

Swearing-in ceremony of the Dean of the UMinho School of Engineering, October 2nd 2019

Speech of Professor Pedro Arezes

Magnificent Rector

Dear members of the UMinho General Council

Dear Members of the Rectoral Team present here

Distinguished members of the governing bodies of the School of Engineering

Former. President of the School and dear members of the outgoing Presidency Team

My dear colleagues of the new Presidency Team

Dear Directors of the Organic Teaching and Research Units

Mr. Administrator of the University of Minho

Dear Emeritus and Retired Professors

Directors and Presidents of the UMinho Interface Units

Dear Professors and Researchers

Dear technical, administrative and management Staff

Dear Students

Esteemed Alumni

Dear representatives of the Rectors of other universities

Dear Councilor of the City Council of Guimarães

Dear Councilor of the City Council of Braga

Dear Representatives of Engineering Schools and Faculties

Dear Presidents of the Polytechnic Institutes and their representatives

Dear Entrepreneurs and business representatives

Distinguished representatives of other public and private institutions

Distinguished guests of this ceremony

Ladies and Gentlemen,

Good afternoon.

My first words are of acknowledged gratitude, both institutionally and personally, for your presence in this ceremony of such value for the School of Engineering and so important to me.

I belong, for the last 28 years, to the School of Engineering of University of Minho, where I first enrolled as a student. 25 years ago, I was hired as a monitor and I started teaching, but mostly I started learning at, and with, the School. Therefore, nothing could make me more proud today than to be able to partake a role in conducting and leading this house.

Allow me a special greeting to the Rector and, in his person, to the rest of the Rectoral Team, keeping the expectation of a strong and fruitful collaboration during the mandate that now begins.

I greet the President of the School Council, and in his person, all members of this Board and the rest of the School of Engineering, thanking them for their confidence in electing me for the next term. I believe the future will be guided by a relationship of trust between the Presidency team and all the organs of the School.

I greet the outgoing Presidency, and the team members of its two terms, thanking them for their effort and dedication in the person of Professor João Monteiro, whom I greet with great esteem.

I enthusiastically welcome the teachers, researchers and the administrative and management staff for being decisive elements for the progress and success of this School. Your dedication, effort and commitment to the most diverse levels is the cornerstone of this success.

A very special word for all those who are retired. The School of Engineering will certainly continue to benefit, respect and interact with you, regardless of your status, as we understand that this connection is fundamental to the good development of our activity.

Students are the *raison d'être* of universities and the sap of their rejuvenation - so are they to this School. I greet all students in the person of the current president of the Academic Association. I understand that the School will be more than just a partner, and I firmly believe that we will have a School with a greater future if we can draw on creativity and count on the irreverent spirit of our students.

I welcome and highlight the expressive presence of former students from our *Alumni* community, whose education and recognition in society today is a manifest reality. Their presence is, I am sure, an indicator of the important role they will play in the near future of the institution. I count on you and we count on you in this new cycle!

I also welcome all the strategic partners with whom we have close links in education, research, innovation and knowledge transfer and enhancement.

To the representatives of the companies here, I would like to thank you for accepting the invitation and to express the great commitment of the School of Engineering to cooperate with your organizations in order to participate - jointly - in the common goal of contributing to the socio-economic development of the region and of the country.

In general, to all representatives of institutional partners and civil society present here, I express the intention to significantly intensify our collaboration in the upcoming years. This School will be a School that seeks and needs to reinforce its commitment to society, and I am sure it will have a lot to give and, certainly also, to receive ...

As you will understand, this is for me a moment of intense emotions and I am happy to be able to share them with people I respect, admire and cherish.

Among those present are family, friends, colleagues, including a group of people who helped me in this application. To all, and without particularizing, I am immensely grateful and recognized for the support you have given me throughout this journey.

But my joy is modest, as I recall the words of a colleague who, referring to the exercise of management positions at the academy, used to say: "In these positions there are typically two moments of great joy and which are the two inaugurations. ... This swearing-in and the swearing-in of the colleague who will succeed me".

It should be reiterated that my candidacy for the Presidency of the School was driven by an imperative of citizenship. I want to recompense how much the School and the University of Minho have given me, both personally and academically, and this way is certainly one of the possible ways to do it.

