

## Sally Weber: Making Art from Light

**Sally Weber**

Resonance Studio

**Bruce Campbell**

Rhode Island School of Design

**Francesca Samsel**

University of Texas

We caught up with Sally Weber

(<https://www.sallyweber.com/>) after having been transfixed by experiencing her latest work, *inFLUX*, in her exhibition, ELEMENTAL (a current installation) at the Butler Institute of American Art, in Youngstown, OH. As an artist who has worked with light as her medium for a distinguished career, we believe Sally has much of value to share with our readership.

Ms. Weber is a holographic artist who completed her graduate work at the Center for Advanced Visual Studies at MIT under Otto Piene. While at MIT, she was able to explore holography and produce several solar installations through the facilities of the Regional Laser Center in the George R. Harrison Spectroscopy Laboratory.

Like graphic artists and data visualization specialists who use models of light and color to present content for screen and paper, Sally works to communicate with light but through media such as holography and laser traces. She works to find a resonance in the materials and representations in order to provide unique experiences of light to elicit insight regarding phenomena not easily experienced at human spatial and temporal scale. Her iterative process includes exploring tangible materials to find an art piece composition that can transfix an audience – an experiential state of being that results in lingering long enough to appreciate the art while wondering about the underlying communication.

Upon experiencing her art, one can think through the aspects of her pieces that make the experience of them so compelling and what technologies might possibly need to provide as affordances to make such experiences transfixing using virtual reality technologies.

Through her environmental art Sally took on the challenge of how to bring art into a larger environment, by working from the outside in. She studied the nature of a place and then made art that was site specific – back when public art was just starting to come to light. Seattle was one of the first locations that had a public art program and by the time she moved out to California, she was right in the middle of it. In doing larger architectural scale work – using sunlight to illuminate holographic art installations – she didn't think of a hologram as a little thing. She thought of landscape and the idea of bringing light and color into a building so that it became a time piece – a way to capture an experience of something that was always in motion. Examples of earlier work include *Lightscape* (Figure 1) and *FocalPoint* (Figure 2)



Figure 1. *LightScape*, is a solar installation using holographic optical elements and acrylic. Sited on Kresge Lawn, Massachusetts Institute of Technology, Cambridge, Massachusetts. Designed to reflect the sun's arc across the site and Kresge Auditorium's curved roof. The holographic elements float above the ground and alter in color with the sun's angle and the viewer's distance from the installation. Photo credit: Sally Weber. (Used with permission.)

Ms. Weber's work is complex and wide ranging in media and content. Focusing on her current exhibition *inFLUX* below, Weber speaks of the work, the process and underlying principles in her own words:

"The themes within *inFLUX* have been percolating for over many years. I had worked with lasers and optics for quite a number of years and knew it wasn't a holography piece but one that could get to the jitter - the inherent jitter that is in everything. Jitter, like that in Brownian motion, is the constant movement of molecules. If you have a glass of water and you pour some milk into it, over time the whole glass of water will become milky. All the molecules bouncing off of each other are actually doing the mixing. For me it doesn't matter what scale - it's a metaphor in that everything is jittering. You can see images from the Large Hadron particle collider at CERN and that's what they are trying to capture - the motion that is a result of collisions which defines what particles exist and what's going on with them as a result of the collisions."

"Light as photons, the particles of light, are always in motion. People generally tend to think of light as just all pervasive, but it is dimensional. Light is always moving and we go through this matrix of movement - affecting not just us but everything. *InFlux* became a metaphor for that kind of movement - not as a rhythmic kind of pendulum motion, like to and fro, that we think of as its resonance dependent on the length of the pendulum, but the movement of objects that interact with each other - a physical representation of what is happening all the time, independent of scale. We 'jitter' or interact with each other in some of the same ways when we meet up with someone, have a conversation, walk by them, etc. The way we move, it's a dance, a synchronicity that takes place all the time, unconsciously, and is something that has been roaming around in my head for a long time."



Figure 2. *FocalPoint* is a solar water fountain, 12'x 4'x 8', with holographic optical elements, glass pipes, steel, and a water system. Designed to focus sunlight into 3 lines of light that scan across the floor and walls in response to the sun's motion. Installed here at the Boston Museum of Science overlooking the Charles River, Boston, Massachusetts. Photo credit: Sally Weber. (Used with permission.)

“I knew I wanted the light to be the functional aspect of *inFLUX*, the active ingredient doing the drawing and leaving a trace of its path, so that people could find a place where they were just caught – and in art when you get caught there can be a moment of silence. You are caught where you aren't thinking and you aren't just emoting, but are transfixed as if through to the solar plexus. As an artist, occasionally, I hope to catch someone before words. In that place there is experience. I aim for that ongoing sense of wonder when one has to stop long enough to see and feel. Otherwise it goes right past you or you go right past it.”

“There is a concept in Buddhism that is not a process of cause and effect but when everything arises at once. If one thinks of nature as cyclic, instead of linear, with everything arising at once, you can't pull it apart. So if instead of looking at the separate parts, which science has done to be able to consider parts separately in order to delve into it, you are looking at the whole matrix of the web and the structure in between it as if you are looking at the negative space. I think I have been fascinated by what keeps things together and how one part impacts the other. So to make things that naturally have limits, you try to expand those limits so that people's experiences take them to someplace else.”

“You can take the experience of a total eclipse and try to capture it through pictures but that isn't going to do it. It's because the whole world that you know changes in a matter of moments when you finally get to totality.”

