina)
 - 13.1. *Compendio de física. I y II* (with V.H. Cicardo). (1962) (B)
14. **COLMANT, Paul Prosper (1896-1983)** – Université Notre Dame de la Paix, Namur (Belgium)
 - 14.1. *Chimie générale et abrégé de chimie minérale*. (1968; 5th ed.) (C)
 - 14.2. *Introduction a la chimie générale* (C)
 - 14.3. *Chimie organique* (C)
15. **DE SINNO, Giovanni Battista (1811-1879)** – Primo Real Collegio di Napoli, Naples (Italy)
 - 15.1. *Elementi di meccanica generale*. (1853) (B)
16. **DIERCKX, François (1863-1937)** – Université Notre Dame de la Paix, Namur (Belgium)
 - 16.1. *Leçons élémentaires de chimie*. (1889) (C)
17. **DRESSEL, Ludwig (1840-1918)** – Ignatiuskolleg, Valkenburg (The Netherlands); Escuela Politécnica, Quito (Ecuador)
 - 17.1. *Química experimental inorgánica*. (1873) (C)
 - 17.2. *Química pura y aplicada*. (1873)
 - 17.3. *Estudios sobre algunas aguas minerales del Ecuador*. (1876)
 - 17.4. *Elementares Lehrbuch der Physik nach den neuesten Anschauungen*. (1895, 1900)

- 17.5. *Un tratado acerca de las teorías química dualista y unitarista.*
- 18. DUMONT, Jean Baptiste (1843-1893)** – St. Xavier College, Kolkata (India)
- 18.1. *Synoptical Tables of Modern Chemistry. Vol. I. Inorganic Chemistry.* (1884) (C)
- 19. FERNÁNDEZ-LOMANA, Román (1869-1951)** – Colegio de San José, Valladolid (Spain)
- 19.1. *Tratado de física, acomodado al cuestionario oficial del bachillerato universitario.* (1929) (B)
- 19.2. *Física elemental para los cursos 4º, 5º, 6º y 7º de enseñanza media acomodada a los nuevos cuestionarios.* (B)
- 19.3. *Complementos de química.* (1940) (B)
- 20. FERNÁNDEZ DE RETANA, José (1919-2001)** – Universidad Pontificia Comillas, ICAI, Madrid (Spain)
- 20.1. *Introducción teórica a la metalurgia física.* (1969) (C)
- 20.2. *Física y química. 1er curso de maestría industrial. Común para las ramas del metal, minera* (with José Ramón Sodupe). (1966, 1968) (C)
- 21. FERNÁNDEZ RODRIGUEZ, Jaime (1929-2013)** – Colegio Anchieta, Nova Friburgo (Brazil)
- 21.1. *Actividades prácticas de física general.* (B)
- 21.2. *Química orgánica experimental.* (B)
- 22. FERNÁNDEZ VALLADARES, Bonifacio F. (1851-1928)** – Colegio de la Inmaculada, Gijón (Spain)
- 22.1. *Tratado de física elemental.* (1900, 1913, 1921) (B)
- 23. FERROLI, Domenico (1887-1970)** – Saint Aloysius College, Mangalore (India)
- 23.1. *Madras University Lectures on the Theory of Restricted Relativity.* (1929) (C)
- 24. FOGLINI, Giacomo (1822-1907)** – Collegio Romano, Rome (Italy)
- 24.1. *Corso de meccanica.* 2 vols. (1864) (C)
- 24.2. *Corso de meccanica elementare.* (1870) (C)
- 24.3. *Corso di meccanica preceduto da una introduzione sopra i principii*

- della geometria analitica e del calcolo infinitesimale e seguito da una appendice intorno all'acustica e all'ottica.* (1870-1872) (C)
- 24.4. *Química orgánica experimental.* (C)
25. **FONTANEL, Pierre (1885-1970)** – L'Inmaculée-Conception, Montréal (Canada)
- 25.1. *L'industrie chimique et le Canada. Volume I. Chimie minerale.* (1929) (D)
- 25.2. *L'industrie chimique et le Canada. Volume II. Chimie organique.* (1930) (D)
26. **FRANCA, Leonel (1893-1948)** – Colégio Anchieta, Nova Friburgo (Brasil)
- 26.1. *Apontamentos de chimica geral.* (1919, 1928, 1932) (B)
27. **GALARZA, Francisco Javier (1892-1968)** – Colegio del Salvador, Buenos Aires (Argentina)
- 27.1. *Disoluciones. Estudio físico-químico adaptado a los estudios de las facultades de medicina, farmacia.* (1928) (C)
- 27.2. *La estructura de la materia.* (C)
28. **GALMES, Juan (1888-1976)** – Instituto Químico de Sarriá, Barcelona (Spain)
- 28.1. *Teoría electrónica de la valencia: complejos - afinidad - oxidación y reducción - cálculo de coeficientes.* (1943) (C)
- 28.2. *Química inorgánica* (Prologue by E. Vitoria, S.I.). (1946) (C)
- 28.3. *Prácticas de química inorgánica.* (1950) (C)
- 28.4. *Química: programa quinto curso de bachillerato.* (1958) (B)
- 28.5. *Química teórico-práctica. 5º curso.* (1958, 1966) (B)
- 28.6. *Manual de química general y descriptiva.* (1961) (B)
- 28.7. *Problemas de química.* (1966) (B)
- 28.8. *Química teórico-práctica.* (1966) (B)
29. **GARCÍA DONCEL, Manuel (1930-)** – Universidad Autónoma de Barcelona, Barcelona (Spain)
- 29.1. *Test de la simetría SU (6) w: polarización de resonancias producidas en un simple mecanismo periférico* (1967) (D)
- 29.2. *Heinrich Hertz: las ondas electromagnéticas* (with Xavier Roqué). (1998) (D)

- 30. GERVER, Albert (1899-1982)** – St. Ignatiuscollege, Amsterdam (The Netherlands)
- 30.1. *Isothermen van gassen tusschen 0° C en 150° C tot drukken van 2000 atmosferen.* (1934) (D)
- 31. GIANFRANCESCHI, Giuseppe (1875-1934)** – Pontificia Università Gregoriana, Rome (Italy)
- 31.1. *Costituzione della materia.* (1914) (C)
- 31.2. *La fisica dei corpuscoli. Molecole, atomi, elettroni.* (1916, 1918, 1920) (C); Translations: Spanish: *La física de los corpúsculos: moléculas, átomos y electrones* (by Juan García Mollá). (1922)
- 31.3. *Relatività e quanti.* (1921) (C)
- 32. GLOVER, Francisco N. (1925-2021)** – Ateneo de Davao University, Davao (Philippines)
- 32.1. *Science and Light. An Introduction to Natural Science.* (E)
- 33. GORETTI MINIATI, Cesare (1868-1923)** - Pontificia Università Gregoriana, Rome (Italy)
- 33.1. *Elementi di meccanica.* (1902) (C)
- 33.2. *Appunti di chimica generale e speciale.* (1904) (C)
- 33.3. *Elementi di fisica.* 3 vols. (1909) (C)
- 34. GREEFF, Henricus de (1860-1930)** – Collège Notre Dame de la Paix, Namur (Belgium)
- 34.1. *Abrégé du cours du chimie organique donné à la faculté des sciences du Collège Notre Dame de la Paix.* (C)
- 35. GRIFFE, Maurice (1925-1999)** – Collège Notre Dame de la Paix, Namur (Belgium)
- 35.1. *Chimie.* (1988) (C)
- 36. HARTMANN, Pierre (1915-1983)** - Université Saint-Joseph, Beirut (Lebanon)
- 36.1. *Contribution à l'étude des "a a' et B B'" diméthylcyclo hexanones.* (D)
- 37. HENAO, Julio de Jesús (1897-1968)** – Colegio de San Ignacio, Medellín (Colombia)
- 37.1. *Nociones de ciencias físico-químicas.* (1962) (B)
- 37.2. *Química orgánica.* 2 vols. (1963) (B)
- 37.3. *Química mineral,* (B)

- 38. HIDALGO ALEXANDRE, Pedro José (1925-2005)** – Universidad Pontificia Comillas, ICAI, Madrid (Spain)
- 38.1. *Prácticas de química.* (1972, 1985) (C)
- 39. HUFFER, Edward J.E. (1888-1980)** – Berchmanianum (Faculty of Philosophy), Nijmegen (The Netherlands)
- 39.1. *Chemie. Ervaring en Deductie.* (1948) (C)
- 40. KRAMERS, Joannes C. H. (1865-1929)** – Canisius College, Nijmegen (The Netherlands)
- 40.1. *De Electriche Geleidbaarheid van Kaliumnitraar.* (1897) (D)
- 41. LATOR, Fermín (1906-1974)** – Colegio San Francisco Javier, Tudela (Spain)
- 41.1. *Química general para los cuatro últimos cursos de bachillerato.* (1946) (B)
- 42. LEQUERICA, José Luis (1906-1990)** – Universidad Pontificia Comillas, ICAI, Madrid (Spain)
- 42.1. *La corriente alterna.* (1968) (C)
- 42.2. *Apuntes de electrotecnia.* (C)
- 43. LYNCH, Joseph (1894-1987)** – Fordham University, New York, New York (USA)
- 43.1. *General Physics.* (1933) (C)
- 44. MARTÍN-ARTAJO, José I. (1904-1984)** – Universidad Pontificia Comillas, ICAI, Madrid (Spain)
- 44.1. *Introducción al estudio de la electrotecnia. Tomo I. Campos electromagnéticos: corriente continua.* (1953) (C)
- 44.2. *Máquinas de inducción.* (1954) (C)
- 44.3. *Arrollamientos para máquinas electromagnéticas.* (1955) (D)
- 44.4. *Introducción al estudio de la electrotecnia.* (1959) (C)
- 44.5. *Máquinas de inducción.* (1959) (C)
- 44.6. *Electrotecnia. Campos eléctricos y magnéticos.* (1964) (C)
- 44.7. *Electrotecnia: transformadores.* (1965) (C)
- 45. MATAIX PLANA, Claudio (1916-1990)** - Universidad Pontificia Comillas, ICAI, Madrid (Spain)
- 45.1. *Selección mediante la analogía reo-eléctrica con papel teldeltos de un tipo de refrigeración de alabes de turbinas de gas.* (1962) (D)

- 45.2. *Turbinas de gas*. (1965) (C)
- 45.3. *Turbomáquinas térmicas: turbinas de vapor, turbinas de gas, turbocompresores*. (1973, 1988) (C)
- 45.4. *Turbomáquinas hidráulicas: turbinas hidráulicas, bombas, ventiladores*. (1975) (C)
- 45.5. *Postulados para un replanteamiento energético tras la crisis del petróleo*. (1988) (E)
46. **MATTIUSSI, Guido (1852-1925)** – Collegio Leone XIII, Milano (Italy)
- 46.1. *Fisica razionale*. 2 vols. (1901) (B)
47. **MENDES, Joao-Baptista (1902-1975)** – Instituto Nun'Alves, Caldas de Saudade (Portugal)
- 47.1. *Química liceal. Tomo I. Fundamentos*. (1965) (B)
48. **MORETTI, Jean Marie (1914-2009)** – Séminaire Missionnaire « Les Fontaines », Chantilly (France)
- 48.1. *La déshydrogénation catalytique des acides aliphatiques supérieurs*. (1945) (D)
49. **OÑATE GUILLÉN, Carmelo (1916-2006)** – Colegio de San José, Valladolid (Spain)
- 49.1. *Física. 6º curso bachillerato*. (1967) (B)
- 49.2. *Física. Preuniversitario*. (1969) (B)
- 49.3. *Física y Química. 3º BUP* (with A. Larburu López, S.I.). (1974) (B)
- 49.4. *Física y Química. 2º BUP* (with M. Santos Romero and J.A. Benito Gallego). (1981) (B)
50. **ORLAND GARCÍA, Joaquín (1888-1973)** – Universidad Pontificia Comillas, ICAI, Madrid (Spain)
- 50.1. *Los rayos X y la estructura fina de los cristales. Fundamentos teóricos y métodos prácticos* (with Julio Garrido). (1946) (D)
51. **PÉREZ DEL PULGAR, José Agustín (1875-1939)** – Universidad Pontificia Comillas, ICAI, Madrid (Spain)
- 51.1. *Electrodinámica industrial*. 4 vols. (1915-1919) (C); Translations: French: *Electrodynamique industrielle*. (1933)

- 52. PIANCIANI, Giovanni Battista (1784-1862)** – Collegio Romano, Rome (Italy)
- 52.1. *Istituzioni fisico-chimiche*. 4 vols. (1833-1834) (C)
- 52.2. *Elementi di fisico-chimica*. 2 vols. (1840-1841) (C)
- 53. OLIVEIRA PINTO, António de (1868-1933)** – Collegio Campolide, Lisbon (Portugal)
- 53.1. *Primeira contribuição para o estudio da radioatividade das águas mineraes de Portugal*. (1910) (D)
- 54. POGGIO MESORANA, José M. (1901-1978)** – Colegio Santiago Apóstol, Vigo (Spain)
- 54.1. *Guión de química elemental*. (B)
- 55. PROVENZALI, Francesco Saviero (1815-1894)** – Collegio Romano, Rome (Italy)
- 55.1. *Elementi di fisico-chimica*. 2 vols. (1865) (C)
- 55.2. *Trattato di chimica moderna*. (1877) (C)
- 56. PUIG, Ignacio (1887-1961)** – Observatorio del Ebro, Roquetas, Tarragona (Spain); Observatorio de Física Cósmica de San Miguel, San Miguel (Argentina)
- 56.1. *Teoría de las valencias positivas y negativas*. (1924) (B)
- 56.2. *Vademecum del químico: resumen de un curso general de química*. (1924, 1932, 1943, 1947) (B)
- 56.3. *Determinación de los coeficientes en las reacciones químicas por valencias positivas y negativas*. (1927) (B)
- 56.4. *Curso general de química*. (1927-1955; 10 eds.) (B)
- 56.5. *Química práctica*. (1933, 1938) (B)
- 56.6. *Resumo do curso general de química, o, vademécum do químico*. (1934-1935) (B)
- 56.7. *Materia y energía*. (1942) (E)
- 56.8. *Manual de pequeñas industrias químicas: valioso y ordenado conjunto de las fórmulas más prácticas y modernas de esta importante rama industrial, explicadas con suma sencillez, para obtener siempre los resultados más satisfactorios*. (1946) (E)
- 56.9. *Los recientes progresos en química*. (1948) (E)
- 56.10. *Los recientes progresos en electrónica*. (1950) (E)
- 56.11. *La energía nuclear. Las bombas A, H y C*. (1954) (E)
- 56.12. *Las virtudes curativas del cloruro de magnesio*. (1959) (E)
- 56.13. *Los recientes progresos en física*. (1948) (E)

