

About Toshio Fukuda

On 5 October 2018 IEEE announced that [Toshio Fukuda](#), [IEEE Life Fellow](#) (1995), had been elected the 2019 [IEEE President-Elect](#). He will begin serving as IEEE President on 1 January 2020.

Medical robotics pioneer, Toshio Fukuda, was born on 12 December 1948 in Showa, Yamanashi Prefecture, Japan. In 1971, Fukuda received a B.E. from Waseda University, Tokyo, Japan and then received an M.S. and D. Sc. from the University of Tokyo, in 1973 and 1977, respectively. He has spent his career in research at teaching at laboratories and universities, primarily in Japan, including: Research Scientist at the National Mechanical Engineering Laboratory, AIST, in Japan (1977-1979); a Visiting Research Fellow at the University of Stuttgart (1979-1980); Associate Professor at the Science University of Tokyo, (1981-1989); Professor at the Department of Mechanical Engineering, Nagoya University, Japan (1989-2013); Professor at Meijo University (2013-); Professor at Beijing Institute of Technology (2013-); and Foreign Member, Chinese Academy of Sciences (2017).

Most recently, Fukuda's research has been focused in the fields of intelligent robotic systems, self-organizing systems, micro and nano-robotics, bio-robotic systems, neuromorphic intelligent control, fuzzy control, control of mechanical systems, technical diagnosis, and error recovery systems.

Fukuda has been an extremely active IEEE volunteer throughout his career, serving in many capacities, including: President of the IEEE Robotics and Automation Society (1998-1999); Director, Division X (2001-2002 and 2017-2018); the Founding President of IEEE Nanotechnology Council (2002-2005); and Director, Region 10 (2013-2014). He has also been a member of many boards and committees, active in planning conferences, and an editor of various IEEE publications and transactions. For example, he was the Founding General Chairman of IEEE International Conference on Intelligent Robots and Systems (IROS) held in Tokyo (1988); the Founding Chair of the IEEE Workshop on Advanced Robotics Technology and Social Impacts (ARSO, 2005); the Founding Chair of the IEEE Workshop on System Integration International (SII, 2008); and the Founding Chair of the International Symposium on Micro-Nano Mechatronics and Human Science (MHS, 1990-2011).

In addition, Fukuda's IEEE awards include: IEEE Eugene Mittelmann Achievement Award (1997), IEEE Third Millennium Medal (2000) the IEEE Robotics & Automation Society Pioneer Award (2004), the IEEE RAS George Saridis Leadership Award in Robotics and Automation (2009), IEEE Technical Field Award on Robotics and Automation (2010), the IEEE/RSJ IROS Harashima Award for Innovative Technologies (2011). In 2015, he also received the Medal of Honor with Purple Ribbon, from the Government of Japan.

About the Interview

TOSHIO FUKUDA: An Interview Conducted by Selma Šabanović, IEEE History Center, 25 September 2011

Interview # 817 for Indiana University and the IEEE History Center, The Institute of Electrical and Electronics Engineers, Inc.

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It is recommended that this oral history be cited as follows:

Toshio Fukuda, an oral history conducted in 2011 by Selma Šabanović, Indiana University, Bloomington Indiana, for Indiana University and the IEEE.

Interview

Interviewer: Selma Šabanović

Interviewee: Toshio Fukuda

Date: 25 September 2011

Location: San Francisco, California

Introduction and education

Šabanović:

Sir, it's recording, so, let's start with your name and where you were born.

Fukuda:

Yes. I'm Toshio Fukuda. I was born in Japan in 1948 and continue to live in Japan. I was educated in Japan, including primary school, junior high school, high school, and also university. [I received a B.E. from Waseda University, in 1971, and an M.S. and D.Sc. from the University of Tokyo, in 1973 and 1977, respectively.] Then I studied at Yale, in New Haven, Connecticut (1973-1977), and worked as a visiting research fellow at the University of Stuttgart, in Stuttgart, Germany, in those days West Germany. That is my background.

Since then I'm interested in research and education, and have worked at Waseda University, where I was an undergraduate student. I worked in the university. So far, my research has focused on robotics and mechatronics.

