Theology in the World of Science

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Abstract: Culture and modern society are posing new challenges to academic institutions (primarily in Europe). Therefore, the Church has started once again to re-establish its own universities to promote dialogue between faith and reason. In the academic world, student autonomy has begun to increase, and more and more, emphasis is placed on self-teaching using multimedia technologies. This has led to innovative activities in the teaching process and in the teaching system, forcing the transformation of universities, who are questioned about their role to play in the world. There must exist a dialogue between theology and exact sciences, which John Paul II described in Sapientia Christiana, Ex Corde Ecclesiae and Fides et Ratio. Two reflections come to the fore: the first is about the mutual benefits that science and theology can obtain in intellectual dialogue in a university context. Consequently, theology plays an indispensable role in the search for the unity of knowledge, which is why it is obliged to a responsible university presence. The second describes the importance of reaching an integrated view, which oscillates between scientific and religious-theological reading of the world. Veritatis gaudium of Pope Francis shows the prospects for the development of Church studies. New social and cultural dynamics force us to extend the purpose of studies, so that the Gospel not only reaches each person individually, but all cultures in their entirety.

Keywords: university, theology, John Paul II, Pope Francis, Sapientia christiana, Fides et ratio, Veritatis gaudium

Abstrakt: Kultura i współczesne społeczeństwo rzucają nowe wyzwania instytucjom akademickim (przede wszystkim w Europie). Dlatego Kościół zaczął na nowo zakładać własne uniwersytety, aby promować dialog pomiędzy wiarą i rozumem. W świecie akademickim zaczęła wzrastać autonomia studenta, coraz większy nacisk kładzie się na autodydaktykę przy użyciu technologii multimedialnych. Doprowadziło to do działań

1 The article is based on the text of the speech delivered during the International Scientific Conference on the occasion of the 50th anniversary of the Pontifical Faculty of Theology in post-war Poland “Theology in the world of science,” which was held at the Pontifical Faculty of Theology in Wrocław on 22–23 June, 2018.
This text serves as an opportunity to reflect on the important task that theology carries out in the world of science. First of all, I would like to draw attention to the new challenges that today’s culture and society pose to academic systems (especially in Europe); secondly, I will refer to the dialogue between theology and the sciences, and finally, I will focus on the development of ecclesiastical studies in the light of the recent Apostolic Constitution *Veritatis gaudium* of Pope Francis.

### The challenges in the current context of academic studies

I would like to start with a provocative quotation that suggests how current discussions touch the nature and destiny of the university itself. The American futurologist, Peter Drucker, in 1997, wrote: “Thirty years from now, university campuses will become relics. Universities should not survive.”

Twenty years have passed and we do not know if in the future we will go towards the outcome hypothesized by Drucker, but we all see that the debate on the change of the university and on its survival is widely open everywhere.

The institution of university, as it was established in the Middle Ages, declined during humanism and above all in the following centuries. After

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3 The university was founded in the 11th century as *universitas scholarium* in Bologna, or *universitas magistrorum* in Paris; only later will we talk about *universitas studiorum*. In the course of history, on the university – from its origins to the present day – developments
The period of the Enlightenment, with the emergence of individual modern states and the spread of a critical mentality towards the Church, the university environment, born from the heart of the Church, is taken out of it, and thus the reform started by Wilhem von Humbolt (1767–1835), also with its merits, represents the laicization of the medieval model of university.\(^4\)

In the cultural situation of more recent centuries, as happened in Europe and elsewhere, the Church has begun to establish its own universities to promote dialogue between faith and reason and to train men and women who are Christianly and professionally qualified. In this new phase, Catholic universities are more distinguished, as they refer to the civil laws of the various countries in which they are established, by ecclesiastical faculties that are particularly concerned with Christian revelation and the disciplines connected with it, and who are more intimately connected with the evangelizing mission of the Church. The ecclesiastical faculties, like this one, are erected or approved by the Holy See and confer academic degrees by authority of it, based on the specific canonical legislation that has been specified over time with provisions issued several times over the last century, up to the Apostolic Constitution \textit{Veritatis gaudium}, recently published by Pope Francis.