“A few years ago an astronomer said to me, “*for a photon it is always present*”. I loved that. You take that sentence in and you think you get it, and you don’t quite get it at the same time. That paradox is exactly that place requiring lingering - the tension between the known and the unknown is right there. For me, light is everything from looking at a star and being right there while at the same time you are right here, as well as thinking of light not just as a surface, or a totality of reflected surfaces, but as the stuff out here, *in the air between us*. From the start holography offers a unique medium: to be able to bring light to a conceptual mode where you think of it as an object but it is not, it is really a field of light. It’s taking the physicality away but giving light a sense of boundary and that sense of boundary makes us ask what else is just a boundary that we consider solid? And thinking about the permeability between these media and how delicate that is or how robust.”

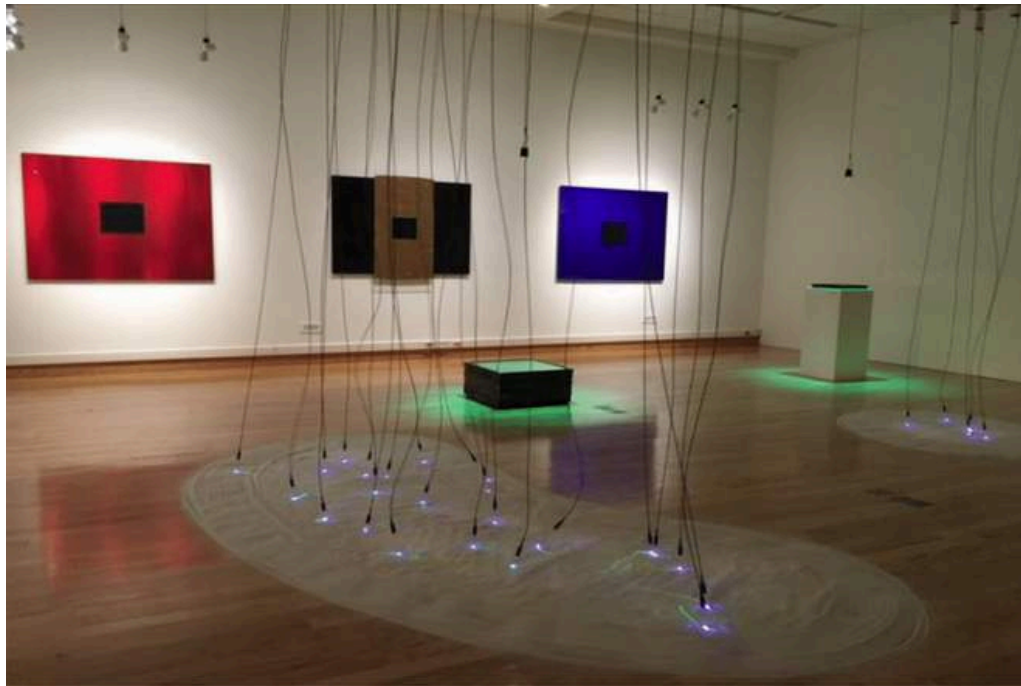


Figure 3. Laser pendulums draw in the sand leaving a trace of their path as color patterns building up over time as *InFLUX*, a two-part laser pendulum installation, in *ELEMENTAL*, solo exhibition at the Butler Institute of American Art, Youngstown, Ohio. Photo credit: Sally Weber. (Used with permission.)

“If you can do something that just shakes people a little bit it’s as if they are looking at a new vista. They suddenly ask “oh my gosh, what is that?” In the case of leaving traces of light in the sand and people not knowing why, it allows that expansion.”

“Little kids are great – they will kneel down spontaneously to look closely. Adults get caught up in the motion and look up to see what is causing it while the kids don’t bother – because they are watching the motion and color and hearing the sounds whirling with the twisting and twisting of the actions that you can’t take all in at once. And yet it’s leaving a trace by drawing so you can see it over time – building up layers of these colored patterns that gradually fade and that are illuminated by the lasers and then glow. ”

“Physically the exhibit consists of white sand down on the floor and the pendulums above it (see Figure 3). I watch where they go and adjust things accordingly and I put what I call *magic dust*, that is basically different pigments, down on the sand so you can see glow in different colors. Depending on when the lights are low or are off, you really see how over time they build up. They remind me of nebula because of the same kind of looking into the depths of something and trying to ascertain from photographs what is in front and what is in back - the brightness is obvi-

ously on top here but there is this complexity underneath. That complexity is all that the light drew over time. It is gradually fading or being reinforced continually.”



Figure 4. A series of stills from *inFLUX* at the Butler Institute of American Art. Each laser draws in the sand by illuminating pigments, which glow in response to the light. Over time, patterns emerge and fade to be redrawn as the pendulums interact, collide, twist and pass by each other. Photo credit: Sally Weber. (Used with permission.)

Selected frames of *inFLUX* in action are shown in Figure 4. A video of *inFLUX* can be found at (URL). For further information about Sally Weber and her work see [www.sallyweber.com](http://www.sallyweber.com).

## ABOUT THE AUTHORS

**Sally Weber** is an independent artist at Resonance Studio. She received her Masters Degree in Art&Visual Studies from Massachusetts Institute of Technology. Her research interests include applying holography and laser technologies in support of art and visualization. Contact her at [info@sallyweber.com](mailto:info@sallyweber.com).

**Bruce Campbell** is a faculty member of Web Design + Interactivity at the Rhode Island School of Design. He received his PhD in Systems Engineering from the University of Washington. His research interests include ocean data visualization and procedural design. Contact him at [bcampbel01@risd.edu](mailto:bcampbel01@risd.edu).

**Francesca Samsel** is a research associate in the Center for Agile Technology at the University of Texas–Austin and an artist-in-residence at the Los Alamos National Laboratory. Contact her at [figs@cat.utexas.edu](mailto:figs@cat.utexas.edu).

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