Early robotics research

My professor was so nice. There are two professors, Professor [Kazuo] Tsuchiya, also Professor [Ichiro] Kato, those are kind of very good professors in Waseda University, particularly the department in mechanical engineering. Why so? Professor Tsuchiya is good at biology related mechanical systems, or biomechanics. And, Professor Kato is very, very good at robotics, particularly biped robotics. Kato is considered "the father of Japanese robotics research." That's why Waseda University is so famous in robotics.

I studied those things in Waseda University, and later I went to the University of Tokyo to study more theoretical works. Then I went to the U.S. to study advanced control theory such as advanced adaptive control and all those things. I was interested in the mathematical proof of the theory. Then I returned to Japan and joined a government mechanical engineering laboratory in Tsukuba. There was a lot of research going on at the lab, including practical robotics and also theory.

Then I went to West Germany to study systems, system theories, software problems, and related things.

Inspection and maintenance robots

Then I returned to Japan and became an associate professor of mechanical engineering and I began a lot of robotics research, starting with an inspection and maintenance robot. This was a robot good from a practical view point.

Many people want robots to be useful for everybody. At the time, there were not many people working in the field of inspection and maintenance robots, so I recognized that it was a good field for making robots. There is a need for these type of robots because people need them for inspection and maintenance of industrial plants, like an oil refinery, a chemical or assembly plant, even a power station. Everything has been done by human hand and it is in a hostile environment. For example, in an oil refinery you have to clean up a storage tank and at the bottom there is a leftover, residual oil, a dirty thing. Workers have to remove it and it smells bad; a bad depuration of oil, so the tank is a really hostile environment.

How do they clean the oil tank?

They take all the oil, but bad oil is left, so they open the small hole and go inside. The entrance to the big oil tank, storage tank, is so small. Then they pull it over there, part by part and over they have a mask over there. Within twenty minutes they assemble it and that is how they clean up.

Modular robots and cellular robots

Now I got the idea to make a modular robot. Could I make a modular robot that could go inside autonomously, and once it got inside, could it make its own robot? It's a safe re-configuration type of robot. It's called a cellular robot. I started a lot of research on this modular robot project. I published 100 papers, and in 1994, I wrote a book on this cellular robot.

A modular robot is small, consisting of small parts that come together. If they get together as a simple function unit, it's a system that can do a very complicated task. Again that's my idea, and I did it. All the work here as a modular robotic system that is also an organizing robot system, self-sorting, an expandable robot system. This is evolutionary robotics. I love it.

My idea started from a small inspection and maintenance robot. I looked at a real situation and thought about the components such a robot would need. Then we developed a theory for that kind of robot

system. We had to think about a simple function unit as well as the complicated robot system such a unit, robot, would require. We envisioned a type of distributed robot system, too. The robot came together and you can say it was a LEGO type of robot. Okay, but there were no LEGO robots.

Later on, I was invited to Denmark to meet with people from a LEGO company. At that time, they did not produce such a Mindstorm yet. They made a Mindstorm LEGO robot.

I was so happy to see how to get the idea. I know LEGOs, it's like a plastic one, but I made a robotic system. So, I realized what I needed and I came up with a concept of a LEGO robot. I called it a Cellular Robot System and it is more complicated. So you start developing from the component-wise, to the cell-wise, to the unit, a small functional unit basically, and then you come up with clusters. Then you make a system and the system comes up with a bigger system. So, we can make a society of robot beings like that. That's a concept. My research work was based on such a concept - Modular Robotics. It took ten years.

Šabanović:

When did you work with the first robot that you were talking about; the one that goes into oil?

Fukuda:

It was 1983 to 1984.

Šabanović:

How did you become familiar with the oil refinery system?

Fukuda:

It's important that I visited many factories. I organized a technical committee for factory visits, maintenance inspections, and to work on this maintenance robot. Back home it became the Robotics Society of Japan.

It's great because even though I was so young, I had an opportunity to assemble this technical committee on factory inspection and maintenance robots because nobody paid attention. People in those days, the 1980s, paid attention to the control theory of robots, the theory of manipulation, the theory of kinematics, and the theory of dynamics of the manipulator. They were using that kind of theory, a PUMA robot, and a vision system. They did that kind of experiments. These are useful in many industries.

However, in my case I didn't start with those things. Instead I visited a factory, a gas supply company, an energy supplying company, an electronics company, and a supply companies. You know, they always look at how they can maintain the system. And, that's the first scene.