In many cases, ecclesiastical faculties are institutionally located within Catholic universities, as required by the Apostolic Constitution \textit{Ex corde Ecclesiae}, or within state universities, governed by specific agreements or conventions.\(^5\)

and tensions produced by culture and society are reflected. The Church has always had an interest in promoting the presence of Christian thought within the culture; in the first centuries, with the famous \textit{Didaskaleion} of Alexandria, where an attempt was made to teach the various profane disciplines in the light of the Gospel, the works of the apologists and of the Fathers of the Church, there was concern to defend the Christian faith against errors, but also to express it in the culture of the time. Along these lines, the first higher-level educational institutions were born in the following centuries, such as the monastic schools and cathedral schools, which organized courses in different arts and disciplines with great authority, orienting them to theology and putting them in dialogue with one another in the light of reason and of faith. The university as \textit{Studium Generale}, i.e. as a place open to all and as a corporation of teachers and students, was built in the 12\(^{th}\) and 13\(^{th}\) centuries. In the \textit{universitas magistrorum et scholarium}, the community of teachers and students who come together freely is animated by the common desire for knowledge, research and contemplation of the truth, the beauty, the good, of God: all expressed in close connection between them.


\(^5\) Ecclesiastical legislation urges theological Faculties to have contact, collaboration and dialogue with other centers of science and culture, both to respond to problems arising
But what are the challenges that universities face today? Undoubtedly, over the past few years, the highly emphasized reference to the knowledge society has been successful. This, like the other similar definitions of ‘information society’ and ‘learning society,’ intends to indicate a society characterized by two paradigms: the growth of knowledge and the corresponding applications in the organization of social life and the change in the ways of memorization and transfer of knowledge. Information technology, the creation of telematic networks, the integration of languages and other technological developments are causing the breaking of space and time constraints, destined to grow in different sectors of social and cultural life. The consequences on research and teaching systems and on universities are particularly incisive and cause profound changes, above all for the possibility of acquiring information and knowledge, and of establishing interactions and exchanges.

First of all, the autonomy of the student is destined to grow with the emphasis of self-learning through the use of multimedia and/or at a distance learning technologies in place of the traditional education in the relationship with the teacher. Moreover, there are also many conceptual and methodological implications produced by the passage from knowledge centered for centuries on the word and on the book and from a teaching based on the direct relationship with the teacher, to a communication connected with the integration of different languages and with a ‘dematerialization’ of relationships.

The new questions and the new opportunities that emerge exercise increasing pressure and cause process and system innovations, inevitably involving the university, which feels challenged about the role to be played in this context. Some specialists in the sector have analyzed the changes and try to trace the future evolution.\(^6\)

Contrary to what P. Drucker states, in the knowledge society, the task of institutions that develop and transfer knowledge is destined to consolidate and grow. In particular, universities, as a place where the processes of production and transmission of the entire range of knowledge coexist, are destined to play an essential and indispensable role. The traditional core of the university institution is, therefore, in harmony with the needs of today and the future, while it is more complicated to understand how it will be able to carry out its functions in a society in continuous transformation.

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We may sense that we will move towards a more highly diversified system, in which there will be – as today – predominantly research institutions and – more than today – mainly educational institutions. In a process that will be long, an arrangement will be formed in which those institutions that will be able to reconfirm their genetic heritage and establish intense cooperation relations with the other institutions will be consolidated as universities.

In the genetic heritage, there arise: knowledge as the result of a meeting between experience and imagination in a community of teachers and students; the unitary coexistence of scientific and humanistic knowledge; the commitment to overcome the separation of cultures and disciplinary fragmentation. These tasks must be articulated within the university institution in a structural and functional way, allowing the development of programs and activities both at the research level and at the level of education in the various academic cycles.

For the future of the university, the prospect of strengthening the international horizon and of encouraging the commitment to build a common space of higher studies remains a strategic one, which, however, must avoid the danger of homogeneity and uniformity. In this common space, a balance must be guaranteed between the unity of values and the academic tradition and the diversity of cultures, languages and social contexts, as well as the typical nature of the university as a real physical space for meeting and communicating, open to virtual interaction and cooperation.

Another aspect that I would like to highlight refers to the change regarding the design of university courses and university curricula. At the European level, in recent years this topic refers to two aspects. The first is the redefinition of the input, or rather of the access elements (the alternative ways of accessing university courses with greater differentiation of age, experience, socio-economic status, cultural background) and the redefinition of the output (the interest has moved towards the skills required and defined by the social and professional context of reference). The second aspect concerns a greater openness and flexibility of the course structure to favour students’ progress through modular options and the credit system.