- 56.14. *Elementos de química*. (1941) (B)
- 56.15. *Manual de química elemental*. (1935) (B)
- 56.16. *Química inorgánica: responde ampliamente a los nuevos programas de los colegios nacionales, escuelas normales, de comercio e industriales*. (B)
- 56.17. *Química orgánica: responde ampliamente a los nuevos programas de los colegios nacionales, escuelas normales, de comercio e industriales*. (B)
57. **RIVAS, Arturo (1898-1974)** – Colegio Apóstol Santiago, Vigo (Spain); Colegio Inmaculada, Gijón (Spain)
- 57.1. *Física y química. 5º curso*. (1945) (B)
- 57.2. *Física y química. 4º curso del bachillerato elemental*. (1961) (B)
- 57.3. *Física sexto curso de bachillerato*. (1965) (B)
- 57.4. *Materia y energía* (with José María Artero). (1973) (B)
58. **RUDDICK, James J. (1923-2007)** – Canisius College, Buffalo, New York (USA)
- 58.1. *Introductory Physics Laboratory. Guidelines for the Theory and Suggestions for Experimentation*. (C)
59. **SÁNCHEZ DEL RÍO, Luis Tomás (1930-)** – Universidad Pontificia Comillas, ICAI, Madrid (Spain)
- 59.1. *Problemas de electrónica*. (1978) (C)
- 59.2. *Electrónica básica*. (1987) (C)
60. **SAZ SERRANO, Eugenio (1878-1952)** – Instituto Químico de Sarriá, Barcelona (Spain)
- 60.1. *Oxidación y reducción: valencias positivas y negativas*. (1919) (D)
- 60.2. *Aniones, cationes y complejos en la teoría de las valencias positivas y negativas*. (1923) (D)
- 60.3. *La disociación iónica en la teoría de las valencias positivas y negativas*. (1923) (D)
- 60.4. *Nueva valoración volumétrica del potasio y del sodio juntos, aplicación a un abono potásico*. (1929) (D)
- 60.5. *Nuevos avances en el desarrollo de la teoría de las valencias positivas y negativas: modificaciones en el sistema periódico de los elementos - los subpisos de electrones y la valencia química - disociación iónica - complejos - coloides*. (1933) (D)
- 60.6. *Compendio de análisis químico cualitativo y marchas sistemáticas*. (1934) (D)

- 60.7. *Fundamentos de la química general: según las teorías de las valencias positivas y negativas*. (1943; 2nd ed.) (C)
- 60.8. *Teoría y práctica del análisis químico mineral*. (1944; 2nd ed.) (C)
- 60.9. *Los coeficientes de las reacciones químicas. Método rápido para su determinación por valencias positivas y negativas*. (1944) (C)
- 60.10. *Teoría y práctica del análisis químico mineral*. 2 vols. (1944) (C)
- 60.11. *Teoría de la valencias positivas y negativas*. (C)
- 60.12. *Química general inorgánica*. (C)
- 60.13. *Compendio de análisis químico cualitativo y marchas sistemáticas*. (C)
- 61. SCHÄRPF, Otto (1929-2019)** – Berchmans-Kolleg, Munich (Germany); Institut Laue-Langevin, Grenoble (France)
- 61.1. *Verhalten der Neutronen beim Durchgang durch die Blochwand*. (1976) (D)
- 61.2. *The Spin of the Neutron as a Measuring Probe*. (1996) (D)
- 61.3. *Neutron Studies of Polymers with an Introduction to Polymer Physics* (with B. Gabrys). (1997) (D)
- 62. SCHMITZ, Mathias (1916-1975)** – Collegio Anchieta, Porto Alegre (Brazil)
- 62.1. *Introdução à química orgânica*. (B)
- 62.2. *Bases teóricas da química orgânica*. (B)
- 63. SECCHI, Angelo (1818-1878)** – Collegio Romano, Rome (Italy)
- 63.1. *L'unità delle forze fisiche. Saggio di filosofia naturale*. (1864, 1874, 1885) (D). Translations: French: *L'unité des forces physiques. Essai de philosophie naturelle*. (1869, 1874); German: *Die Einheit der Naturkräfte. Ein Beitrag zur Naturphilosophie*. (1876, 1885, 1891); Russian: *Единство физических сил. Опыт естественнонаучной философии (Edinstvo fiziceskih sil opyt estestvenno-naucnoj filosofii)*. (1873, 1880)
- 64. SELVAGGI, Filippo (1913-1995)** – Pontificia Università Gregoriana, Rome (Italy)
- 64.1. *Problemi della fisica moderna*. (1953) (C)
- 64.2. *La struttura della materia*. (1966) (C). Translations: Spanish: *La estructura de la materia* (by E. Lator) (1970)
- 64.3. *Orientamenti della fisica*. (1961) (C). Translations: Spanish: *Orientaciones actuales de la física* (by G. Aguirre) (1961)

65. **SHANNON, James I. (1868-1950)** – Saint Louis University, St. Louis, Missouri (USA)
- 65.1. *The Amazing Electron*. (1946) (E)
66. **TEROL, Joaquin (1861-1939)** – Colegio del Salvador, Buenos Aires (Argentina)
- 66.1. *Apuntes complementarios de física* (with J. J. Dölter). 2 vols. (B)
67. **URRA, Bernardino (1888-1968)** – Colegio de San Francisco Javier, Tudela (Spain)
- 67.1. *Resumen sinóptico de química enteramente adaptados al cuestionario y texto oficial del bachillerato*. (1930) (B)
68. **VENEGAS, José Manuel (1911-1992)** – Colegio San Bartolomé, Bogotá (Colombia)
- 68.1. *Nuevo curso de física. Tom. I. Movimiento y energía*. (B)
69. **VERSTRAETEN, Achille (1902-1997)** – St. Xavier College, Kolkata (India)
- 69.1. *Physical Optics*. (C)
70. **VILLAR, Isidro (1885-1950)** – Colegio San Francisco Javier, Oña, Burgos (Spain)
- 70.1. *Problemas y ejercicios de química*. (1929) (B)
71. **VITORIA, Eduardo (1864-1958)** – Instituto Químico de Sarria, Barcelona (Spain)
- 71.1. *Química* (with A. Colomer Ibáñez and J. Fombuena López). (1906) (C)
- 71.2. *La nomenclatura moderna en la química del carbono*. (1910) (C)
- 71.3. *La catálisis química. Sus teorías y aplicaciones en el laboratorio y en la industria*. (1912; 4 eds.) (C)
- 71.4. *El acetileno, sus aplicaciones domésticas, industriales y científicas*. (1913) (C)
- 71.5. *Prácticas químicas para cátedras y laboratorios*. (1914; 7 eds.) (C)
- 71.6. *La ciencia química y la vida social*. (1916) (E)
- 71.7. *Los pesos moleculares: estudio físico-químico teórico y práctico*. (1922) (C)
- 71.8. *Estudios de química contemporánea*. (1925) (C)
- 71.9. *Manual de química moderna teórica y experimental con sus especiales aplicaciones al comercio y a la industria*. (1926; 14 eds.) (C)

- 71.10. *Química del carbono teórica y práctica con vistas muy especiales a la síntesis en el laboratorio y en la industria.* (1927, 1940) (C)
- 71.11. *Química del carbono.* (1928; 3 eds.) (C).
- 71.12. *Los compuestos órgano-metálicos: propiedades físicas y químicas. Preparación. Propiedades organolépticas y agresividad de los compuestos de este tipo.* (1936) (D)
- 71.13. *Los horizontes de la química contemporánea.* (1948) (E)
- 72. VOISIN, Jacques, (b.1936; transferred to Rocherfort Abbey in 1984) – Université Officielle de Bujumbura, Bujumbura (Burundi)**
- 72.1. *Symétrie galiléenne et mécanique quantique.* (D) (1968)
- 73. WENZEL, Guido E. (1936-2014) – UNISINOS, São Leopoldo (Brazil)**
- 73.1. *Bioquímica experimental dos alimentos.* (2001) (D)
- 74. WULF, Theodor (1868-1946) – Ignatiuskolleg, Valkenburg (The Netherlands)**
- 74.1. *Leitfaden der allgemeinen Chemie.* (1912) (C)
- 74.2. *Einsteins Relativitätstheorie.* (1921) (D). Translations: Spanish: *La teoría de la relatividad de Einstein expuesta de un modo elemental.* (1936)
- 74.3. *Lehrbuch der Physik.* (1926) (C). Translations: English: *Modern Physics* (by E. P. Dutton). (1929); English: *Modern Physics. A General Survey of its Principles* (by C. J. Smith). (1930); Spanish: *Tratado de física.* (1933)
- 74.4. *Elektrostatische Versuche mit Anwendung des Universalelektroskops.* (1928) (D)
- 74.5. *Die Faden-Elektrometer.* (1933) (D)
- 74.6. *Die Bausteine der Körperwelt. Eine Einführung in die Atomphysik.* (1935) (C)
- 75. XAVIER, Francis P., (1952-) – Loyola College, Chennai (India)**
- 75.1. *God of the Atoms.* (2006) (E)

3. Books on Biology and Anthropology

1. **ABEL I FABRE, Francesc (1933-2011)** - Barcelona (Spain)
 - 1.1. *Bioética: orígenes, presente y futuro.* (2001) (F)
2. **ALONSO BEDATE, Carlos (1935-2020)** – Instituto de Biología Molecular, Universidad Autónoma de Madrid, Madrid (Spain)
 - 2.1. *La ingeniería genética en la biotecnología.* (1982) (D)
 - 2.2. *Biotecnología II y III.* (1987, 1989) (D)
 - 2.3. *Gen-Ética* (with Federico Mayor Zaragoza). (2003) (E)
3. **AMOZURRUTIA, Jesús (1895-1949)** – Instituto de Ciencias de Guadalajara, Guadalajara (Mexico)
 - 3.1. *Hematología clínica.* (1941) (D)
 - 3.2. *Biología.* (1942) (C)
4. **ARCHER, Luís J. (1926-2011)** – Faculdade de Ciências e Tecnologia da Universidade Nova de Lisboa, Lisbon (Portugal); Instituto Gulbenkian de Ciência, Lisbon (Portugal)
 - 4.1. *Transformação genética em células sincronizadas de bacillus subtilis.* (1968) (D)
 - 4.2. *Genética molecular.* (1976) (C)
 - 4.3. *Temas biológicos e problemas humanos* (1981) (F). Translations: Spanish: *La amenaza de la biología.* (1983)
 - 4.4. *Desafios da nova genética.* (1992) (E)
 - 4.5. *Da genética à bioética.* (2006) (F)
5. **BARNOLA, Joaquín M^a de (1870-1925)** – Intituto Químico de Sarriá, Barcelona (Spain)
 - 5.1. *Manual práctico del botánico herborizador* (1905) (C)
 - 5.2. *Tratado completo de biología moderna* (with E. Pérez Arbeláez, J. Amozurrutia, S.I., J. Pujiula, S.I.). (4 vols.) (1925-1929) (C)
6. **BASTERO MONSERRAT, Juan Jesús (1942-)** – Colegio del Salvador, Zaragoza (Spain)
 - 6.1. *Bases para una programación integrada de ciencias experimentales en bachillerato* (with Ana Paula García). (1982) (B)
 - 6.2. *Claves de programación. Ciencias de la naturaleza: biología y geología* (with Julio Ayala). (1995) (B)
 - 6.3. *Astronomía sin dejar la tierra. Cuestiones abiertas para profesores de ciencias.* (2000) (E)

- 6.4. *Apuntes básicos de biología para uso de los alumnos.* (2013) (B)
- 6.5. *Biología 2º bachillerato* (with José Alcamí Pertejo, Benjamín). (2013) (B)
7. **BAUCHAU, Adrien (1918-1987)** – Université Notre Dame de la Paix, Namur (Belgium)
- 7.1. *La vie des crabes. Anatomie, physiologie, développement croissance, systematique, ecologie, comporte.* (1966) (D)
8. **BELLYNCK, August (1814-1877)** – Université Notre Dame de la Paix, Namur (Belgium)
- 8.1. *Cours élémentaire de botanique.* (1876) (C)
- 8.2. *Cours de botanique* (with Egide Pâque, S.I.). (1899) (C)
9. **BLANDINO, Giovanni (1923-2011)** – Pontificia Università Lateranense, Rome (Italy); Pontificia Università Urbaniana, Rome (Italy)
- 9.1. *Problemi e dottrine di biologia teoretica.* (1960) (C). Translations: Spanish: *Problemas y teorías sobre la naturaleza de la vida. Una exposición crítica de la moderna biología.* (1964)
- 9.2. *Vita, ordine, caso.* (1967) (F)
- 9.3. *Theories of the Nature of Life.* (1969) (F)
10. **BLATTER, Ethelbert (1877-1934)** – St. Xavier's College, Mumbai (India)
- 10.1. *The Flora of the Indian desert, Jodhpur and Jaisamer* (with F. Hallberg). (1918) (D)
- 10.2. *Flora Arabica.* 6 vols. (1919) (D)
- 10.3. *The Ferns of Bombay* (with J.F. d'Almeida). (1922) (D)
- 10.4. *Some Beautiful Indian Trees* (with Walter Samuel Millard). (1925, 1954) (E)
- 10.5. *The Palms of British India and Ceylon.* (1926) (D)
- 10.6. *The Flora of the Indus Delta* (with F. Hallberg and C. McCann). (1929) (D)
- 10.7. *Indian Medicinal Plants.* 4 vols. (1933) (D)
- 10.8. *Beautiful Flowers of Kasmir* (with Walter S. Millard). 2 vols. (1937, 1997) (D)
11. **BONÉ, Edouard L. (1919-2006)** – Université Catholique de Louvain, Leuven (Belgium)
- 11.1. *Modern Giraffes and the Fossil Giraffids of Africa* (with Ronald Singer). (1960) (D)