I love it. This is a real application. People are suffering, so they try to make a robot. Of course, there's no such robot, so that's why I started to make a simple robot. I made a robot for the inspection of a pipeline, a simple pipeline, from inside, and another robot to inspect from outside. The robots inspected, looking for a crack, a hole, or something like that. These inspections would keep a pipeline in good condition.

There are many applications for a pipeline inspecting robot. For example, if you have a plant, say a power plant, there are pipelines everywhere there's a pipeline. It's a monster of a pipeline. There are a lot of pipes and we need to inspect them.

I visited more factories having this kind of problems.

Then, I made many of those robots.

After that, I realized design-wise, we can make a modular robot because whenever I designed a robot's components they were almost the same every time!

Why don't you make such a component, the basics, and then assemble it? Then it is a robot. Or each robot can assemble autonomously. That's also another thing. From my scientific view point, an autonomously assembly robot working together, also a system working together is more profound and significant research work. We call it a Cellular Robotic System because it's coming from the cell system, and in clusters they create a module and then a system. There's another system, and they work together.

That's a Cellular Robotic System; not cellular phone. They always make a joke like that. Anyway, this is a distributed robotic system, a self-organized robotic system, and also an Evolutionary Robotic System. It's also a fault tolerant robot system because if something is wrong you just remove those things and make a new one. You keep the system working. That's a great thing. I love this idea and I did it.

Micro and nano robotics and bio-robotic systems

Then I tried to make it small. Component is big, okay, like our cell is so small. Our cell is 10 micrometer, 20 micrometers. I can make it small, small, small. Then I entered micro technology to make those things small, small, small. So, I made a robot system and figured out how to handle such small parts like that. Also, I tried to handle a small biological system under microscope.

When I was an associate professor there was a small pond in front of the university. One time, after lunch, I went there and I made a boat. Yes. Then, look at that. Oh, there's a small thing there. I went back to my laboratory and put just a drop of water under the microscope. I see. Jee! There are many kinds of biological systems, like a small animal 100 micrometer or something small. Unfortunately, I cannot catch it by hand. I cannot catch it, so I started to make a manipulator to handle it, to catch it, or to grasp it. It's called a micromanipulator. At that time I was one of the pioneers making this type of micromanipulator.

Šabanović:

What year was this?

Fukuda:

It was 1986, 1987.

Šabanović:

Okay, you're doing a lot of modular stuff.

Fukuda:

That's right. That's the same time I'm going that way.

Šabanović:

What's the modular stuff? Earlier you mentioned that you had worked with the professor who was very interested in biology, biomechanics?

Fukuda:

When I was an undergraduate at Waseda University he was an advisor.

Šabanović:

Did that have any effect on when you were working on the modular robots? Were you looking? Were you inspired by biological system and healthy interaction? You mentioned it was like cells.

Fukuda:

Yes. I learned about biological things from my professor. The biological system is sort of an autonomous thing, it is robust, and it is kind of a self-assembly.

For example, while my professor was lecturing, he smoked a cigarette, and said, okay, Toshio look at that. Here there are leaves. He pulled out a cigarette, took out all the leaves, and said there's a hole here. The professor told me: You may think this part is broken, but no, a biological system always tries to...such a problem. So, come up with a way to compensate, try to compensate for the hole, a lot of things, so it worked. Likewise, if we have something wrong, we always try to figure [out the problem]. So, try to compensate. It was true. Likewise, if we have something on, we always ... [undecipherable].

If I were a brain and a synapse died, it doesn't matter because there is rerouting. It's called plasticity. So, in such ways our body is robust. What I learned from him is robustness, a kind of biological system. That's important. That's why those ideas went to my modular robot; ideas for a total system, and how the system can be robust. Then we can think theory-wise. Now, twenty years later, people in the robotics community are talking about modular robotics, space application, but I did those things a long time ago.

Šabanović:

Do you think it's kind of interesting that now the modular stuff is theory? When you were looking at it you got inspired from application. And, in the early 1980s, in the community I guess it seemed like you went away from theory I guess. What was that like? Was there something unsatisfying?

Fukuda:

Yes, from the first [I was inspired by application]. Most people go from the theory, but in my case it's different. I went to the field, to industry, looked at the problem, and extracted the problem. Then you make a theoretical model. Then you come up with experiments and other things. So, I was a little bit different, but nobody else had the idea of modular robotics anyway.