In this context, we are reflecting on the subject of the academic curriculum, drawing, above all, from the language of the school system. Experts argue that the curriculum should provide learning not only of the “inferior” order (such as knowledge and skills), but also of the “superior” order (intelligence, responsibility, open-mindedness, constructive spirit, independence of judgment, reflexivity etc.).

And they refer to this second order of education with the term *morphogenesis*; this consists in the acquisition of abstract, mental and lasting habits, defined as *deutero learning*, that is, a type of intellectual disposition that characterizes the personality of the student in his abilities and constructive spirit. In order for university curricula to encourage the training of “competent persons,” it is hypothesized that, above all, this second level of higher education should aim at some fundamental objectives, such as: systematically involving students in the design, provision and revision of the curriculum; customize study paths; make teachings modular; orientate by educating, educate by evaluating; situate knowledge through internships, field research and project work; use information and communication technologies.

**The dialogue between theology and the sciences**

At the heart of the emerging challenges that the university must face today is the topic of dialogue between theology and the sciences. This is a very relevant topic on which the ecclesiastical teaching has repeatedly expressed itself. Finding ourselves in the homeland of Saint John Paul II, as a special tribute to the memory of this great Pontiff who published in 1979, the Apostolic Constitution *Sapientia christiana* on the Pontifical Ecclesiastical Universities and Faculties; in 1990, the Apostolic Constitution *Ex corde Ecclesiae* on Catholic Universities; and in 1998, the Encyclical letter *Fides et ratio*; I would like to propose some considerations concerning, indeed, the relationship between theology and scientific thought, drawing precisely from the thinking of Pope Wojtyla.8

The request to go back to studying the story of Galileo “in the loyal recognition of the wrongs, whichever part they come from,” formulated in 1979 in a speech to the Pontifical Academy of Sciences on the occasion of the centenary of the birth of Albert Einstein, perhaps constitutes the most striking aspect of this concern.9 With this and other interventions, through a sincere and continuous attention to the scientific environment, he has shown in the first place the attitude to be taken towards scientific research: loyal to its acquired results, open to grasp its potential also for the philosophical and theological reflection, critical and precise towards its ideological seductions. There are many studies

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done on these papal interventions; but here I would like to emphasize the need for this relationship to pass through the university and the interdisciplinary dialogue within it.

In the discourses addressed to universities, one of the poles of discussion is represented by theology. Faith or the Church are involved in this commitment to study and reflection, but in a reflected way, often in a historical framework. In an intellectual debate, science, philosophy and theology can be treated in a similar way: they constitute different ways of approach and knowledge of the single reality and can dialogue with each other both on an epistemological and an anthropological level. Theology is not identified with faith, although the latter is evidently necessary to exercise it. Philosophy and theology are also sciences in the analogical sense. The vision coming from each of these disciplines is not exhaustive and needs the others to arrive at a non-reductive interpretation of the universe we live in.

St. John Paul II was aware of the fact that there are many who, throughout history, have wished to interpret the relationship between theology and the sciences in terms of conflict, and how this mentality has not completely disappeared even in the current era. His look at the past is attentive to the serene recognition of the facts, but he is not willing to rush concessions towards those critical positions which, more than with reason, should be united with ideologies. But the Polish Pontiff’s gaze was turned rather to the future. What seems to have had a special importance for him were the social, but also educational and scientific problems that humanity had to face in the new millennium, in front of which science and religion had to be on the same side. This was for him the decisive thrust that had to motivate his collaboration, pushing both to seek the correct epistemological attitude, but also the confrontation on the anthropological terrain.

Among his recurrent ideas, I would like to point out at least two: first, the reciprocal advantages that science and theology can draw from dialogue conducted with intellectual rigor and in a university context; consequently, theology has an indispensable role in the search for the unity of knowledge and therefore it has a responsible presence within the university. Secondly, the importance of reaching an integrated vision between scientific reading and religious-theological reading of the world: ignoring each other would be not only intellectually incorrect, but also harmful to humanity as a whole. The document that deals with these matters more profoundly and in depth is the

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Letter to the Director of the Vatican Observatory, desired and expressly wanted by the Pope.  