- 11.2. *Devenir de l'homme*. (1962) (F)
- 11.3. *Hipparion from Langebaanweg, Cape Province and a Revision of the Genus in Africa* (with Ronald Singer). (1965) (D)
12. **BOXTEL, Peter van (1878-1939)** – St. Aloysiuscollege, The Hague (The Netherlands)
 - 12.1. *Het menselijk lichaam. Zijn bouw en zijn verrichtingen*. (1946) (B)
13. **BURKE, Edmund J. (1858-1941)** – Fordham University, New York, New York (USA)
 - 13.1. *Lectures in Biology: Zoology*. (1924, 1928) (C)
14. **CABALLERO, Gustavo A. (1867-1935)** – Colegio de Belén, Havana (Cuba)
 - 14.1. *Evolución de los seres vivientes*. (1927) (E)
15. **CÁRDENAS, Jacobo (1940-1996)** – Universidad de Córdoba, Córdoba (Spain)
 - 15.1. *Espectroscopía ultravioleta-visible de compuestos biológicos* (with Manuel Pineda). (1988) (D)
16. **CARLES, Jules (1902-2000)** – Centre National de la Recherche Scientifique (CNRS), Paris (France)
 - 16.1. *Chimisme et classification chez les Iris*. (1934) (D)
 - 16.2. *Geographie botanique: étude de la végétation*. (1943; 31 eds.) (C)
 - 16.3. *Problèmes d'hérédité*. (1945) (D)
 - 16.4. *Unité et vie, esquisse d'une biophilosophie*. (1946) (F)
 - 16.5. *La fécondation*. (1949; 34 eds.) (D)
 - 16.6. *Incertitudes biologiques. L'épigénèse va-t-elle reflourir avec Lysenko?* (1949) (F)
 - 16.7. *Les origines de la vie*. (1950; 57 eds.) (E)
 - 16.8. *Le transformisme*. (1951; 25 eds.) (E)
 - 16.9. *Vers la conquête de la vie*. (1958) (E)
 - 16.10. *L'origine de l'homme dans l'évolution de la vie*. (1967) (E)
 - 16.11. *L'énergie chlorophyllienne*. (1967) (D)
 - 16.12. *Le premier homme*. (1970; 20 eds.) (E)
 - 16.13. *L'origine des espèces*. (1972; 12 eds.) (E)
 - 16.14. *Regards sur la vie*. (1977) (E)
 - 16.15. *La vie et son histoire, du big bang au surhomme*. (1989) (E)

- 17. CARRARA, Bellino (1849-1919)** – Pontificia Università Gregoriana, Rome (Italy)
- 17.1. *La biologia a suo posto. Studio critico.* (1907) (D)
- 18. CAIUS, Jean Ferdinand (1877-1944)** – St. Xavier's College, Mumbai (India)
- 18.1. *Indian Plant Remedies used in Snake Bite* (with K. S. Mhas-ka). (1931) (D)
- 18.2. *The Medicinal and Poisonous Plants of India* (1941, 1986). (D)
- 19. DORE, Francis J. (1876-1944)** – Boston College, Boston, Massachusetts (USA)
- 19.1. *Health and Happiness. An Elementary Text Book of Personal Hygiene and Physiology Based on Catholic Principles.* (1922) (B)
- 20. D'SOUZA, Alphonsus B., (1941-)** – St Aloysius College, Mangalore (India); St Joseph's College, Jakhama, Nagaland (India)
- 20.1. *Traditional Systems of Forest Conservation in North East India: The Angami Tribe of Nagaland.* (2001) (D)
- 21. ERBRICH, Paul (1928-2009)** – Kolleg Stella Matutina, Feldkirch (Austria); Hochschule für Philosophie, Munich (Germany); UNISINOS, São Leopoldo (Brazil)
- 21.1. *Im Wettlauf mit der Zukunft. Ein Materialbuch zur Umwelt- und Energiekrise* (with Günter Remmert). (1978) (F)
- 21.2. *Makrokosmos, Mikrokosmos. Ursprung, Entwicklung und Probleme der Physik.* (1996) (F)
- 21.3. *Grenzen des Wachstums im Widerstreit der Meinungen. Leitlinien für eine nachhaltige ökologische, soziale und ökonomische Entwicklung.* (2004) (F)
- 21.4. *Biologia molecular en evoluçao. Biologia teórica.* (C)
- 22. FABRINI, Natalis (1890-1953)** – Collegio San Francesco Saverio, Rome (Italy); Pontificia Università Gregoriana, Rome (Italy)
- 22.1. *Appunti di biologia. Nozioni di fisiologia umana.* (C)
- 23. FRANGANILLO BALBOA, Pelegrín (1873-1955)** – Colegio de Belén, Havana (Cuba)
- 23.1. *Aracnídeos de Asturias y Galicia.* (1916) (D)
- 23.2. *Las arañas. Manual de araneología.* (1917) (D)
- 23.3. *Contribution à l'étude des arachnides du Portugal.* (1919) (D)

- 23.4. *Elementos de anatomía y fisiología humanas.* (1922) (B)
- 23.5. *Arácnidos de Cuba.* (1923) (D)
- 23.6. *Historia natural, botánica, zoología y geología.* (1924-1927) (B)
- 23.7. *Más arácnidos nuevos de la isla de Cuba.* (1930) (D)
- 23.8. *Las aves de Cuba.* (1932) (E)
- 23.9. *La raza americana.* (1934) (E)
- 23.10. *Los arácnidos de Cuba hasta 1936.* (1936) (D)
- 23.11. *Nuevas arañas de Cuba.* (1944) (D)
- 23.12. *Biología.* (1944) (B)
- 23.13. *Nociones de ciencias naturales.* (B)
- 23.14. *Ciencias naturales para el curso de ingreso.* (2 eds.) (1945) (B)

24. **HAAS, Adolf (1914-1982)** – Berchmankolleg, Munich (Germany)
 - 24.1. *Das stammesgeschichtliche Werden der Organismen und des Menschen.* (1959) (F)
 - 24.2. *Der Mensch, Sinn der biologischen Entwicklung.* (1963) (F)

25. **HAAS, Johannes Nepomuk (1912-1993)** – Canisius-Kolleg, Berlin (Germany); Freie Universität, Berlin (Germany)
 - 25.1. *Physiologie der Zelle.* (1955) (D)
 - 25.2. *Leben in Materie. Entstehung des Lebens im Lichte der neuesten Erkenntnisse der modernen Zellenlehre.* (1956) (D)
 - 25.3. *Das Lebensproblem heute. Beitrag der Zellforschung zur Philosophie des Organischen.* (1958) (F)
 - 25.4. *Biologie und Gottesglaube. Der Gottesgedanke in der wissenschaftlichen Biologie von heute.* (1961) (F)
 - 25.5. *Physiologie der Nervenzelle.* (1962) (D)
 - 25.6. *Die Physiologie der Muskelzelle.* (1963) (D)
 - 25.7. *Der Ursprung des Lebens. Ergebnisse und Probleme der Biogeneseforschung unter besonderer Berücksichtigung der sowjetischen Forschungsergebnisse.* (1964) (F)
 - 25.8. *An der Basis des Lebens.* (1964) (F)
 - 25.9. *Sein und Leben.* (1968) (F)
 - 25.10. *Nachtrag zur Neuauflage von Biologie und Gottesglaube (Ontologie des Lebendigen).* (1986) (F)

26. **HESELHAUS, Franz (1882-1957)** – Aloisius-Kolleg, Bonn (Germany); Immaculata-Kolleg, Büren (Germany)
 - 26.1. *Leitfaden der Biologie zunächst für die Obersekunda der Gymnasien.* (1928) (B)

- 26.2. *Leitfaden der Biologie für die oberen Klassen höherer Lehranstalten.* (1946) (B)
- 27. HEUDE, Pierre Marie (1833-1902)** – Zikawei Observatory, Shanghai, China
- 27.1. *Conchyliologie fluviatile de la province de Nanking (et de la Chine centrale).* 10 vols. (1876-1885) (D)
- 27.2. *Notes sur les mollusques terrestres de la vallée du Fleuve Bleu.* (1882) (D)
- 28. HUGHES, Thomas A. (1849-1939)** – Saint Louis University, St. Louis, Missouri (USA)
- 28.1. *Principles of Anthropology and Biology.* (1890) (C)
- 29. IGNACIMUTHU, Savarimuthu (1959-)** – Loyola College, Chennai (India)
- 29.1. *Biological Control of Insect Pests.* (2003) (D)
- 29.2. *Basic Bioinformatics.* (2006, 2012) (C)
- 29.3. *Biotechnology: An Introduction.* (2008) (C)
- 29.4. *Bioethics.* (2009)
- 30. JULIA, Joaquín (1899-1987)** – Colegio de San José, Valencia (Spain)
- 30.1. *Vocabulario de ciencias naturales.* (1944; 4 eds.) (B)
- 30.2. *Vocabulario escolar de ciencias naturales.* (1944; 3 eds.) (B)
- 31. LABURU OLASCOAGA, José Antonio de (1887-1972)** – Colegio Máximo San Miguel, San Miguel (Argentina); Pontificia Università Gregoriana, Rome (Italy)
- 31.1. *Manual teórico-práctico de citología general e histología animal.* (1917) (C)
- 31.2. *Origen y evolución de la vida.* (1923) (F)
- 31.3. *Origen de la vida.* (1943) (F)
- 32. LUISIER, Afonso (1872-1957)** – Colégio Campolide, Lisbon (Portugal)
- 32.1. *Musci Salmanticenses: Descriptio et distributio specierum hactenus in provincia geographica Salmanticensi cognitarum; Brevi addito conspectu Muscorum totius Peninsulae Ibericae.* (1924) (D)

- 33. MANICKAM, Visuvasam Soosai (1944-)** – St. Mary’s School, Madurai (India)
- 33.1. *Ecological Studies of the Fern Flora of the Palni Hills: South India* (with C.A. Ninan). (1984) (D)
- 33.2. *Pteridophyte Flora of the Western Ghats - South India* (with V. Iru-dayaraj). (1991) (D)
- 33.3. *Polymorphic Ferns of the Western Ghats - South India* (with S. Dominic Rajkumar). (1999) (D)
- 34. MARCOZZI, Vittorio (1908-2005)** – Pontificia Università Gregoriana, Rome (Italy)
- 34.1. *Le origini dell’uomo*. (1944; 8 eds.) (D)
- 34.2. *La vita e l’uomo. Problemi di biologia e di antropologia*. (1946) (D)
- 34.3. *Il senso della vita umana*. (1952) (F). Translations: Spanish: *El sentido de la vida humana*. (1967)
- 34.4. *El hombre en el espacio y en el tiempo. Esquemas de antropología*. (1962) (C)
- 34.5. *L’evoluzione oggi. Creazione evolutiva*. (1966) (F)
- 34.6. *Antropologia psicologica*. (1978) (C)
- 34.7. *Fenomeni paranormali e doni mistici*. (1990) (F)
- 35. MATTHEW, Koyapillil Mathai (1930-2004)** – St. Joseph’s College, Tiruchirappalli (India)
- 35.1. *Enumeration of the Flowering Plants of Kurseong, Darjeeling District, West Bengal, India*. (1981) (D)
- 35.2. *The Flora of the Tamilnadu Carnatic*. 5 vols. (1983) (D)
- 35.3. *A Handbook of the Anglade Institute of Natural History, Shembaganur*. (1994) (D)
- 35.4. *Illustrations on the Flora of the Palni Hills, South India*. (1996) (D)
- 35.5. *The Flora of the Palni Hills, South India*. 3 vols. (1999) (D)
- 35.6. *A Manual for RHT and SHC Herbaria, India*. (1992) (D)
- 36. MERINO, Baltasar (1845-1917)** – Colegio del Apostol Santiago, La Guardia, Pontevedra (Spain)
- 36.1. *Contribución a la flora de Galicia*. (1897) (D)
- 36.2. *Complemento a la obra de Planellas “Ensayo de una flora fanerogámica gallega”*. 2 vols. (1905, 1909) (D)
- 36.3. *Flora descriptiva e ilustrada de Galicia*. (1909) (D)
- 36.4. *Adiciones a la flora de Galicia*. (1912) (D)

- 37. MOUTERDE, Paul (1892-1972)** – Université Saint-Joseph, Beirut (Lebanon)
- 37.1 *Nouvelle flore du Liban et de la Syrie*. 3 vols. (3rd vol. by A. Charpin, based on the author's manuscript) (1966, 1983) (D)
- 38. MUEDRA, Vicente (1892-1970)** – Colegio de San Ignacio, Barcelona (Spain)
- 38.1 *La perfección científica en las obras animales. Narraciones científico-recreativas*. (1948) (E)
- 38.2 *Maravillas científicas en los actos animales*. (1950) (E)
- 38.3 *Ciencias naturales. Primer curso*. (1954) (B)
- 38.4 *Ciencias naturales. Segundo curso*. (1957) (B)
- 38.5 *Ciencias naturales. Tercer curso*. (1959) (B)
- 38.6 *Atlas de anatomía animal*. (1964; 5 eds.) (B)
- 38.7 *La naturaleza*. (1965) (E)
- 38.8 *El naturalista práctico*. (1966) (E)
- 38.9 *Animales*. (1977) (E)
- 38.10 *Atlas de anatomía humana*. (1986) (B)
- 39. MUNTSCHE, Albert (1873-1967)** – Saint Louis University, St. Louis, Missouri (USA)
- 39.1 *Evolution and Culture. Their Relation in the Light of Modern Ethnology*. (1923) (D)
- 39.2 *Cultural Anthropology*. (1934, 1936) (C)
- 40. NAVÁS, Longinos (1858-1938)** – Colegio del Salvador, Zaragoza (Spain)
- 40.1 *Neuroptera. Fam. Nemopteridae*. (Genera Insectorum, fasc. 136). (1912) (D)
- 40.2 *Neuroptera. Fam. Dilaridae*. (Genera Insectorum, fasc. 156). (1914) (D)
- 40.3 *Manual del entomólogo*. (1914) (C)
- 40.4 *Monografía de l'ordre dels Rafidiòpters*. (1918) (D)
- 40.5 *Entomologia de Catalunya. Neuropters*. 3 vols. (1923, 1926, 1934) (D)
- 41. NIEUWENHOVEN, Leon M. van (1910-1968)** – Canisiuscollege, Nijmegen (The Netherlands)
- 41.1 *An Investigation into the Structure and Function of the Anterior Basal Retractor Muscle of Mytilus Edulis L.* (1947) (D)
- 41.2 *Biologie. Een wetenschap van analyse en synthese*. (1954) (C)

