Saal: Simulacron-3 | 12:00 | 00:30 | Day: 5 | Track: Ethics, Society & Politics | nA

Title: **Satellite Imagery in Agriculture**

Subtitle: Questioning privacy, data protection, and autonomy in the field

Speaker: **Lisa Gutermuth**

Short: *Satellite imagery has been used since the 1960s to monitor agricultural activities at a national and international level. It is only now that the image quality and cost feasibility have made satellite imagery available to individual farmers in application to crop quality analysis, yield prediction, and other measures related to precision farming. Farmers can now pinpoint problem areas of their fields and address them on the spot, rather than blanketly spraying fertilizer and pesticides, which has the potential for environmental and economic benefits. However, this development has launched agriculture into new territory ridden with issues of privacy, data protection, and autonomy of farm inputs and activities. This is a discussion of the state of affairs in agricultural earth observation and what we can do to ensure that it is used for improved practices and not against the producers of our food.*

Long: In 2013 the artist Mishka Henner produced the work, "Feedlots." It is a series of satellite images he found of selected cattle feedlots across Texas. Across the images one can objectively observe the the adverse effects of irresponsible farming practices. This represents the transparency and accountability that satellite imagery can enable. At the same time, farmers were adopting precision agricultural technologies which used vegetation indices such as NDVI derived from near infra-red satellite imagery to track the progress of their crops and detect areas that didn't have enough water or nutrients. The digitisation of fields and creation of field analysis software means that farmers can download the data on a USB stick, plug it into a tractor, and apply fertiliser exactly where it is needed, which brings environmental and economic benefits. However, as with the introduction of most new technologies there are potential issues that come along with our inexperience in these new territories. Privacy issues related to who can access and order satellite imagery of different farms, and to what degree of resolution. Data security issues for farmers to work out with the agritech companies offering the internet based services. Questions of, 'who owns my data and what can they use it for?' are coming up across the cornfields of the Midwest of the United States. Additionally, companies that offer farming software also offer seeds, chemical fertilisers, and a whole suite of products that they oblige farmers to use. Just as Apple encourages users to use their line of synchonised products, agritech firms want farmers to start farming literal apples with their line of seeds that correspond to the fertiliser, pesticide, and the price calculations of their cloud farm planning tool. These are issues that were never encountered by the agricultural community before, and recognition and new solutions at the onset of this new era are necessary for the future of our food.