For too long, theology and sciences have been held at a distance, says John Paul II in this letter: now is the time to begin to understand each other. Just as the Church needs the university, theology also needs science. If the Word of God may, as such, not need it, as an *incarnate* word it cannot fail to dialogue with the various aspects of human rationality, all equally necessary for this word to be better understood and expressed. This is ultimately the task of theology towards the Revelation and faith. The vital exchange that theology has traditionally implemented over time with philosophy and other humanistic disciplines, today must also be carried out with scientific thought.

John Paul II courageously compared the use made in the past by the Christian faith with many insights from Aristotelian philosophy and science, with the role that contemporary science could play in favouring the expression and better understanding of some truths contained in the Revelation. The language of contemporary science, as it was that of medieval culture, or even of the archaic culture in which the first pages of Sacred Scripture were forged, could, therefore, be useful, properly understood and evaluated, to talk about the mystery of the world and of man.

For these reasons, Pope Wojtyla hoped for the presence of theologians who are also competent in scientific subjects, to avoid the double error of using science with ingenuously apologetic ends or ignoring – often for fear of its consequences – its cultural and philosophical scope, thus taking refuge in a dangerous isolation. Today it is also thanks to the vision of the world offered by the natural sciences that a believer can understand the scope of what it means to be “a creature in front of a Creator;” or what the truth of Christ as the head of creation means, the mandate to reconcile all things with him through the Father in the Spirit; or grasp all the wealth of information and processes associated with the mystery of life and its reproduction. It is a scope and an opening of horizons that only a couple of centuries ago seemed inconceivable.

It should, therefore, be read within this new cultural horizon, what John Paul II wrote in *Fides et ratio*:

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11 The circumstances, apparently unusual, of the Letter are those of the publication of the Proceedings of a Conference held at the Vatican Observatory from 21 to 26 September 1987, on the occasion of the 300th anniversary of Newton’s *Principia Mathematica Philosophiae Naturalis* (1687), which will give rise to a series of Interviews subsequently hosted by the Vatican Observatory.
The Revelation, with its contents, will never be able to humiliate reason in its discoveries and in its legitimate autonomy; for its part, however, reason must never lose the ability to question and question itself, in the awareness of not being able to stand up to absolute and exclusive value (no. 79).

Einstein’s well-known statement that science without religion is lame, but religion without science is blind, does not lose its validity. On the need for a dialogue between theology and the sciences in the university context, John Paul II returned to an important passage in the Apostolic Constitution on Catholic universities. With the progress of scientific development and with the globalization of culture and life on the planet, religion and sciences are coming and will inevitably come into contact and, for this reason, around them there must be an interdisciplinary research commitment on an academic and scientific level.

If the interdisciplinary relationship between science and humanism should be favoured already in principle because it allows a better service to man and his integral truth, with greater reason it must be sought when the disciplines in question are the natural sciences and theology, the influence of which was such as to forge, in the case of the former, the dominant rationality of our time, in the case of the latter, the moral conscience of the peoples.

In the places rich in history and academic and cultural institutions, dialogue and collaboration always existed, and in the face of today’s challenges, they are even more desirable. There are many points in common between theologians and the scholars of other sciences: they work with the same tools of knowledge production; they dedicate themselves to hermeneutical work; participate in the construction of a network of meanings and values, etc. All of this constitutes the basis of a serious scientific dialogue aimed at the common good, namely: responding to problems emerging from cultural progress and seeking, in the light of the Revelation, solutions to human problems.

12 “Theology plays a particularly important role in the search for a synthesis of knowledge, as well as in the dialogue between faith and reason. It also brings a contribution to all the other disciplines in their search for meaning, not only helping them to examine how their respective discoveries will affect people and society, but also providing a perspective and orientation that are not contained in the methodologies. In turn, the interaction with these other disciplines and their discoveries enriches theology, offering a better understanding of today’s world and making theological research more adherent to the present needs” (John Paul II, Apostolic Constitution Ex corde Ecclesiae, no. 19).
The orientations of the Apostolic Constitution *Veritatis gaudium*