42. **NÚÑEZ DE CASTRO, Ignacio (1937-)** – Universidad de Málaga, Málaga (Spain)
- 42.1. *Enzimología*. (2001) (C)
- 42.2. *De la dignidad del embrión*. (2008) (F)
- 42.3. *La bioética, un camino para el presente*. (2008) (F)
43. **ORTIZ VALDIVIESO, Pedro (1926-2012)** – Pontificia Universidad Javeriana, Bogotá (Colombia)
- 43.1. *Orquídeas de Colombia. Géneros*. (1976) (D)
- 43.2. *Orquídeas ornamentales de Colombia* (with A. Martínez Martínez and G. Misas Urreta). (1980) (D)
- 43.3. *Orquídeas nativas de Colombia* (with R. Escobar and J. M. Múnera). (1991) (D)
- 43.4. *Las orquídeas del género Masdevallia en Colombia*. (2000) (D)
- 43.5. *Orquídeas. Especies de Colombia*. (2011) (D)
44. **OVERHAGE, Paul (1906-1979)** – Jesuiten Residenz, Ignatius-haus, Frankfurt (Germany)
- 44.1. *Um das Erscheinungsbild der ersten Menschen*. (1959) (D). Translations: Portuguese: *Os primeiros homens, forma corporal e evolução*. (1962) (D)
- 44.2. *Um die ursächliche Erklärung der Hominisation. Biologische Hypothesen über den Ursprung des Menschen*. (1959)
- 44.3. *Die Evolution des Lebendigen. Das Phänomen*. (1963) (D)
- 44.4. *Das Problem der Hominisation. Über den biologischen Ursprung des Menschen* (with Karl Rahner, S.I.). (1965) (F). Translations: Spanish: *El problema de la hominización. Sobre el origen biológico del hombre*. (1973)
- 44.5. *Experiment Menschheit: Die Steuerung der menschlichen Evolution*. (1969)
- 44.6. *Menschenformen im Eiszeitalter*. (1969) (D)
- 44.7. *Der Affe in dir. Von tierischen zum menschlichen Verhalten*. (1972) (E)
- 44.8. *Die biologische Zukunft der Menschheit*. (1977) (D)
45. **PALLITHANAM, Joseph M. (1915-1984)** – St. Xaviers College, Tirunelveli Tamil Nadu (India); St. Joseph's College, Tiruchirapalli (India)
- 45.1. *A Pocket Flora of the Airumalai Hills, South India* (with K. M. Matthew, S.I.). (2001) (E)

46. **PUIG, Ignacio (1887-1961)** – Observatorio del Ebro, Roquetas, Tarragona (Spain); Observatorio de Física Cósmica de San Miguel, San Miguel (Argentina)
- 46.1. *Historia natural*. (1932) (E)
47. **PUJIULA, Jaime (1869-1958)** – Instituto Químico de Sarriá, Barcelona (Spain)
- 47.1. *Estudios críticos sobre la teoría de la evolución*. (1910) (D)
- 47.2. *Citología: parte teórica*. (1914) (C)
- 47.3. *Citología: parte práctica técnica y observación*. 2 vols. (1914-1918) (C)
- 47.4. *Conferencias sobre la vida y su evolución filogenética*. (1915) (E)
- 47.5. *Histología, embriología y anatomía microscópica vegetales o sea los tejidos vegetales, sus orígenes*. (1921) (D)
- 47.6. *Elementos de embriología del hombre y demás vertebrados*. 2 vol. (1927, 1942) (C)
- 47.7. *Manual completo de biología moderna macro-y microscópica*. (1927, 1936) (C)
- 47.8. *Biología del bachiller: obra adecuada al cuestionario oficial*. (1929) (B)
- 47.9. *Trayectorias embriológicas. Lecciones de alta biología*. (1930) (C)
- 47.10. *Histología fisiológica y anatomía microscópica humana y animal con indicaciones patológicas*. (1936) (D)
- 47.11. *Embriología*. (1941) (C)
- 47.12. *Problemas biológicos*. (1941) (C)
- 47.13. *El vegetal a través del microscopio*. (1956) (E)
- 47.14. *Elementos de embriología del hombre y demás vertebrados*. (introduction and notes by Lluís Victori, S.I.) (2007)
48. **RAMBO, Balduino (1905-1961)** – UNISINOS, São Leopoldo (Brazil)
- 48.1. *Elementos de história natural*. 3 vols. (1935-1937) (C)
- 48.2. *A fisionomia do Rio Grande do Sul*. (1938) (D)
- 48.3. *Flora Riograndense*. (1946) (D)
- 48.4. *Die alte Südfloora in Brasilien*. (1958) (D)
- 48.5. *Euphorbiaceae Riograndenses*. (1960) (D)
- 48.6. *Migration Routes of the South Brazilian Rain Forest*. (1961) (D)
- 48.7. *Myrtaceae Riograndenses*. (1965) (D)
- 48.8. *Gramineae riograndensis*. (1984) (D)
- 48.9. *Viagens ao Sudoeste do Rio Grande do Sul*. (2014) (E)

- 49. RODRÍGUEZ, Salomón (1892-1953)** – Colegio San Bartolomé, Bogotá (Colombia)
- 49.1. *Nociones de anatomía, fisiología e higiene del cuerpo humano para colegios de segunda enseñanza.* (1952) (B)
- 49.2. *Nociones de biología general, zoología y botánica.* (1939) (B)
- 50. SALDANHA, Cecil J. (1926-2002)** – St. Joseph College, Bangalore (India)
- 50.1. *Flora of Hassan District, Karnataka, India* (with D. H. Nicolson and T. P. Ramamoorthy). (1976) (D)
- 50.2. *Flora of Karnataka. Magnoliaceae to Fabaceae* (with S.R. Ramesh). 2 vols. (1984) (D)
- 50.3. *Plants of India* (with J. Dhawan). (1984) (E)
- 50.4. *Karnataka - State of Environment Report 1983-1984.* (1984) (D)
- 50.5. *A Select Bibliography Andaman, Nicobar, and Lakshadweep: For an Environmental Impact Assessment.* (1989) (D)
- 50.6. *A Select Bibliography on Lakshadweep.* (1989) (D)
- 50.7. *A Select Bibliography on the Environment of Karnataka.* (1993) (D)
- 51. SANTAPAU, Hermenegildo (1903-1970)** – St. Xavier College, Mumbai (India)
- 51.1. *The Acahaceae of Bombay.* (1951) (D)
- 51.2. *Textbook of Biology. For Intermediate Students* (with R. M. H. Desai and G. R. Kshirsagar). (1953) (B)
- 51.3. *The Flora of Khandala on the Western Ghats of India.* (1953) (D)
- 51.4. *The Flora of Purandhar or an Enumeration of All the Phanerogamic Plants Discovered in Purandhar Duri.* (1957) (D)
- 51.5. *The Asclepiadaceae and Periplocaceae of Bombay.* (1960) (D)
- 51.6. *The Flora of Saurashtra.* (1962) (D)
- 51.7. *The Orchids of Bombay.* (with Z. Kapadia) (1966) (D)
- 52. SAZ SERRANO, Eugenio (1878-1952)** – Instituto Químico de Sarriá, Barcelona (Spain)
- 52.1. *Costumbres de insectos: observadas en plena naturaleza.* (1930) (E)
- 52.2. *Instinto de los animales.* (1933) (E)
- 52.3. *Costumbres de insectos. La guerra entre las hormigas.* (1943) (E)
- 53. SEHNEM, Joao (1908-1996)** – Colegio de Cristo Rei, São Leopoldo (Brazil)
- 53.1. *Noções de nutrição.* (B)

- 54. SEMPERE, Antonio (1900-1975)** – Colegio S. Calixto, La Paz (Bolivia)
- 54.1. *Apuntes de historia natural. Biología general.* (1934) (B)
- 54.2. *Apuntes de biología.* (1945) (B)
- 55. SILVA TAVARES, Joaquim da (1866-1931)** – Collegio São Fiel, Louriçal do Campo (Portugal)
- 55.1. *Cynipidae peninsulae Ibericae.* 2 vols. (1931) (D)
- 56. SIQUEIRA, Josafá Carlos de (1951-)** – Pontificia Universidade Católica do Rio de Janeiro, Rio de Janeiro (Brazil)
- 56.1. *A flora do campus.* (1992) (E)
- 57. SODIRO, Luigi (1836-1909)** – Escuela Politécnica, Quito (Ecuador); Universidad Central de Quito, Quito (Ecuador)
- 57.1. *Apuntes sobre la vegetación ecuatoriana.* (1875) (C)
- 57.2. *Gramíneas ecuatorianas de la provincia de Quito.* (1880) (C)
- 57.3. *Reflexiones sobre la agricultura ecuatoriana.* (1883) (E)
- 57.4. *Cryptogamae vasculares Quitenses adiectis speciebus in aliis provinciis dittonis Ecuadorensis hactenus detectis.* (1893) (D)
- 57.5. *Contribuciones al conocimiento de la flora ecuatoriana.* (1901-1903) (D)
- 57.6. *Tacsonias ecuatorianas.* (1906) (D)
- 57.7. *Anturios ecuatorianos.* (1906) (D)
- 57.8. *Sertula florae ecuadorensis.* (1908) (D)
- 58. SOLÁ, Juan Bautista (1866-1923)** – Ateneo de Manila, Manila (Philippines)
- 58.1. *A Hand List of the Most Common Minerals, Plants and Animals in the Philippine Islands.* (E)
- 59. SONET, Philippe (1912-1990)** – Université Notre Dame de la Paix, Namur (Belgium)
- 59.1. *Initiation à la zoologie.* (1943) (C)
- 59.2. *Vie et moeurs des fourmis.* (E)
- 60. TEILHARD DE CHARDIN, Pierre (1881-1955)** – Institute de Paléontology Humaine, Paris (France); Institute of Geo-Biology, Beijing (China)
- Early Man in China.* (1941)
- 60.2. *La question de l'homme fossile.* (1943) (D): Translations: English: *Fossil Men. Recent Discoveries and Present Problems.* (1943)

- 60.3. *Le phénomène humain*. (1955) (F). Translations: English: *The phenomenon of Man*. (1959); German: *Der Mensch im Kosmos*. (1959); Italian: *Il Fenomeno Umano*. (1962); Spanish: *El fenómeno humano*. (1967)
- 60.4. *L'Apparition de l'homme* (1956) (D). Translations: English, *The Appearance of Man*. (1956); Italian: *L'apparizione dell'uomo*. (1956); German: *Die Entstehung des Menschen*. (1961); Spanish, *La aparición del hombre*. (1967)
- 61. TROSSARELLI, Ferdinando (1899-1977)** – Istituto Arecco, Genoa (Italy)
- 61.1. *Corso di Biologia ad uso delle scuole medie superiori*. (1948) (B)
- 61.2. *Anatomia e fisiologia animale e vegetale con nozioni d'igiene*. (1948) (B)
- 62. URIBE URIBE, Lorenzo (1900-1980)** – Universidad Nacional de Colombia, Bogotá (Colombia); Pontificia Universidad Javeriana, Bogotá (Colombia)
- 62.1. *La Flora de Antioquia*. (1940) (D)
- 62.2. *Botánica. Texto para Bachillerato*. (1942; 16 eds.) (B)
- 62.3. *Nociones de Ciencias* (with Julio de J. Henao, S.I.). (1959) (B)
- 63. VERGNANO, Carlo M. (1924-2013)** – Istituto Sociale, Turin (Italy)
- 63.1. *Proprietà, significato biologico e metabolismo dei Coenzimi Piridinici* (with A. Bonsignore). (D)
- 64. WADDINGTON, George (1879-1944)** – Heythrop College, Chipping Norton/London, United Kingdom
- 64.1. *Principles of Biology* (with Monica Taylor). (1935) (C)
- 65. WASMANN, Erich (1859-1931)** – Jesuitenkolleg in Maria Laach, Gleeß, Germany
- 65.1. *Instinkt und Intelligenz im Tierreich: ein kritischer Beitrag zur modernen Tierpsychologie*. (1897) (D). Translations: English: *Instinct and Intelligence in the Animal Kingdom. A Critical Contribution to Modern Animal Psychology*. (1903); Italian: *Istinto e intelligenza nel regno animale. Contributo critico alla zoopsicologia moderna*. (by A. Boni) (1908).
- 65.2. *Die psychischen Fähigkeiten der Ameisen*. (1899) (D)
- 65.3. *Vergleichende Studien über das Seelenleben der Ameisen und der höheren Tiere*. (1900) (D)

