

# KAS OOSTERHUIS

Words Kseniya Otmakhova

Images Hyperbody

Professor Kas Oosterhuis, or, as he calls himself, *the expert formerly known as an architect*, steps down from his function as the head of Hyperbody with the end of the current academic year. However for him not much seems to change, since Hyperbody is not just a job, it is a passion. Crossing the borders between the rational and the emotional aspects of architecture how does Kas see the movement he established 16 years ago? Who will take over from him and where is Hyperbody heading towards in the coming months and years?

## What is Hyperbody (to you)?

It's a start of a larger movement. Socially, the society rearranges itself all the time, technology reinvents itself all the time and that's exactly where we want to work. The actual state of mind, in the actual condition. People sometimes think we don't look at context, at history, but we do. Being aware of what happened in the past and from there, from the actual condition, developing the future vision. It's the architecture of here and now. We design to produce. We're very much hands on, we don't talk about it, we do it. If you look at design and production strategies, we always say: 'It's only this component, at this location, at this moment in time'. We look into the components that buildings and environments are made of. These components can be anything: from building blocks in the context of the city to parts of the façade and furniture. Another thing we are working with is the state of the swarm. We are interested in the interaction between people and these dynamic systems.

Everything we do in Hyperbody I did in the practice before. Concepts like Trans-potrs and NSA Muscle were developed in my practice and brought later on into Hyperbody for further research. That was the real basis for further explorations. In practice I went much more in the direction of building larger buildings based on the same principles as swarm-behavior and component based intelligence, parametric design, etc. In Hyperbody I was more focused on adaptivity and interactivity.

## What inspired you to establish Hyperbody?

The fact that I became interested in this direction to begin with has a lot to do with the social relations I have with artists and scientists. So many architecture offices earn their money by copy-pasting each other's ideas. That's where artists and scientists have a different attitude, they look from the inside. My wife is a visual artist and works in a completely different way than I did as an architect. I wanted to link together the emotional and the intuitive to the rational.

In 1994 we had an event, 'Sculpture City', where we declared that we can do sketches in 3D and that we can make interpretations of that into something that could be built. We said a building can be a sculpture and evoke emotional feelings and at the same time it can be a functional building. We believed that these

two qualities don't have to be in conflict. That idea was the basis for the 'Water Pavilion'. With that we initiated something completely different, without any serial repetition. We started thinking of architecture that's based on transformations, processes, that's based on a completely different paradigm. That later evolved into a component based idea, inspired by the swarm-behavior. The smallest components together are forming this sculptural and emotive body. That idea was so strong, that the 'Water Pavilion' went viral and eventually I got invited to teach here.

## Why did you choose to establish Hyperbody within this specific faculty and not, for example, at TU Eindhoven?

I never thought of going to TU Eindhoven, because they are even more technology driven. This faculty was clearly more design oriented. Hyperbody doesn't start with computation, it starts with emotion.

## What is the role and the meaning of Hyperbody within this Faculty?

Hyperbody is one of the few Chairs at the Faculty that represents actuality in architecture. We belong to architecture and not so much to the technical department. From the outside people might think: 'Oh so you work with computation, so you must be engineer-like architects.' We are, but that's not where we start from. We don't do engineering to facilitate





other people's ideas, we embed engineering in our own design pieces.

The Venice Biennale by Rem Koolhaas [held in 2014, red.] was about so-called fundamentals, but then it was obvious that his thinking stopped after he left the AA. All the movements he described in education and practice ended somewhere in the 80's. He completely ignored the actual state of mind. This huge gap I also see represented in the curriculum of the Bachelor. They're behind some 20-30 years.

#### **How did the attitude towards Hyperbody as a discipline develop over the years?**

We gained a lot of international recognition. We've a strong feeling that here at the Faculty we're tolerated and maybe even respected, but not so much appreciated as we're appreciated internationally. The amount of international students we have at Hyperbody is a sign of that, but our work and publications also means a lot for universities abroad, for them Hyperbody brought the change.