A particularly incisive contribution to developing dialogue between ecclesiastical studies, above all theology, and other sciences, comes from the recent Apostolic Constitution *Veritatis gaudium* of Pope Francis, in which he wanted to emphasize the great need to give a new impulse to the scientific research conducted in ecclesiastical universities and faculties. Already John Paul II, in *Sapientia christiana*, introduced the theme of research as a “fundamental duty” for academic institutions, called to put themselves in constant “contact with reality itself (…) to communicate the doctrine to the men of their time in the variety of cultures.” But in our age, marked by the multicultural and multi-ethnic condition, new social and cultural dynamics impose a widening of these aims of study so that the Gospel reaches not only every person, but also to the cultures as a whole. In this sense, ecclesiastical studies cannot be limited to transferring knowledge, skills, experiences to the men and women of our time, but they must acquire the urgent task of developing intellectual tools capable of presenting themselves as paradigms of action and thought, useful to the announcement in a world marked by ethical-religious pluralism.

This requires not only a profound theological awareness, but, as well, the ability to conceive, design and implement systems of representation of the Christian religion that are able to enter deeply into different cultural systems. All this calls for an increase in the quality of scientific research and a progressive advancement of the level of theological studies and related sciences.

One of the criteria that Pope Francis indicates to renew the architecture and methodical dynamics of the curricula proposed by the ecclesiastical study system, in their theological origin and in dialogue with the various scientific disciplines, is the vital and intellectual principle of the unity of knowledge in the distinction and in respect of its multiple, related and converging expressions. In this sense, the Constitution says, the rediscovery of the principle of interdisciplinarity is certainly positive and promising; not so much in its “weak” form of simple multidisciplinarity, as an approach that favors a better understanding from more points of view than a object of study; but rather in its “strong” form of *transdisciplinarity*, as the placement and fermentation of knowledge within the space of Light and Life offered by Wisdom that emanates from the Revelation of God.

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13 John Paul II, Apostolic Constitution *Sapientia Christiana*, Proemium III.
14 Cf. Pope Francis, Apostolic Constitution *Veritatis gaudium*, Proemium 4c.
Therefore, the profile of ecclesiastical studies, as outlined in the Proemium of the Constitution, today must be more detailed so that it can be offered and spent in the areopagus of cultures, in the concert of academic institutions and in the knowledge market, through a more careful disciplinary and pedagogical articulation. In this sense, it will be necessary to apply more and more the vital and intellectual principle of the unity of knowledge in the distinction of its multiple and related expressions. What does this mean for the dialogue between theology and other sciences?

The unity of knowledge, which is increasingly invoked as an antidote to the current fragmentation, is not assimilable with the concept of the unity of science, of a purely functional character and tending to a re-composition of knowledge from the outside, but it envisages the unification of knowledge from the inside. Indeed, it is a matter of offering a plurality of knowledge through the system of studies, corresponding to the multiform richness of the real in the light disclosed by the event of the Revelation, which is, at the same time, harmonically and dynamically gathered in the unity of its transcendent source and of its historical and metahistorical intentionality. This theological and anthropological, existential and epistemic principle, has an extraordinary value and can exhibit great efficacy both within the system of studies (in its cohesion and flexibility, as well as in organicity and dynamism) and also in relation to the fragmented and often disintegrated today’s panorama of university studies and the pluralism of cultural beliefs and options.

The principle of the unity of knowledge must find its intelligent articulation and its corresponding application at different levels of university life.

First of all, at the academic environment level. Some specialists today claim that the university fails in its tasks if men and women come out of its classrooms and instead of contributing to the common good, they use the benefits obtained with the contribution of the whole society for purely selfish purposes. The irreplaceable role of the university lies in being Alma Mater, a mother who nourishes and raises. The Latin etymology aló, alimentary, is the root of alma and pupil (alunno), which assimilates with personal study the nourishment it receives from professors to grow intellectually. Obviously, the level of university studies cannot be lowered to suit everyone indiscriminately; on the contrary, it must be demanding and vitally capable of raising and contributing to the

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growth of the ecclesial and civil community, as well as the common aspirations of each one. Therefore, the university must establish a special type of bond both between the people who compose it (universitas magistrorum et scholarium), and between the various disciplines of human knowledge (universitas studiorum). In such perspective, university teaching requires active and dynamic relationships between professors and students who are able to integrate the intellectual aspects of study and scientific research with human aspects. The academic environment must be a place of gathering and at the same time an open place, a convivial place and at the same time a universal place, where the multiple and differentiated relationships that are experienced in it have the stamp of commitment and application, freedom, creativity and the joy of growth.