It's a good thing to come up with theory-wise, a modular robot as a cellular robotic system. That's a good idea. It's a good thing for me.

Then I went into the micro, micro, micro, small, small, small. Then what happened? Again, it's like a biological system; a biological system is cellular robust. Now I look at them, we can handle a cell, a small cell, a real cell, biological stuff. One hundred cells, one picks up here, two together, three together, make a module, then try to make an organ, make a huge human body like that. Then we can make a biological robotic system and a robotic system made by an active cell manipulator. So now I'm working on micro bio robotics or nano bio robotics, and I'm making a small nano manipulator, Nano, Nano, Nano. It's a biological environment. It's a wet environment. It is the same as a dry environment which I started thirty years ago, a cellular robotic system.

Now here I'm talking about the real biological cellular system. How can we make a cell, bring a cell here? This is very, very challenging, nobody succeeded, but the people doing so from a stem cell, iPS, are making those things. If we can make a system like that, construct the system as we want. It's very, very interesting and very challenging. I still work on bio nano or robot system. I like concept-wise small cell module, making a system, and all the microns like that, even dry environment or wet environment.

My concept from thirty years ago when I was young is still valid. I like it. Of course, the mechanism is different, but concept-wise, they are almost the same. That's my robot idea. Of course, other people think, no. My robotic concept comes from such a cell system like a human robot or some other kind of module robot.

Šabanović:

What are some of the important conceptual kinds of innovations that you've made? You have to think about going from the very large system to the smaller and smaller system. There are also probably different challenges on a different scale.

Fukuda:

Yes exactly. It's interesting that they're so small. If it's small, they can communicate with each other. If it comes out module-wise, maybe you can have loose communication between them. If you have a big system, you never have a direct communication between the cells. How can you make such a structure? How they do it is very interesting from this view point. How do you convey you're intension and what to do next? How do you tell the next over there so that they can propagate from here to the other at the end?

This is a very interesting communication problem, too. So, I have to figure out how we can do a task, how we can deconstruct that task, and how we can communicate with each other. What is the number of cells required? That's a bit of theory-wise work. We can develop a cellular robot system theory. That's my contribution.

Afterwards, in 1994, I published a book. That's great.

Then after that we made many, many things. How can you put in more intelligence, for example, by using a neural network or a physiological [indiscernible].

Think about neural network, for example, one cell, one synapse doesn't work. If you have two, three, four, or more, then they can make something. I got it. As that time I also started a neural network. Why? One synapse, no. Two, three, more, more and more, then you can have a good, a somewhat good result. Make the system with more components, then we can have something better and better performance. Likewise my robots, [indiscernible] small cell, you need simply, then come up here together, so that is my theory.

Nobody liked a modular robotic theory like that, but I made such a foundation of a cellular robotics, of a system modular robotics. I'm proud of those things. Even now those things come up here from the biological system, too. I like it. Sometimes we have to work over such a semi conductive type of thing, kind of a MEMS technology, a microelectromechanical system. We also have to work on a nano system. That's the whole thing and how you get it together.

A pioneer

Šabanović:

Were there competing theories or other people? When did other people start working on the modular robotics?

Fukuda:

In those days I had only one. Here we will write my IEEE, Institute of Electrical and Electronics Engineers Society. I'm the only one working on this kind of cellular robotics. I liked it; no competition. Later other people came up with a multiple robot system, a multiple distributed robotic system. But, usually, these people were talking about mobile robotics, a mobile robot. Mine was more like a cell assembly, docking, making a system like that. So, it was in a little bit of a different direction.

You are better to have some unique strange idea. Now people are working on a modular robot. They used this concept to make a modular robot to make a space station. Something like that is the best thing.

Šabanović:

You said there wasn't really much competition, but since it was such a new idea how did the community react? What was the reaction?

Fukuda:

Reaction? Of course, people said it was a stupid idea and come on, why don't you design a robot, la, la, la. In 1980, why did those people work on a manipulator, dynamics, or kinematic dynamic, so fast? They were making a non-linear control theories, la, la, la, la.

At the time I'm talking about, how did they can communicate with each other? How did each cell work together? How did they dock with each other? I worked those things alone, so that's why many people saw strange things.

My paper was rejected by the conference and by the journal. They don't always recognize my work, but that's a good thing for me, yes.