- 65.4. *Die moderne Biologie und die Entwicklungstheorie.* (1904, 1905, 1906) (D). Translations: Italian: *La biologia moderna e la teoria dell'evoluzione.* (1906); English: *Modern biology and the Theory of Evolution.* (1910)
- 65.5. *The Berlin Discussion of the Problem of Evolution; Full Report of the Lectures Given in February, 1907, and of the Evening Discussion.* (1909) (D)
- 65.6. *Die Ameisenmimikry.* (1925) (D)
- 66. WENZEL, Guido E. (1936-2014)** – UNISINOS, São Leopoldo (Brazil)
- 66.1. *Bioquímica experimental dos alimentos.* (2010) (D)
- 66.2. *Carboidratos nutracêuticos e/ou prebióticos.* (2012) (D)
- 67. WIDEMAN, Charles J. (1896-1990)** – Loyola University, Chicago, Illinois (USA)
- 67.1. *The Biological World. Drawings* (with Raphaelis Gehlen, S.C.C.). (1949) (E)
- 68. ZULUETA, Adrián (1904-1982)** – Colegio San Francisco Javier, Oña, Burgos (Spain)
- 68.1. *Nociones de antropología.* (1957) (C)
- 68.2. *Cuestiones biológicas.* (1963) (C)

4. Books on Astronomy, Meteorology and Earth Sciences

1. **ALGUÉ, José (1856-1930)** – Manila Observatory, Manila (Philippines)
 - 1.1. *Baguíos o ciclones filipinos. Estudio teórico práctico.* (1898) (D)
 - 1.2. *The Barocyclonometer.* (1898) (D)
 - 1.3. *Las nubes en el Archipiélago Filipino.* (1899) (D)
 - 1.4. *Atlas de Filipinas (Atlas of the Philippines).* (1900) (D)
 - 1.5. *El Archipiélago Filipino* (with J. Closé, S.I.). 2 vols. (1900) (D)
 - 1.5. *The Cyclones of the Far East.* (1904) (D)

2. **ARCIDIACONO Vincenzo (1910-2001)** – Pontificia Università Gregoriana, Rome (Italy); Osservatorio sismico-meteorologico, Istituto Nazionale di Geofisica, Messina (Italy)
 - 2.1. *Come si evolvono i cieli. Origine ed evoluzione dell'universo.* 2 vols. (1958) (E)
 - 2.2. *Atomo universo creazione.* (1976) (E)
 - 2.3. *La cosmologia, Einstein e il "big bang".* (1979) (E)
 - 2.4. *La scienza e l'universo.* (1982) (E)
 - 2.5. *Creazione, evoluzione, principio antropico.* (1983) (F)
 - 2.6. *L'astronomia e gli astrofili.* (1985) (E)
 - 2.7. *Interrogativi sull'universo.* (1992) (E)

3. **AUPING BIRCH, John (1945-)** – Universidad Iberoamericana, Mexico City (Mexico)
 - 3.1. *Una revisión de las teorías sobre el origen y la evolución del universo: física, metafísica, ciencia.* (2009) (F)

4. **BALCELLS, Mariano (1864-1911)** – Observatorio del Ebro, Roquetas, Tarragona (Spain)
 - 4.1. *La observación solar.* (1908) (D). Translations: French: *L'observation solaire.* (1909)

5. **BASAURI RETOLAZA, Daniel (1897-1967)** – Colegio Externado de San José, San Salvador (El Salvador)
 - 5.1. *Contribución a la mineralogía y geología de El Salvador.* (1945) (D)

6. **BRAUN, Carl (1831-1907)** – Haynald Observatórium, Kallócsa (Hungary)
 - 6.1. *Die Gravitations-Constante, die Masse und mittlere Dichte der Erde nach einer neuen experimentellen Bestimmung.* (1896) (D)

7. **BRICARELLI, Carlo (1857-1931)** – Pontificia Università Gregoriana, Rome (Italy)
 - 7.1. *Lectures populaires d'astronomie*. (1906) (E)
 - 7.2. *Il movimiento nei sistemi solari*. (1891) (D)
 - 7.3. *Meteoriti. Collezione della Specola Vaticana*. (D)

8. **BRUGIER, Eduard (1838-1919)** – Colegio San Ignacio, Santiago (Chile)
 - 8.1. *Nociones de cosmografía*. (1899) (B)
 - 8.2. *Elementos de cosmografía para colegios de segunda enseñanza*. (1904) (B)
 - 8.3. *Cosmografía*. (1926) (B)

9. **BUSSOLINI, Juan Antonio (1905-1966)** – Observatorio de Física Cósmica, San Miguel (Argentina)
 - 9.1. *Los esquemas y la trabazón del universo*. (1962) (D)

10. **CABRÉ, Ramón (1922-1997)** – Observatorio de San Calixto, La Paz (Bolivia)
 - 10.1. *Historia sísmica de Bolivia*. (1965) (D)
 - 10.2. *El clima de la Paz*. (1988) (D)
 - 10.3. *Propagation and Attenuation of Lg Waves in South America*. (1989) (D)
 - 10.4. *Sismicidad en Bolivia* (with A. Vega). (1989) (D)

11. **CANUDAS, Antonio (1814-1891)** – Colegio de Manresa, Manresa (Spain); Colegio Máximo, Tortosa (Spain)
 - 11.1. *Nociones de cosmografía*. (1884) (C)

12. **CAPPELLETTI, Enrico M. (1831-1899)** – Colegio del Sagrado Corazón, Puebla (México)
 - 12.1. *Apuntes de astronomía elemental o cosmografía*. (1887) (B)

13. **CHEVALIER, Stanislas (1852-1930)** – Zikawei Observatory, Shanghai (China)
 - 13.1. *Atlas du Haut Yant-tse de I-tchang-fou à Ping-chan, levé de Novembre 1879 a Mars 1898*. (1899) (D)
 - 13.2. *Complement de l'Atlas de Haut Yant-tse*. (1899) (D)

14. **CIRERA, Ricardo (1864-1932)** – Manila Observatory, Manila (Philippines); Observatorio del Ebro, Roquetas, Tarragona (Spain)
 - 14.1. *El magnetismo terrestre en Filipinas*. (1893) (D)
 - 14.2. *Noticia del Observatorio del Ebro y de algunas observaciones del eclipse del 30 de agosto de 1905*. (1906) (D)
 - 14.3. *Viajes científicos*. (1913) (E)

15. **COLIN, Elie (1852-1923)** – Observatoire d’Ambohidempona, Antananarivo (Madagascar)
 - 15.1. *Les cyclones du 9 au 12 décembre 1902 à Ambohidempona*. (1902) (D)
 - 15.2. *Les cyclones à Madagascar*. (1913)

16. **CONSOLMAGNO, Guy, (1952-)** – Vatican Observatory (Vatican City)
 - 16.1. *Turn Left at Orion: A Hundred Night Sky Objects to See in a Small Telescope - and How to Find Them* (with Dan M. Davis). (1989; 4 eds.) (E). Translations: Italian: *A Orione svolta a sinistra* (with Dan M. Davis). (1999)
 - 16.2. *Worlds apart: A Book in Planetary Science* (with M. W. Schaefer). (1994) (E)
 - 16.3. *“The Way to the dwelling of light”: How Physics Illuminates Creation*. (1998) (E)
 - 16.4. *Vatican Observatory Meteorite Catalogue*. (2001) (D)
 - 16.5. *God’s Mechanics*. (2008) (F)
 - 16.6. *The Heavens Proclaim. Astronomy and the Vatican*. (2009) (E). Translations: Spanish: *Los cielos proclaman*. (2010); Slovak: *Nebe sia Rozprávajú*. (2013); Italian: *L’infinitamente grande*. (2009)

17. **CORBALLY, Christopher J. (1946-)** – Vatican Observatory (Vatican City)
 - 17.1. *Stellar Spectral Classification* (with Richard O. Gray and Adam J. Burgasser). (2009) (D)

18. **COYNE, George (1933-2020)** – Vatican Observatory (Vatican City)
 - 18.1. *Viandanti nell’Universo. Astronomia e senso della vita* (with A. Omizzolo). (2000) (E). English translation: *Wayfarers in the Cosmos: The Human Quest for Meaning*. (2002)
 - 18.2. *A Comprehensible Universe. The Interplay of Science and Theology* (with Michael Heller). (2010) (F)

- 19. DECHEVRENS, Marc (1845-1923)** – Zikawei Observatory, Shanghai (China); Maison St. Louis Observatory, Jersey, United Kingdom
- 19.1. *Le typhon du 31 juillet 1879.* (1879) (D)
- 19.2. *L'inclinaison des vents sur l'horizon.* (1881) (D)
- 19.3. *Sur la variation de temperature observée dans les cyclones.* (1887) (D)
- 19.4. *Courant verticaux dans les cyclones.* (1887) (D)
- 20. DELANEY, Charles (1867-1944)** – Manresa House, Hawthorn, Victoria (Australia)
- 20.1. *The Glory of the Stars.* (1924) (E)
- 21. DEPPERMAN, Charles (1889-1957)** – Manila Observatory, Manila (Philippines)
- 21.1. *Outline of Philippine Frontology.* (1936) (D)
- 21.2. *Typhoons Originating in the China Sea.* (1938) (D)
- 21.3. *Some Characteristics of Philippine Typhoons.* (1939) (D)
- 21.4. *Upper Air Circulation (1-6 km) over the Philippines and Adjacent Regions.* (1940) (D)
- 22. DESCOTES, Pierre M. (1877-1964)** – Observatorio de San Calixto, La Paz (Bolivia)
- 22.1. *Courbes isodiastématiques. Nouvelle méthode pour les calculer.* (1933) (D)
- 23. DRESSEL, Ludwig (1840-1918)** – Escuela Politécnica, Quito (Ecuador); Ignatiuskolleg, Valkenburg (The Netherlands)
- 23.1. *Die Basaltbildung in ihren einzelnen Umständen erläutert.* (1866) (D)
- 23.2. *Geognostisch-geologische Skizze der Laacher-Vulkangegend.* (1871) (D)
- 24. DUE ROJO, Antonio (1898-1975)** – Observatorio de Cartuja, Granada (Spain)
- 24.1. *Vida y muerte del cosmos.* (1960) (E)
- 24.2. *El mundo de los mares. Conquistas de la oceanografía moderna.* (1961) (E)
- 24.3. *El cosmos en la actualidad científica.* (1962) (E)
- 24.4. *La frontera de nuestro mundo. Conquistas de la meteorología moderna.* (1963) (E)

- 24.5. *La tierra agitada: conquistas de la geofísica moderna.* (1965) (E)
- 24.6. *Edades y tiempos en el universo. Conquistas de la cronometría moderna.* (1966) (E)
25. **EGIDI, Giovanni (1835-1897)** – Osservatorio del Collegio Romano, Rome (Italy)
- 25.1. *Tratatto elementare di gnomónica teorica e practica.* (1882) (C)
26. **ESCH, Michael A. (1869-1938)** – Ignatiuskolleg, Valkenburg (The Netherlands)
- 26.1. *Beobachtungen veränderlicher Sterne.* 7 vols. (1930-1937) (D)
27. **FAURA, Federico (1840-1897)** – Manila Observatory, Manila (Philippines)
- 27.1. *Resumen de los ciclones de 1879.* (1880) (D)
- 27.2. *Observaciones sismométricas de los terremotos del mes de julio de 1880.* (1880) (D)
- 27.3. *Señales precursoras de temporal en el Archipiélago Filipino.* (1882) (D)
- 27.4. *El barómetro aneroides aplicado a la previsión del tiempo en el Archipiélago Filipino.* (1892) (D)
28. **FÉNYI, Julius (1845-1927)** – Haynald Obszervatórium, Kalooca (Hungary)
- 28.1. *Meteorologische Beobachtungen angestellt am Haynald-Obszervatórium in den Jahren 1886-1888 (Mit Beschreibung des Anemometers und des Sonnenscheinographen).* (1891) (D)
- 28.2. *Protuberanzen beobachtet in den Jahren 1888, 1889, 1890 am Haynald-Obszervatórium.* (1902) (D)
- 28.3. *Protuberanzen beobachtet in den Jahren 1891, 1892.* (1911) (D)
29. **FERRARI, Gaspare Stanislao (1834-1903)** – Pontificia Università Gregoriana, Rome (Italy)
- 29.1. *Il calendario Gregoriano.* (1882) (E)
- 29.2. *Elementi di astronomia teorico pratica.* 2 vols. (1883) (C)
30. **FONTANEL, Pierre (1885-1970)** – L'Inmaculée-Conception, Montreal (Canada)
- 30.1. *Minéralogie et géologie appliquées au Canada.* (1927) (D)

- 31. FROC, Louis (1859-1932)** – Zikawei Observatory, Shanghai (China)
- 31.1. *L'atmosphère en Extrême-Orient*. (1898) (D)
 - 31.2. *Signaux aux Marins*. (1909) (D)
 - 31.3. *La pluie en Chine, 1900-1910. Onze années d'observation*. (1912) (D)
 - 31.4. *Atlas of tracks of 620 typhoons*. (1893-1918) (1920) (D)
- 32. GHERZI, Ernesto (1886-1973)** – Zikawei Observatory, Shanghai (China); Collège Jean de Brébeuf, Montreal (Canada)
- 32.1. *Étude sur la pluie en Chine*. (1928, 1937) (D)
 - 32.2. *The Winds and the Upper Currents Along the China Coast and the Yantse Valley*. (1931) (D)
 - 32.3. *Atlas de l'humidité relative en Chine*. (1934) (D)
 - 32.4. *Atlas thermométrique de la Chine*. (1934) (D)
 - 32.5. *Climatological Atlas of East Asia*. (1944) (D)
 - 32.6. *The Meteorology of China*. 2 vols. (1951; 4 eds.) (D)
 - 32.7. *The Forecasting of Tropical Cyclones*. (1958; 3 eds.) (D)
 - 32.8. *Meteorological Notes*. (1959; 3 eds.) (D)
 - 32.9. *Atlas de la pluie en Chine*. (1928) (D)
- 33. GOETZ, Edmund (1865-1933)** – Observatory of Bulawayo, Bulawayo (Zimbabwe)
- 33.1. *The Rainfall of Rhodesia*. (1909) (D)
- 34. GOUIN, Pierre (1917-2005)** – Observatory of Addis Ababa, Addis Ababa (Ethiopia); Collège Jean de Brébeuf, Montreal (Canada)
- 34.1. *Earthquake History of Ethiopia and the Horn of Africa*. (1979) (D)
 - 34.2. *Historical Earthquakes Felt in Quebec from 1534 to March 1925*. (2001) (D)
- 35. GUTIÉRREZ LANZA, Manuel (1865-1943)** – Observatorio de Belén, Havana (Cuba)
- 35.1. *Climatología de Cuba*. (1913) (D)
 - 35.2. *Conferencias de sismología*. (1917)
 - 35.3. *Génesis y evolución del huracán del 20 de octubre de 1926 y catálogo de ciclones en la isla de Cuba 1865-1926*. (1927) (D)
 - 35.4. *Los ciclones de las Antillas*. (1935) (D)