I think I can say that the President has a key role to play in the School, but his contribution is clearly to unite and mobilize the School Community around a project that shapes the present and, most importantly, prepares and draws the future of the institution with the effort, talent and determination of its members.

As I mentioned when I submitted my application, I decided to apply assuming that the 45-year legacy of the School of Engineering is clearly and unambiguously successful. A success, however, that faces significant, circumstantial but also structural challenges. Therefore, I understand that leading the School in this context requires, in addition to total dedication and commitment, a new vision and strategy, which we assume for this mandate.

Among the challenges mentioned, it is very clear that one of the main ones is to follow the changes that occur in the context of higher education and in particular higher education in the area of Engineering. This is - and always has been - a very dynamic area. Dynamic because the learning-teaching process has to be continually reinvented, dynamic because engineering research is constantly evolving into unexplored, of greater complexity fields, and dynamic because the challenge of wanting to affirm the School requires an articulation between prospective thinking and a daily implementation effort.

But there are other challenges that are not of lesser importance... As an example, we cannot remain indifferent to the challenges of digitization and its impact on academic life and, in particular, in terms of knowledge and its diffusion.

The massification of digital technologies in economic activities, the clear valuation of knowledge as a competitive factor and the profound professional specialization of human capital are having the expected effects on the labor market and, consequently, on the employability potential of our School graduates.

The changes brought about by digitization and the so-called 4th industrial revolution will lead, like the previous ones, to the obsolescence of many technologies and many professions, with effects on the job offer and, inevitably, on the educational offer of these areas. However, it is my understanding that we shall not ignore the fact that on the medium and long-term, new technologies and new business models may also create more opportunities and jobs than they will destroy. In addition, they will create new areas in which engineering and technology will be especially relevant and which the School should see as an opportunity to rethink its projects, particularly teaching projects.

Universities used to be exclusive centers for the “possession” of knowledge. But the paradigm has changed dramatically. The digital world has changed the way we teach and do science. It brought speed and fluidity and, with that, evolutions of great importance.

This knowledge development represents a risk and an opportunity for universities. A risk because it is easy to be left behind. On the one hand, knowledge is so fluid and dynamic that only with vision, hard work and a great dose of investment is it possible to keep up the pace. On the other hand, it is very accessible to all, so our students may start to wonder what is the added value of the “face-to-face university” in this context.

But it also represents a huge opportunity because the dematerialization of knowledge has led all universities to be levelled. In a society where access to information is no longer, in itself, a competitive advantage, developing a critical spirit and a creative and collaborative mindset will be the great assets students will take from universities.

It has also been evident, for several years, the increasing competitiveness among the various top higher education institutions. And today this competition is not limited to attracting more and better students, but it extends equally to the strategies and practices of attracting the best human resources to their faculty and researchers’ boards. This strategy is decisive, particularly in engineering schools, for visibly increasing the degree of rapport between teaching and research through the harmonious and demanding combination of a university learning dimension and a frontier scientific research.

And we certainly cannot ignore the great trends in engineering education. In particular the existing trend towards *curricula* design focused on socially relevant issues, including ethics, and externally oriented, *curricula* that tend to manifest individual student choices, multidisciplinary approaches with social impact, in parallel with a wide range of student experiences outside the classroom.

Here, and on socially relevant issues, I cannot fail to mention the challenges of environmental sustainability, with impact on all the other dimensions associated with sustainable management and action, materialized, namely, in an evolution towards a decarbonization of the economy. I have no doubt that Engineering will play a central and decisive role in the solutions that will be found for these questions.

Ladies and Gentlemen,

To achieve all these strategic goals, I formed a Presidency Team with 3 colleagues who generously offered to share with me a good deal of the work involved. They are recognized and extraordinarily competent people, both individually and in how they will complement each other to form a great team. I have just had the honor and pleasure of investing the Vice-Presidents Professor Maribel Santos, Professor Estela Bicho Erlhagen and Professor António Vicente.

To my teammates, I want to thank you for the availability and confidence with which you have embraced the project for the School, and I am sure of your commitment and enthusiasm in the performance of your newly invested roles.

