Good morning, evening, afternoon to you all. You sound so full of energy. That is the effect. Scientifically, that is the effect of a good lunch and a wonderful, magnificent convention organized with only human centered in the organization of the convention. Congratulations to you all.

President Riccobono, thank you so much for the very kind invitation to present here at the convention. It is the highest honor, and I wouldn't be anywhere else. It took me almost 24 hours to arrive. I left. It was supposed to be 6 hours. But then multiplied by 4. Oh, that was the longest time to arrive at the hotel. But before it multiplied to infinite, it stopped. We all got together. We put our hands to work. And mainly my determination to say no, I need to be in New Orleans. So, you had better take me there. That was it. Sometimes we have to be firm, right? Respectful, but firm.

I'm, I also want to, I also want to thank my people from the National Federation of the Blind Puerto Rico who are sitting back there with all their energy. It has been, it has been because of their love, not only their love, but their support and their advice, their advice that many things in my life have begun to move in the direction of victory and many victories that are cooking right now that I will not tell you about that.

So, I would tell you a little bit of my story, which is a story I don't have a long time, right, but it's a story that is unconventional then inside their own conventionalities or conventionalities of our history and I calmly will begin my story relating to you or based on conversations that I have had with scientists that are blind and scientists that are early onset with early onset disabilities that they study science, but then they finished doing working on accessibility or education and people outreach or doing something else not related to the science, which is what they trained themselves to do. Education and people outreach are very important, the most important, is the basis of everything. But if I didn't study to do education and people outreach, why do you divert me to education in and people and outreach?

My sight loss spread severely and aggressively, I’m diabetic since I was a child, very, very small and my sight or my vision or I do. How do you say that in English? Help from Puerto Rico. My sight lost spread severely and aggressively and already in my early 20s I was totally blind. I only have 5% of side vision or peripheral vision on one eye, so I cannot read if I'm in darkness or in this. I do not know if there is light in this room. I assume there is because I tell people they need to orientate right? But I cannot orientate unless I have my very good friend they came.

So, by being here with you and having accepted the invitation, the very kind invitation from President Riccobono. I trust that we will reach a time when if we do education and people are rich is because of choice and not because we have been diverted into that, that when we are in the education realm, when we are getting educated, we will be able to worry only about getting good grades, then to improve the accessibility of material that has to be accessible before getting to our hands, that we will be able to focus on our human development, on the development, on the skills that we want to develop.

Because I experience, uh, losing my sight like during my development, so I experience, and I learned using mono sensorial styles monos with mono sensorial I mean using your site. That was the main style at that moment because I experienced that and very, very being very, very careful with my words, having them later lost that kind of freedom. It brings me to grief at the thought of the countless peoples that give up, that stop considering and even think that the field, the work market or even the field of science but I'm talking about the work market going to job, going to have a job and be productive not only for society but for yourselves. It is something that is reserved for Joseph job and with that it makes me grief at the thought of the countless peoples that may just give up not contributing to society.

So today being said that I'm here as a scientist who uses multi sensorial perception or the many human senses, sight, touch, sense and the tongue we are not using right now but, who says that we are not going to use it? That uses combination of sensorial human senses or multi-sensory. To explore to use our personal perception to scrutinize datasets to do exploration of astronomy information.

I do not do accessibility for the sake of the ones coming behind me, for the millions that will raise after this convention today, I don't do accessibility. When people come to ask me about accessibility, I tell them go and ask a specialist on accessibility. I didn't study. I'm a scientist who focuses on doing research and producing results on my research. So, Thank you.

So, the situation of lack of access led me to do an interdisciplinary doctorate on human computing interaction in astrophysics. So, as I was doing my PhD in astrophysics and analyzing data, I had to build the prototype. That I was using I was, uh, I had to use in order to analyze the information. A good mentor at NASA Goddard Space Flight Center, his name was Robert candy. He gave me the opportunity to go to work with him as an intern. My grades were very, very, very bad. They were the shame of the university. I was almost like, I don't know how the grading is in here in the United States, but my best grade was a D. One more but I would pass the class I was studying hard, hard, hard, hard, hard but not understanding anything that was happening in the classroom. And perhaps you have heard this before but when recording when sneaking a recorder into the classroom and after recording the mathematics or the nuclear physics class the only thing that I would be able to understand was these sounds. You put this here, there and substitute here. And then after you do this, this, this, this, this, and this, this is the result. Nothing else. So not even my professors had the skills to convey with words what they were explaining. I was completely left out of the of the of their loop.

So, When I'm working with Bobby at NASA, he said one, I want you to do a project in order to translate the data that is saved in the Helio physics Data Facility databases into sound for blind people to become familiarized With the data that is saved in that in that database. And I said I don't want to become familiar because I'm already familiarized. I want to do science. So, he said, well, make it so. So, I began working 24/7 in order to make this data not only accessible, remember I don't work with accessibility, but to make it accessible to Wanda and for Wanda to be able to listen and to find ways so other people can extract science from the data. So, we work 24/7 because even though he was asking for blind people to become familiarized and I didn't want to become familiarized, he was giving me a scenario and I said this is the scenario to move things forward, to demonstrate to my mentor who is trusting me. We trust that I can do this, he said. Make it so. Make it happen. I need to honor that trust and I need to show him that he's not losing time with me.