36. **HAGEN, Johann Georg (1847-1930)** – Georgetown Observatory, Washington, D.C. (USA); Vatican Observatory (Vatican City)
- 36.1. *Atlas stellarum varabilium*. 7 vols. (1899-1929) (D)
- 36.2. *La rotation de la Terre. Ses preuves mécaniques anciennes et nouvelles*. (1911) (D)
- 36.3. *Die veränderlichen Sterne, geschichtlich-technischer Teil*. (1921) (D)
37. **HEYDEN, Francis J. (1907-1991)** – Georgetown Observatory, Washington, D.C. (USA); Manila Observatory, Manila (Philippines)
- 37.1. *The Complete Astronomer*. (1975) (E)
- 37.2. *A Laboratory Manual for Undergraduate Astronomy*. (1976) (C)
38. **LEJAY, Pierre (1898-1958)** – Zikawei Observatory, Shanghai (China); Laboratoire National de Radioélectricité, CNRS, Paris (France)
- 38.1. *Exploration gravimétrique de l'Extrême-Orient*. (1936) (D)
- 38.2. *Étude gravimétrique des îles Philippines*. (1938) (D)
- 38.3. *Développements modernes de la gravimétrie*. (1947) (C)
- 38.4. *Méthodes modernes de recherches sur la haute atmosphère*. (1954) (D)
39. **LENZ, Johann Maria (1902-1985)** – Collegium Canisianum, Innsbruck (Austria)
- 39.1. *"Die Himmel rühmen..." Bilder vom Weltall für alle erklärt*. 14 eds. (1935-1956) (E). Translations: Dutch: *Het Lied van de Hemel: tochten door het heelal*. 16 eds. (1936); Polish: *Wycieczka w przestworza. Opowiadania o słońcu i gwiazdach*; Portuguese: *Sinfonia Sideral* (by Arnaldo Bruxel, S.I.).
40. **LONC, William (1930-2014)** – Saint Mary's University, Halifax (Canada)
- 40.1. *Radio Astronomy Projects: A Hands-on Guide to Exploring the Radio Universe* (2006; 3rd ed.) (E)
41. **LÓPEZ DE LA FUENTE, Julio (1927-2012)** – Universidad Centroamericana, Managua (Nicaragua)
- 41.1. *Registros, análisis y correlaciones climático-solar tropicales 1983-2008, Managua-Nicaragua*. (2010) (D)

42. **LYNCH, John J. (1894-1987)** – Fordham University, New York, New York (USA)
42.1. *Watching our Trembling Earth for 50 Years.* (1970) (E)
43. **MACELWANE, James B. (1883-1956)** – Saint Louis University, St. Louis, Missouri (USA)
43.1. *Introduction to Theoretical Seismology. Part I: Geodynamics.* (1936) (C)
43.2. *When the Earth Quakes.* (1947) (E)
44. **MARTÍNEZ DE BUJANDA CIORDIA, Jesús (1896-1959)** – Facultad de Teología, Granada (Spain)
44.1. *Astronomía y astros habitados.* (1957) (E)
45. **MAYAUD, Pierre-Noël (1923-2006)** – Institute de Physique du Globe, CNRS, Paris (France)
45.1. *Terre Adélie, 1951-1952. Magnétisme terrestre.* 2 Vols. (1954) (D)
45.2. *A Hundred Year Series of Geomagnetic Data 1868-1967.* (1973) (D)
45.3. *Derivation, Meaning, and Use of Geomagnetic Indices.* (1980) (D)
46. **MENYHÁRTH, Lazlo (1849-1897)** – Missão de São José de Boroma (Mozambique)
46.1. *Meteorologische Beobachtungen, angestellt zu Boroma in Süd-Afrika im Jahre 1891 und 1892.* (with J. Fényi, S.I.) (1895) (D)
47. **MERINO, Baltasar (1845-1917)** – Colegio de La Guardia, Pontevedra (Spain)
47.1. *Estudio sobre las borrascas en la costa occidental de Galicia.* (1883) (D)
48. **MIER Y TERÁN, J. (1878-1942)** – Observatorio de Cartuja, Granada (Spain)
48.1. *Eclipse total del sol del 30 de agosto de 1905. Observaciones hechas en Carrión de los Condes (Palencia).* (1906) (D)
49. **MÜLLER, Adolf (1853-1939)** – Pontificia Università Gregoriana, Rome (Italy)
49.1. *Elementi di astronomia ad uso delle scuole e per istruzione privata.* (1904) (B)
49.2. *Elementi di astronomia. Astrofisica.* (1906) (C)
49.3. *Elementi di astronomia. Astrometria.* (1908) (C)

50. **PERRY, Stephen (1833-1889)** – Observatory of Stonyhurst College, Clitheroe, Lancashire (United Kingdom)
- 50.1. *Notes on a Voyage to Kerguelen Island to Observe the Transit of Venus, December 8, 1874.* (1876) (D)
51. **POISSON, Charles (1882-1965)** – Observatoire d'Ambohidempona, Antananarivo (Madagascar)
- 51.1. *Les cyclones tropicaux.* (1931) (D)
- 51.2. *Documentation statistique sur les cyclones malgaches.* (1936) (D)
- 51.3. *Les anomalies magnétiques à l'Observatoire d'Ambohidempona (Madagascar).* (1937) (D)
- 51.4. *Abri météorologique et température à Tananarive.* (1940) (D)
- 51.5. *Météorologie de Madagascar.* (1945) (D)
52. **PUIG, Ignacio (1887-1961)** – Observatorio del Ebro, Roquetas, Tarragona (Spain); Observatorio de Física Cósmica, San Miguel (Argentina)
- 52.1. *Astronomía popular.* (1934) (E)
- 52.2. *La edad de la tierra.* (1934) (E)
- 52.3. *Observatorio de San Miguel, República Argentina.* (1935) (D)
- 52.4. *La estratosfera.* (1940) (E)
- 52.5. *La pluralidad de los mundos habitados.* (1941) (E)
- 52.6. *Los rayos cósmicos.* (1944) (E)
- 52.7. *¿Qué es la física cósmica?* (1944) (E)
- 52.8. *La astronomía contada con sencillez.* (1951) (E)
- 52.9. *Los satélites rusos y americanos.* (1958) (E)
- 52.11. *Cómo y cuándo acabará el mundo.* (1958). (E)
- 52.12. *Mineralogía y geología.* (E)
53. **RAMÍREZ, Jesús Emilio (1904-1981)** – Instituto de Geofísica, Universidad Javeriana, Bogotá (Colombia)
- 53.1. *Nociones de prospección geofísica* (with Luís G. Duran). (1957) (C)
- 53.2. *Historia de los terremotos en Colombia.* (1969) (D)
- 53.3. *Nariño Proyecto Cooperativo Internacional 1973. La transición océano-continente en el suroeste colombiano* (with L.T. Aldrich). (1977) (D)
54. **RIGGE, William F. (1857-1927)** – Creighton University, Omaha, Nebraska (USA)
- 54.1. *The Graphic Construction of Eclipses and Occultations.* (1924) (D)
- 54.2. *Harmonic Curves.* (1926)

- 55. RODÉS, Luis (1881-1939)** – Observatorio del Ebro, Roquetas, Tarragona (Spain)
- 55.1. *Harmonies del firmament.* (1920) (E)
- 55.2. *El firmamento.* (1927, 1939) (E)
- 55.3. *El firmamento. Edición reducida.* (1934) (E)
- 56. ROMANÍA, Antonio (1900-1981)** – Observatorio del Ebro, Roquetas, Tarragona (Spain)
- 56.1. *Los atrayentes problemas de la moderna astronomía.* (1940) (E)
- 56.2. *Provisional Atlas of Rapid Variations.* (1958) (D)
- 56.3. *Idea sobre el estado actual de la cosmología.* (1966) (D)
- 57. ROSA, Paolo (1825-1874)** – Osservatorio del Collegio Romano, Rome (Italy)
- 57.1. *Studi intorno ai diametri solari.* (1874) (D)
- 58. SADERRA MASÓ, Miguel (1865-1939)** – Manila Observatory, Manila (Philippines)
- 58.1. *La sismología en Filipinas.* (1895) (D)
- 58.2. *Catalogue of Violent and Destructive Earthquakes in Philippines 1599-1909.* (1910) (D)
- 59. SÁNCHEZ NAVARRO-NEUMANN, Manuel (1867-1941)** – Observatorio de Cartuja, Granada (Spain)
- 59.1. *Terremotos, sismógrafos y edificios.* (1916) (D)
- 59.2. *Bosquejo sísmico de la península Ibérica.* (1921) (D)
- 60. SARASOLA, Simón (1871-1947)** – Observatorio de Belen, Havana (Cuba)
- 60.1. *Los huracanes de las Antillas.* (1925, 1928) (D)
- 61. SAZ SERRANO, Eugenio (1878-1952)** – Instituto Químico de Sarriá, Barcelona (Spain)
- 61.1. *Los minerales: su reconocimiento sistemático.* (1946) (D)
- 62. SCHRADER, Godofredo Ernesto (1875-1945)** – Gymnasio Catharinense, Florianopolis (Brazil)
- 62.1. *Compendio de cosmographia.* (1930) (B)

- 63. SECCHI, Angelo (1818-1878)** – Osservatorio del Collegio Romano, Rome (Italy)
- 63.1. *Quadro fisico del sistema solare secondo le più recenti osservazioni.* (1859)
- 63.2. *Osservazioni e ricerche astronomiche sulla grande cometa del giugno.* (1861). (D)
- 63.3. *Sulla struttura delle macchie solari.* (1866) (D)
- 63.4. *La météorologie et le météorographe à l'Exposition Universelle* (1867).
- 63.5. *Le soleil* (1870, 1875-1877) (D). Translations: German: *Die Sonne.* (1872); Spanish: *El sol.* (1879); Italian: *Il sole.* (1884)
- 63.6. *Le stelle. Saggio di astronomia siderale.* (1877, 1878) (D); Translations: French: *Les étoiles. Essai d'astronomie sidérale* (1879, 1884, 1895)
- 63.7. *Lezioni elementari di fisica terrestre, coll'aggiunta di due discorsi sopra la grandezza del creato.* (1879) (D); Translations: German: *Die Größe der Schöpfung. Zwei Vorträge.* (1883, 1885); Spanish: *Lecciones elementales de física terrestre. Dos discursos sobre la grandeza de la creación.* (1886)
- 63.8. *Catalogo delle stelle di cui si è determinato lo spettro luminoso.* (1867) (D)
- 63.9. *Sugli spettri prismatici delle stelle fisse.* (1868) (D)
- 64. SELGA, Miguel (1879-1956)** – Manila Observatory, Manila (Philippines)
- 64.1. *The Velocity of Wind at Manila, Baguio, Iliilo and Cebu.* (1931) (D)
- 64.2. *Charts of Remarkable Typhoons in the Philippines 1902-1934. Catalogue of Typhoons 1348-1934.* (1935) (D)
- 64.3. *Observations of Rainfall in the Philippines.* (1935) (D)
- 65. SEQUEIROS, Leandro (1942-)** – Universidad de Zaragoza, Zaragoza (Spain); Universidad de Sevilla, Sevilla (Spain); Facultad de Teología de Granada, Granada (Spain)
- 65.1. *Geología de Aragón: rocas y fósiles.* (with L. Liñan). (1978) (D)
- 65.2. *Atlas de los fósiles.* (1989) (D)
- 65.3. *La extinción de las especies biológicas. Construcción de un paradigma científico.* (2002) (D)
- 65.4. *Puede un cristiano ser evolucionista.* (2009) (F)
- 65.5. *Elefantes, Tortugas y volcanes. Alcolea de Calatrava y sus fósiles.* (2010) (E)

66. **SOHON, Frederick W. (1894-1972)** – Georgetown University, Washington D.C. (USA)
- 66.1. *Introduction to Theoretical Seismology. Vol. 2: Seismometry.* (1936) (C)
67. **SPINA, Pedro (1839-1925)** – Instituto Oriente, Puebla (Mexico)
- 67.1. *El clima, nociones generales.* (1890) (D)
- 67.2. *Teoría de la rotación universal.* (D)
68. **STEIN, Johan (1871-1951)** – Vatican Observatory (Vatican City)
- 68.1. *Die veränderlichen Sterne. Band II: mathematisch-physikalischer Teil* (with J. Hagen, S.I.). (1924) (D)
69. **TEILHARD DE CHARDIN, Pierre (1881-1955)** – Institute de Paléontology Humaine, Paris (France); Institute of Geo-Biology, Beijing (China); Wenner-Gren Foundation, New York, New York (USA)
- 69.1. *The Granitisation in China.* (1940) (D)
- 69.2. *New Rodents of the Pliocene and Lower Pleistocene of North China.* (1942) (D)
- 69.3. *Chinese Fossil Mammals* (with P. Leroy, S.I.). (1942) (D)
- 69.4. *Le Néolithique de la Chine.* (1944) (D)
- 69.5. *Les Féélides de Chine.* (1945) (D)
- 69.6. *Les Mustéélidés de Chine.* (1945) (D)
70. **TOOLAN, David (1935-2002)** – America Magazine, New York, New York (USA)
- 70.1. *At Home in the Cosmos.* (2001) (E)
71. **UBACH, José (1871-1935)** – Observatorio del Ebro, Roquetas, Tarragona (Spain)
- 71.1. *Observaciones del eclipse anular del 3 de diciembre en Buenos Aires (República Argentina).* (1919) (D)
- 71.2. *Observações astronômicas feitas em “Vila Devoto” no eclipse de 1 outubro de 1921.* (1922) (D)
- 71.3. *Estudio sobre las observaciones de los pasos de Mercurio en 1907, 1914 y 1924.* (1925) (D)