This mandate will take into account the general challenges already mentioned and some more circumstantial ones that cannot be ignored, such as the ones I highlight:

- The need for restructuring the Integrated Masters degree courses in engineering;
- Management of the subunits and of the need for balance between them;
- The aging of faculty and the obvious and urgent need for their rejuvenation;
- The financial and execution constraints that we continue to face on a daily basis;
- The accommodation of a new body of researchers and the resulting issues.

Bearing all the challenges in mind, we defined a set of intervention axes, which substantiate the School's strategy for the presidency that is now beginning. We have defined an ambitious action program and, without going into a detailed description of the various measures proposed, I would stress that we will do so by reference to 7 key areas, which we understand to be relevant to structure the entire action plan:

1. Governance Model
2. Human Resource Management and Quality of Life
3. Education and Training
4. Research and Scientific Management and Knowledge Enhancement
5. Interaction with Society, Communication and Identity
6. Internationalization
7. Evaluation, Quality and Ethics

The proposed action program has 4 strong ideas, which I can summarize as follows:

1. Externalization and internationalization of the School: which includes the creation of an Engineering@UMinho identity mark and its affirmation abroad, consolidating the connection with the national and international Industry. It also includes transforming the School into a bilingual environment, with institutional communication in Portuguese and in English, and adopting English in the 3rd studies cycle and gradually into 2nd cycle courses.
2. An Interdisciplinary Approach: translated into teaching and research projects and services of various natures considering the latest societal challenges (such as clean and safe energy sources, improved infrastructure and equipment, new concepts of mobility, etc.) in an always multi and interdisciplinary approach.
3. A modern and of quality teaching. Students should be the epicenter of the University, involving a teaching aimed at competences that are favorable to technological change and innovation, to creative capacity, to the affirmation of autonomy based on high ethical values. Today, and more and more so in the future, an innovative and quality engineering education based on socially relevant *curricula* and oriented towards the impact on society must be promoted, addressing transversal competencies concerns such as soft skills and computing and relying on immersive approaches in projects developed in the business environment. But this teaching will not be possible if we do not have adequate spaces, designed to respond to the demands of the students and to attract them to inhabit the physical space of the School.
4. By focusing on emerging engineering areas: From Artificial Intelligence to quantum computing, from nanotechnology to data science, from bioengineering and genetics to new means of interaction with technology, through autonomous mobility and aerospace engineering. These are all areas of future in engineering that the School has to embrace and develop within.

A few months ago, I listened to the (still) European Commissioner for Research, Science and Innovation, the Portuguese Carlos Moedas, saying that "... citizens no longer want politicians to tell them what to do. They want to design policies with them" well, I think the same is true for academic institutions. Therefore, the action program is something that will also be built on the internal and external inputs of all members and partners of the School, in a participatory and broad perspective.

Therefore, as we propose this action program, we are committed, as a team, to making every effort to carry out a rigorous, transparent and participatory management, with particular attention to the explicit signals and contributions of the School community and its surroundings, strengthening the dialogue within it and welcoming initiatives that the members of the School understand as relevant.

We'll have to recognize that we are at a time when we do not have an abundance of resources, particularly human resources, and therefore we are asked for effectiveness in action, but above all for efficiency, creativity and boldness.

Above all, we need to be alert to opportunities to be bold, because, in Demosthenes' words, "small opportunities are often the beginning of great enterprises."

[And – allow me now a few words in English - ... now addressing some words to those who don't speak Portuguese, and because one of the measures of our action plan is to have all the School official communication in Portuguese and English, I'll start right now... exactly in this first official ceremony and announce that, whenever technically possible, my entire speech will be available at the school website in both languages.]

Ladies and gentlemen,

Being President of the School of Engineering University of Minho is a huge challenge, but at the same time an immense honor. I am aware of the responsibilities that fall on me, but I count on the entire Academy, without exception, to help me raise its prestige even higher.

I close this speech by appealing to the reputation, dedication and sense of responsibility of our Academic Community, but also to the motivation and enthusiasm. I would like everyone to share the enthusiasm of the new Presidency team to carry out the demanding undertaking that lies ahead.

I will not dwell any longer and I only reaffirm that if the challenges are great, the expectations are no smaller. We have a lot of work ahead, so José Saramago's words are appropriate here: "Let us not rush anything, but let us not waste time."

Thank you very much.