So, I want to go 24/7, I wouldn't go out. I wouldn't socialize with the other interns. Why would I socialize with them? I couldn’t understand what they were talking about. They would talk about these huge projects, saying words that I had never heard before. And because I couldn't read, I couldn't even imagine how those words were written. It was a very, very bad situation but my mentor very patiently He answered all the questions very respectfully.

And one day I said, Bobby, I don't know if I can, if I can finish the goal, if I will be able to achieve the goal And he said the only thing I need is for you to continue doing what you do, working really, really, really hard. What I like of you is that you're not waiting for anyone to come and do it for you. And I took that as a strengthening of that act of trust. At the end of the semester, I published my very first scientific paper on the most energetic explosions in the universe called Gamma Ray Burst. And we released the 1st edition of the sonification prototype.

So, we did experiments because while these people were not using sound, it is a Wanda thing. Or is this something that they stopped using because they're very smart? These people know it all to be because of a reason, but I couldn't find evidence. So I did experiments and from the experiments with professional astronomers at the University of Harvard, the Center for Astrophysics, the Harvard Smithsonian Center for Astrophysics, we evidence with professional astronomers that sound increases Sensitivity to events in the astronomy information that by nature are blind to the human eye transforming completely our role in the science from benefactors only look for focusing on education and people outreach to. The factors of the science that can come to the science and with our skills make more discoveries and reach the discoveries in science.

And we've done and we've done that gave us a big impulse because it also revealed a huge fracture in the sciences that because of the evolution of machinery and technology focusing when mono sensorial technologies and mono sensorial productivities have left out other performance styles in order to produce better science and produce results for society.

So, I have been going from one observatory to the next to the next, to the next to the next, to the next, to the next to the next, and infinitely. To the next, always being diverted to education and people outreach. But when I notice that they come to divert me to education and people are rich, I said, ah, I didn't come here to do that. You need to hire someone that will focus on that. And when I do my science, with my science done, I will go and do education and people outreach.

So, I went into Italy and my mentor in Italy, late Doctor Stavros Katsanevas, he said I trust sound as gravitational scientists do, I trust sound to allow us to peruse more information from gravitational wave telemetry or measurements? So, we analyzed a very well-known event in the gravitational wave community, and we did it that way because no one would be able to contradict my findings. If I find something new, I will say you have perused that data over and over and you couldn't find what I found. So, we analyzed the data using audio and we were able to find things that were blind to artificial intelligence, machine learning algorithms and also to the other collaborators in the gravitational waves’ scientist. And I want to play the sounds for you.

(playing sounds)

You will hear, I will not tell you. Right? You need to notice the change. It's very subtle, it's very fast and it's at some point in the data set, sighted people, machine learning algorithms, it is augmented, right? So, we zoom into the data, we augment the data in order to make it very, very, very sensorially perceptible with the ear of everyone but I'm going to play it and your gravitational waves.

(playing sounds)

So, after coming back from Italy or being in Italy with working with my mentor, I realized that the work for equality and the work for us to mainstream. You know, the work, the job market in economy, in society that those two jobs, those two tasks are equal, are prestigious, and we should pay the same attention to the to the two tasks are of the same equality and are. Equally important.

Thankfully, and very enterprisingly, and looking to the future, Her Royal Highness Dr. Princess Listerine and Hashemite establish a new organization under the Royal Academy of Sciences International Trust. This organization is called Science in Braille. These are professional scientists that are doing their science. They are producing science. I go around just making sure they're doing their science, They are performing their science, and we sit down in order to transform not only the scientific economy, but the work, the work economy into a multi sensorial economy that will allow us to perform at our own maximum and that will support and enhance the ways we have to perform at our or maximum. So, this work also includes. Having very difficult conversations with different peoples, right? Because sometimes different the economy depends on mono sensorial, on mono sensorial technologies, on mono sensorial ways of performing. So sometimes difficult conversations and sometimes convincing Headquarters, this is the way to go because we are we our skills produce more science and more benefits to society so again multi-sensory reality is not for accessibility not yet is to produce more results for society and the economy and you are the ones with the skills from birth because you lost your sight in any in any way You are the ones that can come into that economy and transform that economy into one that will autonomously give the chance to everyone

Right now, we are using, we are using sonification. Sonification has gone to Luxembourg, the asteroid foundation is using, is using it for defense is being used to do uh diagnosis on neonates or *recien nacidos*. I do not know how to say that neonates. Would you know when a child is born, it recently comes out of the mother, right? So doing diagnosis of autism to children also being explored to use it in flights for astronauts and soup to security for pilots also to training for people in the autism Spectra and many and many other things.

my students do that. some of them they didn't know how to divide they when they were in high school and they and I think they build antennas they learn to divide they learn to do their operations. They don't give up and I And I believe and I'm completely sure they're the most outstanding people in the world because they didn't allow any, any social stigma to stop them. They took things in hand, and they transformed it, and they didn't give up in their dreams.

Right now, we are all this is how I want to finish. We are all at the stage of life. Each and every one of you is at the stage of life with the future in your hands. The decisions we take here at the National Federation of the Blind, it moves the country forward. It moves each of our Lives forward and at those moments Is our time to win and we will achieve equality by keeping focus, not being diverted, and by not giving up. And remember, always keep in mind that to win is to never give up. Thank you and I apologize.