72. **UDÍAS, Agustín (1935-)** – Universidad Complutense, Madrid (Spain)
- 72.1. *Física de la tierra*. (1981) (B)
 - 72.2. *Fundamentos de geofísica* (with J. Mezcua). (1985, 1997) (C)
 - 72.3. *Fundamentos de sismología* (with J. Mezcua). (1996) (C)
 - 72.4. *Principles of Seismology*. (1999) (C)
 - 72.5. *Ciencia y religión. Dos visiones del mundo*. (2010) (F)
 - 72.6. *Problemas resueltos de geofísica* (with E. Bufo and C. Pro). (2010) (C). Translations: English: *Solved Problems of Geophysics* (with E. Bufo and C. Pro). (2012)
 - 72.7. *Source Mechanisms of Earthquakes. Theory and Practice* (with R. Madariaga and E. Bufo). (2014) (D)
73. **VICO, Francesco de (1805-1848)** – Osservatorio del Collegio Romano, Rome (Italy)
- 73.1. *Corso elementare di astronomía*. (C)
 - 73.2. *Osservazioni fatte alla Specola dell'Università Gregoriana in Collegio Romano*. (1845) (D)
74. **VIÑES, Benito (1837-1893)** – Observatorio de Belén, Havana (Cuba)
- 74.1. *Apuntes relativos a los ciclones de las Antillas en 1875 y 1876*. (1877) (D)
 - 74.2. *El cicloscopio de las Antillas*. (1880) (D)
 - 74.3. *Investigaciones relativas a la circulación y traslación ciclónica de los huracanes de las Antillas*. (1895) (D); Translations: English: *Investigation of the Cyclonic Circulation and Translator Movement of the West Indian Hurricanes*. (1898)
75. **WOLFF, Theodor (1841-1924)** – Escuela Politécnica, Quito (Ecuador)
- 75.1. *Memorias sobre las islas Galápagos*. (1887) (D)
 - 75.2. *Carta geográfica del Ecuador*. (1892) (D)
76. **ZUMOFFEN, Godefroy (1848-1928)** – Université Saint-Joseph, Beirut (Lebanon)
- 76.1. *Géologie du Liban*. (1926) (D)

Authors by Countries of Work

AFRICA

COLIN, Elie (1852-1923), Observatoire d'Ambohidempona, Antananarivo, Madagascar

GOETZ, Edmund (1865-1933), Observatory of Bulawayo, Bulawayo, Zimbabwe

GOUIN, Pierre (1917-2005), Observatory of Addis Ababa, Addis Ababa, Ethiopia

MENYHÁRTH, Lazlo (1849-1897), Missão de São José de Boroma, Mozambique

POISSON, Charles (1882-1965), Observatoire d'Ambohidempona, Antananarivo, Madagascar

VOISIN, Jacques (1936-), Université Officielle de Bujumbura, Bujumbura, Burundi

ARGENTINA

BUSSOLINI, Juan Antonio (1905-1966), Observatorio de Física Cósmica, San Miguel

CASTEX, Mariano N. (1932-), Observatorio de Física Cósmica de San Miguel, San Miguel. (Left the Society of Jesus in 1970)

GALARZA, Francisco Javier (1892-1968), Colegio del Salvador, Buenos Aires

LABURU OLASCOAGA, José Antonio de (1887-1972), Colegio Máximo San Miguel, San Miguel

ORTELLS y CERDÁ, Antonio (1861-1951), Colegio de la Inmaculada Concepción, Santa Fe

PUIG, Ignacio (1887-1961), Observatorio de Física Cósmica de San Miguel, San Miguel

TEROL, Joaquín (1861-1939), Colegio del Salvador, Buenos Aires

AUSTRALIA

DELANEY, Charles (1867-1944), Manresa House, Hawthorn, Victoria

AUSTRIA

ERBRICH, Paul (1928-2009), Kolleg Stella Matutina, Feldkirch

LENZ, Johann Maria (1902-1985), Collegium Canisianum, Innsbruck

BELGIUM

BAUCHAU, Adrien (1918-1987), Université Notre Dame de la Paix, Namur

BELLYNCK, August (1814-1877), Université Notre Dame de la Paix, Namur

BONÉ, Edouard L. (1919-2006), Université Catholique de Louvain, Leuven

COLMANT, Paul Prosper (1896-1983), Université Notre Dame de la Paix, Namur

DIERCKX, François. (1863-1937), Université Notre Dame de la Paix, Namur

GREEFF, Henricus de (1860-1930), Collège Notre Dame de la Paix, Namur

GRIFFE, Maurice (1925-1999), Collège Notre Dame de la Paix, Namur

SONET, Philippe (1912-1990), Université Notre Dame de la Paix, Namur

BOLIVIA

CABRÉ, Ramón (1922-1997), Observatorio de San Calixto, La Paz

CARRERAS, Rosendo (1904-1989), Colegio Sagrado Corazón de Jesús, Sucre

CERRO CORCOLES, Francisco (1857-1945), Colegio del Sagrado Corazón, Sucre

DESCOTES, Pierre M. (1877-1964), Observatorio de San Calixto, La Paz

ECHEVARRÍA, Antonio de (1904-1976), Colegio de San Calixto, La Paz

SEMPERE, Antonio (1900-1975), Colegio de San Calixto, La Paz

BRAZIL

ERBRICH, Paul (1928-2009), UNISINOS, São Leopoldo

FERNÁNDEZ RODRÍGUEZ, Jaime (1929-2013), Colégio Anchieta, Nova Friburgo

FRANCA, Leonel (1893-1948), ,

RAMBO, Balduino (1905-1961), UNISINOS, São Leopoldo

SCHMITZ, Mathias (1916-1975), Colégio Anchieta, Porto Alegre

SCHRADER, Godofredo Ernesto (1875-1945), Gymnasio Catharinense, Florianopolis

SCHWEITZER, Paul A. (1937-), Pontificia Universidade Católica do Rio de Janeiro, Rio de Janeiro

SEHNEM, Joao (1908-1996), Colégio de Cristo Rei, São Leopoldo

SIQUEIRA, Josafá Carlos de (1951-), Pontificia Universidade Católica do Rio de Janeiro

WENZEL, Guido Edgar (1936-2014), UNISINOS, São Leopoldo

CANADA

FONTANEL, Pierre (1885-1970), L'Inmaculée-Conception, Montreal
GOUIN, Pierre (1917-2005), Collège Jean de Brébeuf, Montreal
LONC, William (1930-2014), Saint Mary's University, Halifax

CENTRAL AMERICA

BASAURI RETOLAZA, Daniel (1897-1967), Colegio Externado de San José, San Salvador, El Salvador
LÓPEZ DE LA FUENTE, Julio (1927-2012), Universidad Centroamericana, Managua, Nicaragua
STELLA, Antonio (1877-1966), Colegio de Granada, Managua, Nicaragua

CHILE

BRUGIER, Eduardo (1838-1919), Colegio San Ignacio, Santiago

CHINA

CHEVALIER, Stanislas (1852-1930), Zikawei Observatory, Shanghai
DECHEVRENS, Marc (1845-1923), Zikawei Observatory, Shanghai
FROC, Louis (1859-1932), Zikawei Observatory, Shanghai
GHERZI, Ernesto (1886-1973), Zikawei Observatory, Shanghai
HEUDE, Pierre Marie (1833-1902), Zikawei Observatory, Shanghai
LEJAY, Pierre (1898-1958), Zikawei Observatory, Shanghai
MARTÍNEZ CÁRDENAS, Alberto (1905-1988), Jesuit Mission Lu'an City, Huoshan county, Anhui province
TEILHARD DE CHARDIN, Pierre (1881-1955), Institute of Geo-Biology, Beijing

COLOMBIA

BECERRA, José Ramón (1897-1985), Colegio San Ignacio de Loyola, Medellín
HENAO, Julio de Jesús (1897-1968), Colegio de San Ignacio, Medellín
ORTIZ RESTREPO, Carlos (1893-1975), Colegio de San Bartolomé, Bogotá
ORTIZ VALDIVIESO, Pedro (1926-2012), Pontificia Universidad Javeriana, Bogotá
RAMÍREZ, Jesús Emilio (1904-1981), Instituto de Geofísica, Pontificia Universidad Javeriana, Bogotá
RODRÍGUEZ, Salomón (1892-1953), Colegio S. Bartolomé, Bogotá
URIBE URIBE, Lorenzo (1900-1980), Universidad Nacional de Colombia, Bogotá; Pontificia Universidad Javeriana, Bogotá
VENEGAS, José Manuel (1911-1992), Colegio San Bartolomé, Bogotá

CUBA

CABALLERO, Gustavo A. (1867-1935), Colegio de Belén, Havana

CASTRO, Maturino de (1890-1940), Colegio de Belén, Havana

FRANGANILLO BALBOA, Pelegrín (1873-1955), Colegio de Belén, Havana

GUTIÉRREZ LANZA, Manuel (1865-1943), Observatorio de Belén, Havana

JIMÉNEZ, Amador (1904-1971), Colegio de Belén, Havana

SARASOLA, Simón (1871-1947), Observatorio de Belén, Havana

VIÑES, Benito (1837-1893), Observatorio de Belén, Havana

ECUADOR

DRESSEL, Ludwig (1840-1918), Escuela Politécnica, Quito

EPPING, Joseph (1835-1894), Escuela Politécnica, Quito

KOLBERG, Joseph (1832-1893), Escuela Politécnica, Quito

SODIRO, Luigi (1836-1909), Escuela Politécnica, Quito; Universidad Central de Quito

WOLFF, Theodor (1841-1924), Escuela Politécnica, Quito

FRANCE

CARLES, Jules (1902-2000), Centre National de la Recherche Scientifique (CNRS), Paris

LACOUTURE, Henri (1838-1913), Collège Le Caousou, Toulouse

LEJAY, Pierre (1898-1958), Laboratoire National de Radioélectricité, CNRS, Paris

MAYAUD, Pierre-Noël (1923-2006), Institute de Physique du Globe, CNRS, Paris

MORETTI, Jean (1914-2009), Séminaire Missionnaire « Les Fontaines », Chantilly

POTRON, Maurice (1872-1942), Collège Saint Geneviève, Paris

SCHÄRPF, Otto (1929-2019), Institut Laue-Langevin, Grenoble

SÉGUIER, Jean de (1862-1935), Residentia Parisiensis, Paris

TALPAIN, Leon (1915-1991), Collège Sainte-Geneviève, Paris

TEILHARD DE CHARDIN, Pierre (1881-1955), Institut de Paléontologie Humaine, Paris

GERMANY

ERBRICH, Paul (1928-2009), Hochschule für Philosophie, Munich

HAAS, Adolf (1914-1982), Berchmankolleg, Munich

HAAS, Johannes Nepomuk (1912-1993), Canisius-Kolleg, Berlin; Freie Universität, Berlin

HESELHAUS, Franz (1882-1957), Aloisius-Kolleg, Bonn; Immaculata-Kolleg, Büren

OVERHAGE, Paul (1906-1979), Jesuiten-Residenz, Ignatiushaus, Frankfurt

SCHÄRPF, Otto (1929- 2019), Berchmans-Kolleg, Munich

WASMANN, Erich (1859-1931), Jesuitenkolleg in Maria Laach, Glees

HUNGARY

BRAUN, Carl (1831-1907), Haynald Obszervatórium, Kalocsa

FÉNYI, Julius (1845-1927), Haynald Obszervatórium, Kalocsa

INDIA

ALBUQUERQUE-PAI, George (1882-1962), St. Aloysius College, Mangalore

BLATTER, Ethelbert (1877-1934), St. Xavier's College, Mumbai

CAIUS, Jean Ferdinand (1877-1944), St. Xavier's College, Mumbai

D'SOUZA, Alphonsus B. (1941-), St Aloysius College, Mangalore; St Joseph's College, Jakhama, Nagaland

DUMONT, Jean Baptiste (1843-1893), St. Xavier College, Kolkata

FERROLI, Domenico (1887-1970), Saint Aloysius College, Mangalore

GOREUX, François (1905-1991), Xavier's College, Kolkata

IGNACIMUTHU, Savarimuthu (1959-), Loyola College, Chennai

MANICKAM, Visuvasam Soosai (1944-), St. Mary's School, Madurai

MATTHEW, Koyapillil Mathai (1930-2004), St. Joseph's College, Tiruchirappalli

PALLITHANAM, Joseph M. (1915-1984), Tamil Nadu;

PEREIRA, Richard A. (1912-2007), Saint Mary's High School, Mumbai; St. Xavier's College, Delhi

SALDANHA, Cecil J. (1926-2002), St. Joseph College, Bangalore

SANTAPAU, Hermenegildo (1903-1970), St. Xavier College, Mumbai

VERSTRAETEN, Achille (1902-1997), St. Xavier College, Kolkata

XAVIER, Francis P. (1952-), Loyola College, Chennai

ITALY

ARCIDIACONO, Vincenzo (1910-2001), Pontificia Università Gregoriana, Rome; Osservatorio sismico-meteorologico, Istituto Nazionale di Geofisica, Messina

BLANDINO, Giovanni (1923-2011), Pontificia Università Lateranense: Pontificia Università Urbaniana, Rome