In those days most people thought of robots as a PUMA manipulator, a mobile robot, a computer, and a vision system. My approach to robotics is completely different from the regular way of research. Mine is more of something I learned from industry and learned from the biological system. That's a thing. That's a different kind of inspiration. Yeah.

Šabanović:

Do you think there were something else also in addition to going to industry and working and you know – I guess this unique way of thinking seems like maybe we'll take a little bit more than – do you think there was any other factors?

Fukuda:

Yeah of course there are other factors. In those days I also read many, many works, such as photo and computing, Apollo, and launching Apollo. For Apollo they needed five computers for redundancy. In case one had something wrong, they went over there, so they had a triple modular redundancy system. I started those things. As you know, a biological system is so robust. How we can make the robotic system also robust? That's a good thing, so think about it.

They're also good for industry, industry people think the system has to be robust and work for a long time.

So, in case something went wrong I could use such a concept for manufacturing, an Intelligent Manufacturing System. Now people call those systems an autonomous robot system, but in another way. In my case, if you carry a heavy payload, don't make a big gigantic robot alone, instead make a cellular robot that comes together, it's carried together. Or say something goes wrong with a manipulator made as part of a module, take it off and bring in another part. Think part-wise. They re-configured their

structure autonomously. That's my concept. In real industry, it's not so easy. But those kind of robots with a good concept are made for industry.

Šabanović:

Who made it?

Fukuda:

The Denso Company made it. It is so very interesting because they made an electronic product for the automobile. They made a robot, the same robots. They can hand there, making assembling parts by parts like that, so every robot had the same function. They assembled this part first stage, second stage, third stage, fourth stage, fifth stage, then they can make a product. Once there wasn't much demand, one or two robots out, only three robots were here. Three robots can still make it. The robot was kind of like a human being. It depends on demand. If the demand is not so big, few robots work. If the demand increases then many robots work on the line. That's the reality.

I was so happy to see my concept, those things, realized in industry. As a matter of fact, thanks to those good people.

Šabanović:

When did the Denso Company –

Fukuda:

It was 1980, the 1980s, from 1980 to 1989 or 1990; something like that. They also received an award because it was such a fantastic thing. They made a robot like a human. They line up on the line as if the humans and robots are same. They communicate with each other, handle the product here, then next step, and another step, then another step. Finally, at the end they made a product; amazing, that's interesting. If there isn't much demand, just two or three are up and the others take the rest. You know, that's a re-configurable, flexible manufacturing system. That's interesting.

Šabanović:

In general, did industry have a better reaction initially than academia to your work?

Fukuda:

No. But maybe people thought it would be a good idea, if we could realize it. The realization is more problematic, okay. They used just a part of the idea. How can you make the system redundant to make the system robust? Also, in case something went wrong, how can the system can keep going? That's important. So they took the idea, but not the whole idea. One of the example I just mentioned is a re-configurable manufacturing system. Robot one, two, three, four, five. If dependent demand, yeah, some group can make those system and make a production. That's very nice. That's good. I myself loved these ideas and I didn't care if other people did not like my idea. You must have a good unique creative idea to make an experiment, a theory, and those things.

Research funding

Šabanović:

How did you get funding for your ideas?

Fukuda:

My ideas got support from the government and industry. Industry people gave me research funds, but not a lot of money. The government gave me a lot of money for research. Since my idea was kind of strange, at the beginning I got a little funding, or nothing, zero. I used university funding. Then I got more and more funding because it's a very nice idea. Finally, fantastic, that's a great idea, right, and they liked a cellular robotic system.

Šabanović:

Did you have connections from having worked at the MITI, MEL that helped you?

Fukuda:

MITI made an advance robotic project. I was a member of a committee for advanced robotics. They made a maintenance, inspection, and maintenance robot for nuclear power plants or some kind of power generation. Since, in those days, I was one of a kind. The technical committee chairman on inspection and maintenance robots usually didn't pay attention.

That's why I was a member of advanced robotics. I learned many, many things because those industries were involved with a big project of MITI. They wanted to make a sizeable system, spending, say, US\$200 million which I cannot spend. I was very happy to see how they could make a four leg robot inside, how the tele operation worked, how the communication worked, how a laser could be used, and those things.