#### **Maybe the new Master improvement plan [see Bnieuws 07, p. 14, red.] aimed at multidisciplinary education and more connection between tracks will bring a change?**

I think with the change of the Master courses there are more generic things coming in. Which, I have to say, I regret, because many of these things don't

stimulate the collaboration really, they flatten the level. I see a tendency now where you study longer and make a reservation to go deeper into a subject during your PhD. I am very much in favor of collaboration between interdisciplinary experts. We also practice this within our studios. The students work in teams where everyone has his or her own specialization. I find that a very natural way of collaboration since people all have different interests, different qualities, and different ambitions.

#### **What is the future of Hyperbody now that you will be leaving?**

The coming five years I'll remain in close relationship with Hyperbody and I'll be focusing more on the relations with the universities abroad to strengthen Hyperbody's international network. Henriette Bier and Nimish Biloría will take the lead over the research and the education within Hyperbody.

#### **Considering the trend of 'Automation' [see Bnieuws 09, p 16] the dean mentioned that designers need to take a leadership role in the discussion on robotics in our society. What does this trend mean to Hyperbody?**

Well, that's what I've been doing for 30 years already. This dean is much closer to what we do than his predecessors.

In Hyperbody a design starts with an ambition to reach a certain goal. You know that a certain technology is around and for each project you develop this technology further. One of the subjects, almost a paradigm we pursue is: 'It's only there when you need it'. Imagine a room where you don't see anything, but if you would want to sit a chair appears and when you want it to become a kitchen it becomes one. This is the idea of multi-modality where the same space can be adapted to become another space with another function. I'm not interested in a robot that does things for me, but in the whole space as something that interacts with me.

#### **Do you have any unrealized projects you still want to undertake?**

Yes, of course we need to build this truly interactive multi-modal pavilion. That's still a dream that has to be realized. We are now aiming to create an interactive stage for the upcoming GAME.SET.MATCH-conference that will serve as a prototype for the multi-modal pavilion.

"HYPERBODY DOESN'T START WITH COMPUTATION, IT STARTS WITH EMOTION."

#### **Apart from Hyperbody what is important to you?**

What we do in practice these days is working on open design systems on all levels from urban to interior. The intelligence of the whole process is already in the components. This leads to a new type of design process which is participatory and makes it possible to include and consider everyone as an expert. And that's the future. How does that sound?

#### **Any last words of advice?**

Be open to the actual developments. Talk with completely different disciplines. Work with dancers.

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#### GAME.SET.MATCH. CONFERENCE 2016

Hyperbody is organizing the Game.Set.Match conference that will be taking place in November 2016. Here all the themes Hyperbody is working on, will be presented: 'Next Generation Building', 'Robotic Building', and 'S.M.A.R.T Environments'. Internationally renowned speakers - architects, designers, researches - will be addressing these themes. Next to that there will be an exhibition and a robotic action in the Oostserre.

More info on: [gsm3.hyperbody.nl](http://gsm3.hyperbody.nl)