But the principle of the unity of knowledge must be articulated above all at the level of the specific task of the academic institution. Experts in cognitive processes argue that any university reform must have thought reform as a vital goal; it would allow the full use of intelligence and the coordination of cultures and separate knowledge. Interdisciplinarity is insufficient to remedy superspecialization. It is, therefore, a matter of starting a non-programmatic but paradigmatic reform that concerns our ability to organize knowledge to overcome the fragmentation of the disciplines, replacing a thought that connects to a thought that only distinguishes. The ability to connect and unite requires that the unilinear causality is replaced by a multireferential causality, that the logical rigour is completed with the dialogical one, capable of connecting antagonistic notions in a complementary way. Theology and ecclesiastical studies, in this sense, have an added value compared to others: the unique epistemic principle is the intelligence of the Revelation which, ultimately, is Christ himself, mediator simul et plenitudo totius revelationis (Dei Verbum, 2) and which closely links the system of studies to the evangelizing mission of the Church. From this unitary principle derives the indispensable and immense task of the university: to teach wisdom, which means to acquire that gaze of truth and freedom on God, on man and on the world, which is “one” being “multiple” in its expressions, just as how manifold are the expressions of the life of the person, of the human community and of the cosmos.\(^{17}\)

The unity of knowledge must also characterize the method of research, teaching and study. The Apostolic Constitution Veritatis gaudium reiterates

\(^{17}\) Benedict XVI emphasized that only the light of faith in God, and his Revelation in Christ, helps man to pass from a simply scientific knowledge to a “sapiential” knowledge; it allows us to discover the intrinsic unity that links the different branches of knowledge. If this is true for all the sciences, it is essential and connatural for the different articulations of theological knowledge and related sciences.
what *Sapientia christiana* already affirmed, namely, the need to pay attention to the “right desire for a university life open to greater participation,” to the need not to neglect “the great evolution that has taken place in the pedagogical methods and didactics” and “the desire for greater collaboration in the entire university world.” These traits are the answer to the crisis of the university, due to the profound split between a classical conception of science and knowledge – the university as a place for the common search for truth – and the flat functionalism of science, basically practiced and transmitted in universities. The university cannot be reduced to a mere vocational school bent to the harsh efficiency criteria of modern industrial society, but it must recover the aspect of community that has always characterized it, proposing it as a place for the community development of a particular culture in which scientific research and theory, but also the formation and education of people, are harmoniously combined.

In conclusion, I hope that the tasks and challenges of theological faculties will be faced with courage and foresight.

The great environmental, scientific and technological transformations that shape in an ever-new way the surface of the planet, our way of living and communicating, as well as the progressive social transformations of people, the interaction between the ethnic groups and traditions caused by the growing migratory phenomenon, are all factors that do not alter the characteristics of the authentic “university spirit,” but rather represent all the realities that must enter the “universitas” with that very spirit, the only one that can guarantee the dignity of the person, the love for their integral truth, the serene confrontation of knowledge and cultures achieved with intellectual rigour, but always with respect for all and in peace.

Theology, which investigates the problems and questions of man from the point of view of the Gospel message, can offer to various areas of scientific knowledge, an illuminating contribution.

Bibliography:


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18 Proemium V.
Pope Francis, Apostolic Constitution *Veritatis gaudium*, Proemium 4c.

**Angelo Vincenzo Zani (Archbishop)** – was ordained a priest on September 20, 1975; on November 9, 2012, Benedict XVI appointed him Secretary of the Congregation for Catholic Education, raising him to the title of titular Archbishop. He received the episcopal sacrament on January 6, 2013 in the Basilica of St. Peter at the Vatican at the hands of Pope Benedict XVI; on December 15, 2012, he was appointed by Benedict XVI a member of the Congregation for the Doctrine of the Faith. His most important publications are: *Formare l’uomo europeo* (Città Nuova 2005), *Le Istituzioni accademiche ecclesiastiche. Cultura della qualità e nuova evangelizzazione* (Rome 2012).