For example, if there is smoke, we cannot see each other, but a laser beam with a long wavelength can go through. We can see through smoke. About twenty-five years ago, I worked on those things together. Usually, people cannot see if there is fire and smoke. The visual system doesn't work, but the laser beam with a long wavelength works. A CO2 gas laser can see through the smoke. I learned many, many things from such a It is a good thing to involve industry and government. So, in a project I can exhibit more ideas to do so. That's a good thing. Since I used to work in those areas, I realized it was very important for inspection and maintenance and industry to work on a project. They had a project and they came to my lab. We had ties and collaborated together on research and those things. I love to do so and it's a really good thing. But, in the 1990s I did more theoretical work and later I moved more from a dried one to wet areas, more biological cell manipulation. I still like this idea.

Collaborators from biology and medicine

Šabanović:

Did you also have a collaborator from biology or -

Fukuda:

Yes, of course. Without collaboration with the biology, you cannot work. Biology is so complicated, profound, and also not clear yet. There is no mathematical way. We have a lot of knowledge and a lot of experience from biologists. That's why I worked together with them. I also work with medical doctors.

Šabanović:

Oh yes, did you do some medical robotics as well?

Fukuda:

Yes. I used a medical robot for intravascular surgery in your brain. A small wire went through a catheter and the small wire going inside hurt. Then the problem is the robot.

They have no way of knowing how good my robot is, so how can we show them? Of course, we can use a dog or another animal. We can make artificial blood cells with glass, but it's not good. Finally, I made human data - a CT scan, MRI data, so that I know exactly the blood vessel you have. That's the model. Then I tried to show how my robot was good at going inside the human body, such as inside a blood vessel. Then you have a simulator. It is a human, an exact human simulator of the whole body. Then what happened? A medical doctor bought my simulator, not my robot.

Šabanović:

To learn about the body.

Fukuda:

Yes. They said your robot is fine but I can do it by myself. But I need some simulator, okay, like because they're humans, yeah, human we cannot do that, okay. So that they bought. Now because of that thing, medical doctors like it, then we made a simulator based on silicon, okay. So a human body, okay. So, we made such an intravascular simulator. People liked it. Finally, we founded a company to sell it. It was a venture business spin off from my lab. It's still existing here for last six or seven years. It was so nice to spin out the company.

Most professors in Japan don't have the experience of making a robot from their own research work. I made it. I know in the U.S. it's easy and you have so many kinds of companies, and professors can found a company.

I know some very, very good professors wrote books. Marc Raibert's Boston Dynamics, my company, is not that big, but they're surviving. They sell a human simulator to hospitals and many catheter manufacturers.

Šabanović:

I know you have to go to dinner at six, so do you want to stop?

Fukuda:

Yeah, stop.

Šabanović:

I wanted to ask some questions about your early times, including Waseda University, the University of Tokyo, and stuff, but it may take time, so do you want to –

Fukuda:

No, no I can do that quickly. As I told you, when I was an undergraduate at Waseda I had a good advisor.

Šabanović:

What was it like? I am curious because you have this amazing experience of having been at Waseda at the beginning. Things were just starting. What was it like? Who was there? What were the robots? What were the questions?

Fukuda:

There's a good robot.

Waseda University is so famous for robotic or biological system or bio robotics. People know that. Instead, I didn't go into fluid dynamics, material science, thermodynamics, or engine or those things,

Instead, I went into control engineering. That's the reason. So, bio robotics – by chance, that's a great thing. I learned many things from the undergraduates. The professors are so good because they try to give us something to think about. They were not the typical Japanese professor's. They're different. They just give a time. They're not good at teaching, instead they try to think – for us to think about. Why it so? Why it so? That's what I love and I appreciate those professors because they have given us time to think.

Šabanović:

Is there any particular professor that you remember that was good at this?

Fukuda:

Like I said, Kato for robotics and Tsuchiya for biological inspired robotics. That's two professor. Most of them passed away, but there are so many.

Šabanović:

What were some of the early exciting projects that you worked on with them?

Fukuda:

Yeah, as I said, in particular, as an undergraduate for one year I worked on a circulation system to keep our human organ alive. That's good, you see. I also made a fluidic system and applications of fluidic systems. Now you people are working in microfluidics, small one.

I think I have to go.

Šabanović:

If you have a little bit more time at some point during the conference, maybe we can continue.

Fukuda:

Sure, tomorrow. Okay then. You know my phone number, right?

Šabanović:

Yes and I sent you mine.