"Guest Interviews": Little chat with Professor Valeria Cardellini

On the 13th of July a new challenge has been issued by the Global Governance B.A., the first Symposium was in fact launched. The Symposium was born with the aim of creating a roundtable where experts from different disciplines could have had the chance to share, discuss and confront their knowledge about a main topic chosen by the event itself. The day of the event has been divided into two moments, the morning speakers which have discuss around the key word "imagination", and then later in the afternoon the second round of speakers who discussed about the word "web". Fortunately, at the end of the day, we had the pleasure to engage in an interesting conversation with one of the afternoon speakers which is Valeria Cardellini and we had the chance of asking her some questions about her profession and the speech she made during the event. Professor Valeria Cardellini is an associate professor at the Faculty of Engineering of Roma "Tor Vergata", her main researches and publications focus on topics which range from distributed systems Cloud computing, big data, computer architecture, and Web engineering. She has been very enthusiastic of answering our questions, thus she has been able to transmit us the passion she has for her job and her field of studies.

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First of all, can you tell us something more about your Academic Background?

Yes, I studied informatics engineering and then I did a PhD in Computer Science and Automation Engineering with a special focus on Computer Science. I spent six months of my PhD at the IBM Centre ... I was very lucky since I had the chance to work with one of the most cited authors in the computer science field who gave me many inputs and stimulus. After this experience I started working in the university and I became Researcher in 2007 and then Associate Professor in 2015.

Actually, the field in which you decided to specialize some years ago is nowadays one of the most discussed, in particular Data Science is identified as the major global challenge of the present time and the next future. Do you see this increasing innovation also in your daily work?

In the Data Science sector, I worked on the distributed systems as the ones used to process Data. Nowadays there is not one server but a system composed of many servers which work together to process Data. I am currently working on the processing of data in real time so from data that is coming from different type of devices with sensors incorporated: smartwatch, bags, shoes, laundry machines, refrigerators and so on.

An additional innovation and future challenge of the web is connected with the concept of virtual

reality, for example the Google glasses or the video and pictures made to catch the feelings of the users. It already exists on Twitter and it is called the sentiment analysis to understand the vote trends and the public feeling about a new commercial product. I work on the systems that process this data coming from the users which will be analyzed through many different tools, such as informatics or for computing.

Which is the relation between these new technologies and the privacy of the users? In your opinion, it will lead to more problems in this area?

The system will in some sense address the privacy problem by making the users free to decide to whom they should give their personal data. For example, some users may want to keep their information private in some servers or others may want their data to be processed just in some specific areas.

In our university course, Global Governance, there is one key concept that is always missing in the different fields we have studied and analyzed: Governance. In your presentation you described a decentralized system that seems not to have a governance. According to you, who should be in charge of leading it?

In my field it is better to have a decentralized system rather than a single centralized controller. However, it can happen that the single parts agree to cooperate going towards a global governance, in the direction of a common and shared good.

Did the symposium meet your expectations?

I am very satisfied of the day I spent here in Villa Mondragone. It was the first time that I had the chance to work with colleagues from so many different fields and with a public with such interesting questions. Usually I participate to meetings focused on my sector and I am required to analyze the technical part of the topics while today there was any limit!

It worked! My compliments to you that decided to get involved in this interdisciplinary course! I can imagine that the moment of the choice was not an easy time for you since at the beginning it was not a consolidated course and you did not have many information of the future placement but I am glad you accepted the challenge!

We are still inside that challenge but the more we participate to experiences such as the Symposium, the more we recognize the incredible value of interdisciplinarity in today´s world. Your field of study as well can be considered an highly interdisciplinary one since it deals with Philosophy, Law, Human Rights and so on. Do you experience a strong collaboration with the other disciplines in your daily work?

In the Academic field it does not happen but it also depends from the specific sectors where I work. My colleagues that work more on the privacy issue may have more contacts with lawyers or economists. Informatics is a broad area! Actually, in meetings on Cloud Computing I had the chance to have more interdisciplinary discussions with lawyers and social scientists on privacy or big data. On the newspaper there was an example of interdisciplinarity: the algorithm that should decide if saving the life of the car driver or of the pedestrians that were crossing the street. You can imagine how many ethical implications it had!

If I am not mistaken some years ago there was a science movie with a very similar example!

Yes, it is incredible! Nowadays there is the Deep Learning on which Google is investing a lot which are algorithms to elaborate data in more efficient ways and to have a deeper knowledge of the system and of data observation.

I can imagine when there will be the Quantum Computing, a new way to realize calculators with computational capacities far more advanced than the ones we have today. This is one of the most actual issues and the possible scenarios are still not clear.

What seems impossible today is the reality of tomorrow! I am so fascinated and at the same time scared, as an user, of this continuous and unpredictable mutation of informatics. Also on the research side, while in other disciplines the evolution is slower, in informatics what you did five years ago gives you the knowledge to understand but it is to be used on new systems and problems. This is what fascinates me the most!

Is this the reason why you decided to specialize in this field?

After the scientific high school I was interested in architecture, art history and mathematics. The scientific aspect prevailed over the others and I chose the engineering specialization track I was more curious about. Moreover, it was the first year that my department was opened, as you in Global Governance.

One last question before letting you go, which message you would like to leave to Global Governance students?

Be open minded, adaptive and discover new horizons. Be curious!

Sonia Matera & Claudia Del Monte