BRICARELLI, Carlo (1857-1931), Pontificia Università Gregoriana, Rome

CARRARA, Bellino (1849-1919), Pontificia Università Gregoriana, Rome
CASOLARO, Vincenzo (1906-1995), Istituto Pontano, Naples
DE SINNO, Giovanni Battista (1811-1879), Primo Real Collegio di Napoli, Naples
EGIDI, Giovanni (1835-1897), Nobile Collegio Mondragone, Frascati; Osservatorio del Collegio Romano, Rome
FABRINI, Natalis (1890-1953), Collegio San Francesco Saverio, Rome; Pontificia Università Gregoriana, Rome
FEDERICI, Stanislao (1860-1947), Istituto San Francesco Saverio, Livorno
FERRARI, Gaspare Stanislao (1834-1903), Pontificia Università Gregoriana, Rome
FOGLINI, Giacomo (1822-1907), Collegio Romano, Rome
GIANFRANCESCHI, Giuseppe (1875-1934), Pontificia Università Gregoriana, Rome
GORETTI MINIATI, Cesare (1868-1923), Pontificia Università Gregoriana, Rome
LEGGIO, Serafino (1871-1934), Istituto Pontano, Naples
MARCOZZI, Vittorio (1908-2005), Pontificia Università Gregoriana, Rome
MATTIUSSI, Guido (1852-1925), Collegio Leone XIII, Milano
MÜLLER, Adolf (1853-1939), Pontificia Università Gregoriana, Rome
PIANCIANI, Giovanni Battista (1748-1862), Collegio Romano, Rome
PROVENZALI, Francesco Saverio (1815-1894), Collegio Romano, Rome
ROSA, Paolo (1825-1874), Osservatorio del Collegio Romano, Rome
SECCHI, Angelo (1818-1878), Collegio Romano, Rome
SELVAGGI, Filippo (1913-1995), Pontificia Università Gregoriana, Rome
TROSSARELLI, Ferdinando (1899-1977), Istituto Arecco, Genoa
TURNER, Guglielmo (1807-1852), Panormitana Domus Probationis, Palermo
VERGNANO, Carlo M. (1924-2013), Istituto Sociale, Turin
VICO, Francesco de (1805-1848), Osservatorio del Collegio Romano, Rome

LEBANON

HARTMANN, Pierre (1915-1983), Université Saint-Joseph, Beirut
MEIGNE, Maurice (1905-1975), Université Saint-Joseph, Beirut

MOUTERDE, Paul (1892-1972), Université Saint-Joseph, Beirut
 ZUMOFFEN, Godefroy (1848-1928), Université Saint-Joseph, Beirut

MEXICO

AMOZURRUTIA, Jesús (1895-1949), Instituto de Ciencias de Guadalajara, Guadalajara
 ANAYA DUARTE, Gabriel (1935-2017), Universidad Iberoamericana, Mexico City
 AUPING BIRCH, John (1945-2017), Universidad Iberoamericana, Mexico City
 CAPPELLETTI, Enrico M. (1831-1899), Colegio del Sagrado Corazón, Puebla
 MARTÍNEZ SANCHEZ, Jorge (1945-), Universidad Autónoma de Querétaro, Santiago de Querétaro
 MORENO A., José Luis (1950-) Colegio Ibero, Tijuana
 SPINA, Pedro (1839-1925), Instituto Oriente, Puebla

THE NETHERLANDS

BOXTEL, Peter Van (1878-1939), St. Aloysiuscollege, The Hague
 DRESSEL, Ludwig (1840-1918), Ignatiuskolleg, Valkenburg
 ESCH, Michael A. (1869-1938), Ignatiuskolleg, Valkenburg
 GERVER, Albert (1899-1982), St. Ignatiuscollege, Amsterdam
 HUFFER, Edward J.E. (1888-1980), Berchmanianum, Nijmegen
 JANSSEN, Christian J.A. (1900-1961), St. Aloysiuscollege, The Hague
 KRAMERS, Joannes C. H. (1865-1929), Canisius College, Nijmegen,
 NIEUWENHOVEN, Leon M. van (1910-1968), Canisius College, Nijmegen
 WULF, Theodor (1868-1946), Ignatiuskolleg, Valkenburg

PERU

BARTRA, Clemente (1924-2017), Colegio de la Inmaculada, Lima

PHILIPPINES

ALGUÉ, José (1856-1930), Manila Observatory, Manila
 CIRERA, Ricardo (1864-1932), Manila Observatory, Manila
 DEPPERMAN, Charles (1889-1957), Manila Observatory, Manila
 FAURA, Federico (1840-1897), Manila Observatory, Manila
 GLOVER, Francisco N. (1925-), Ateneo de Davao University, Davao
 HEYDEN, Francis J. (1907-1991), Manila Observatory, Manila
 SADERRA MASÓ, Miguel (1865-1939), Manila Observatory, Manila

SELGA, Miguel (1879-1956), Manila Observatory, Manila
SOLÁ, Juan Bautista (1866-1923), Ateneo de Manila, Manila

PORTUGAL

ARCHER, Luís J. (1926-2011), Faculdade de Ciências e Tecnologia da Universidade Nova de Lisboa, Lisbon; Instituto Gulbenkian de Ciência, Lisbon
LUISIER, Alfonso (1872-1957), Colégio Campolide, Lisbon
MENDES, João-Baptista (1902-1975), Instituto Nun'Alves, Caldas de Saudade
OLIVEIRA PINTO, António de (1868-1933), Colégio Campolide, Lisbon
SILVA TAVARES, Joaquim da (1866-1931), Colégio São Fiel, Louriçal do Campo

SPAIN

ABEL I FABRE, Francesc (1933-2011), Instituto Borja de Bioética, Barcelona
AGUINAGA MORENO, Rafael de (1928-2017), Universidad Pontificia Comillas, ICAI, Madrid
AGUSTÍ, José M., (1931-), Colegio San Ignacio, Barcelona
ALONSO BEDATE, Carlos (1935-2020), Instituto de Biología Molecular, CSIC, Universidad Autónoma de Madrid, Madrid
ARECHA VALETA, Eduardo (1867-1928), Colegio San Ignacio, San Sebastián
BALCELLS, Mariano (1864-1911), Observatorio del Ebro, Roquetas, Tarragona
BARNOLA, Joaquín M^a de (1870-1925), Instituto Químico de Sarriá, Barcelona
BASTERO MONSERRAT, Juan Jesús (1942-), Colegio del Salvador, Zaragoza
BRAVO SANTOS, Jaime (1914-1999), Colegio de San José, Valladolid
CANUDAS, Antonio (1814-1891), Colegio de Manresa, Colegio Máximo, Tortosa
CÁRDENAS, Jacobo (1940-1996), Universidad de Córdoba, Cordoba
CHACÓN XERICA, Enrique (1905-1993), Universidad de Deusto, Bilbao
CIRERA, Ricardo (1864-1932), Observatorio del Ebro, Roquetas, Tarragona
DOU, Alberto (1915-2009), Universidad Complutense, Madrid
DUE ROJO, Antonio (1898-1975), Observatorio de Cartuja, Granada
ECHAGUIBEL, Emiliano de (1879-1954), Colegio Máximo San Francisco Javier, Oña, Burgos

- FERNÁNDEZ DE CASTRO, Manuel María (1905-1985), Colegio Inmaculado Corazón de María, Sevilla
- FERNÁNDEZ DE RETANA, José (1919-2001), Universidad Pontificia Comillas, ICAI, Madrid
- FERNÁNDEZ-LOMANA, Román (1869-1951), Colegio de San José, Valladolid
- FERNÁNDEZ VALLADARES, Bonifacio F. (1851-1928), Colegio de la Inmaculada, Gijón
- GALMES, Juan (1888-1976), Instituto Químico de Sarriá, Barcelona
- GAYA Y BUSQUETS, Fernando (1884-1962), Colegio San José, Valencia
- GARCÍA DONCEL, Manuel (1930-), Universidad Autónoma de Barcelona, Barcelona
- GÓMEZ-PALLETE, Manuel (1910-1989), Colegio San José, Villafranca de los Barros
- GONZÁLEZ REGÚLEZ, Jesus (1889-1979), Colegio San José, Valladolid
- HIDALGO ALEXANDRE, Pedro José (1925-2005), Universidad Pontificia Comillas, ICAI, Madrid
- JIMÉNEZ TARRONI, Enrique (1876-1950), Universidad Pontificia Comillas, ICAI, Madrid
- JULIA, Joaquín (1899-1987), Colegio de San José, Valencia
- LATOR, Fermín (1906-1974), Colegio San Francisco Javier, Tudela
- LEACH ALBERT, Javier (1942-2016), Universidad Complutense, Madrid
- LEQUERICA, José Luis (1906-1990), Universidad Pontificia Comillas, ICAI, Madrid
- LÓPEZ DE LA RICA, Antonio (1939-), Universidad Pontificia Comillas, ICAI, Madrid
- MANZANAL MAESTRO, Francisco (1928-), Colegio de San José, Valladolid
- MARTÍN-ARTAJÓ, José I. (1904-1984), Universidad Pontificia Comillas, ICAI, Madrid
- MARTÍNEZ DE BUJANDA CIORDIA, Jesús (1896-1959), Facultad de Teología, Granada
- MATAIX PLANA, Claudio (1916-1990), Universidad Pontificia Comillas, ICAI, Madrid
- MERINO, Baltasar (1845-1917), Colegio del Apostol Santiago, La Guardia, Pontevedra
- MIER Y TERÁN, José. (1878-1942), Observatorio de Cartuja, Granada

- MOCOROA MÚGICA, Agustín M. (1912-2000), Colegio Seminario Menor, Javier, Navarra
- MUEDRA, Vicente (1892-1970), Colegio de San Ignacio, Barcelona
- NAVÁS, Longinos (1858-1938), Colegio del Salvador, Zaragoza
- NÚÑEZ DE CASTRO, Ignacio (1937-), Universidad de Málaga, Málaga
- OLABARRIETA, Luciano, (1879-1960), Universidad de Deusto, Bilbao
- OÑATE GUILLÉN, Carmelo (1916-2006), Colegio de San José, Valladolid
- ORLAND GARCÍA, Joaquín (1888-1973), Universidad Pontificia Comillas, ICAI, Madrid
- PÉREZ DEL PULGAR, José Agustín (1875-1939), Universidad Pontificia Comillas, ICAI, Madrid
- POGGIO MESORANA, José M. (1901-1978), Colegio Santiago Apóstol, Vigo
- PUIG, Ignacio (1887-1961), Observatorio del Ebro, Roquetas, Tarragona
- PUJIULA, Jaime (1869-1958), Instituto Químico de Sarriá, Barcelona
- RIVAS, Arturo (1898-1974), Colegio Apóstol Santiago, Vigo; Colegio Inmaculada, Gijón
- RODÉS, Luis (1881-1939), Observatorio del Ebro, Roquetas, Tarragona
- ROMAÑÁ, Antonio (1900-1981), Observatorio del Ebro, Roquetas, Tarragona
- SÁNCHEZ DEL RÍO, Luis Tomás (1930-), Universidad Pontificia Comillas, ICAI, Madrid
- SÁNCHEZ NAVARRO-NEUMANN, Manuel (1867-1941), Observatorio de Cartuja, Granada
- SAZ SERRANO, Eugenio (1878-1952), Instituto Químico de Sarriá, Barcelona
- SEQUEIROS, Leandro (1942-), Universidad de Zaragoza, Zaragoza
- SOLER, Pablo (1902-1989), Colegio Inmaculada Concepción (Areneros), Madrid
- TARRONI JIMÉNEZ, Enrique (1876-1950), Universidad Pontificia Comillas, ICAI, Madrid
- THIO de POL, Santiago (1938-2022), Universidad de Barcelona, Barcelona
- UBACH, José (1871-1935), Observatorio del Ebro, Roquetas, Tarragona
- UDÍAS, Agustín (1935-), Universidad Complutense, Madrid

URRA, Bernardino (1888-1968), Colegio de San Francisco Javier, Tudela

VILLAR, Isidro (1885-1950), Colegio San Francisco Javier, Oña, Burgos

VITORIA, Eduardo (1864-1958), Instituto Químico de Sarriá, Barcelona

WEINBERGER, José (1900-1968), Colegio Inmaculada Concepción (Areneros), Madrid

ZULUETA, Adrián (1904-1982), Colegio San Francisco Javier, Oña, Burgos

UNITED KINGDOM

BAYMA, Joseph (1816-1892), Stonyhurst College, Clitheroe, Lancashire

O'HARA, Carl W. (1886-1967), Manresa House, London

PERRY, Stephen (1833-1889), Observatory of Stonyhurst College, Clitheroe, Lancashire

WADDINGTON, George (1879-1944), Heythrop College, Chipping Norton/London

UNITED STATES OF AMERICA

BAYMA, Joseph (1816-1892), Santa Clara University, Santa Clara, California

BRANDE, Edward W. (1931- 2003), Saint Peter's University, Jersey City, New Jersey

BURKE, Edmund J. (1858-1941), Fordham University, New York, New York

DORE, Francis J. (1876-1944), Boston College, Boston, Massachusetts

HEYDEN, Francis J. (1907-1991), Georgetown Observatory, Washington, D.C.

HUGHES, Thomas A. (1849-1939), Saint Louis University, St. Louis, Missouri

LARGUIER, Everett (1910-2000), Spring Hill College, Mobile, Alabama

LYNCH, Joseph (1894-1987), Fordham University, New York, New York

MACELWANE, James B. (1883-1956), Saint Louis University, St. Louis, Missouri

MUNTSCH, Albert (1873-1967), Saint Louis University, St. Louis, Missouri

RIGGE, William F. (1857-1927), Creighton University, Omaha, Nebraska

RUDDICK, James J. (1923-2007), Canisius College, Buffalo, New York

SHANNON, James I. (1868-1950), Saint Louis University, St. Louis, Missouri

SMITH, James F. (1930-2016), Le Moyne College, Syracuse, New York

SMOLARSKI, Dennis C. (1947-), Santa Clara University, Santa Clara, California

SOHON, Frederick W. (1894-1972), Georgetown University, Washington, D.C.

THEISSEN, Augustine D. (1877-1949), West Baden College, West Baden Springs, Indiana

TOOLAN, David (1935-2002), America Magazine, New York, New York

WIDEMAN, Charles J. (1896-1990), Loyola University, Chicago

VATICAN CITY

CONSOLMAGNO, Guy (1952-), Vatican Observatory

CORBALLY, Cristopher J. (1946-), Vatican Observatory

COYNE, George (1933-2020), Vatican Observatory

HAGEN, Johann Georg (1847-1930), Vatican Observatory

STEIN, Johan (1871-1951), Vatican Observatory