Update

# HYPERBODY: HERE & NOW

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Images Hyperbody

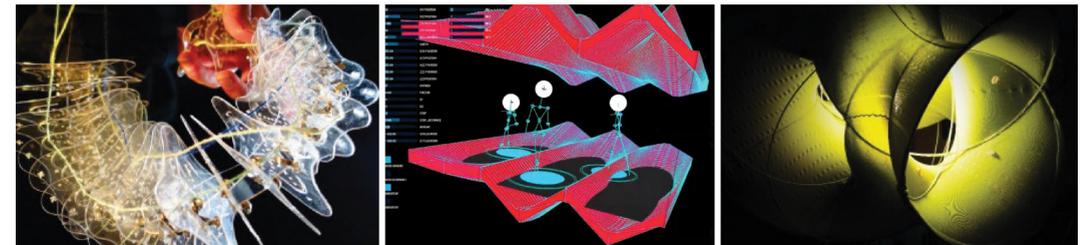
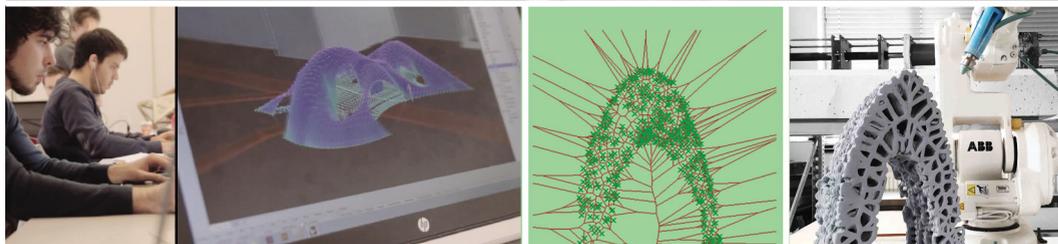
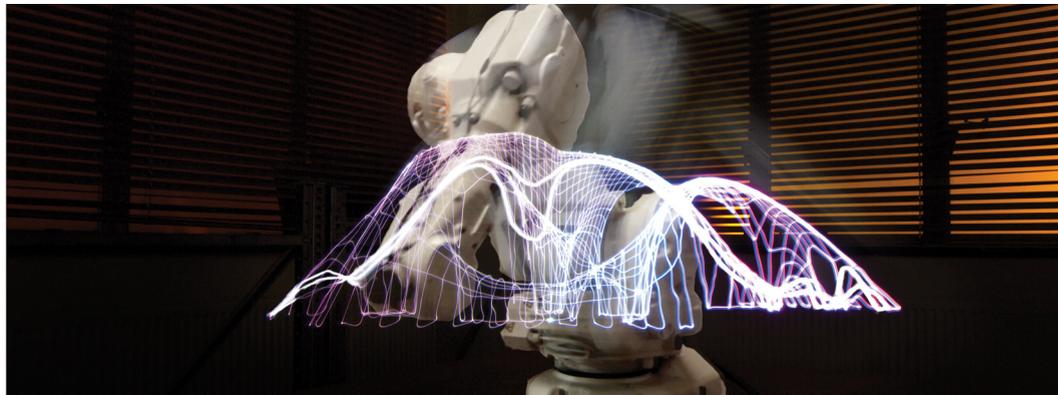
Henriette Bier and Nimish Bioria will be taking over the lead from Kas Oosterhuis. They told Bnieuws about the most recent developments in research and education at Hyperbody.

## Henriette Bier

Associate Professor, Leader Robotic Building as Design-to-Robotic-Production and Operation

We have two main research themes within Hyperbody that relate and inform the Master studios: Robotic Building and S.M.A.R.T. Environments. I lead the Robotic Building theme, aiming to integrate robotic devices into design and production processes as well as into the operation of buildings. Usually, research and education are strongly connected. The projects that the students are doing are linked with the research that we are conducting. The Robotic Building group has four active researchers.

Recently we received a grant, which enabled us to buy a robot and establish the first robotic lab at the Faculty where we are developing Design-to-Robotic-Production with researchers and students. This new development has been received international recognition and now we are invited to exhibit our work in Centre de Pompidou in March 2017. It is a good time for us to push these developments within the Faculty, because they currently take place all over the world. This is being reflected in the interest of the students as well: our student numbers grow while more and more international students come to us.



S.M.A.R.T. environment

## Nimish Bioria

Assistant Professor, Leader S.M.A.R.T. Environments

I lead the S.M.A.R.T. Environments theme within Hyperbody. S.M.A.R.T. is an acronym for Systems & Materials in Architectural Research and Technology. As a research umbrella, S.M.A.R.T. Environments interrogates the intricate relationship between information systems and associative material formations. This interrogation is carried out every semester as an active collaboration between dedicated Hyperbody researchers and our Masters students. Here we use cutting edge interdisciplinary design strategies and nonlinear computational processes. Performance Driven Architectures and Real-Time Interactive Environments, the two main research and design strands of S.M.A.R.T. Environments, are thus produced. Such context aware environments embody sensing, thinking and acting as an intrinsic part of their make-up. The produced designed environments are thus able to respond/adapt in real-time with People, Activity and Environmental Context based data. The focus on enhancing user comfort and awareness levels, while at the same time sustainably producing/channeling energy and optimally organizing materials. There is a growing interest in developing such intelligent environments with its core values embedded in human behavior and multi-performative nature of architectural space.

[hyperbody.nl](http://hyperbody.nl)

< Robotic building workshop