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Lecturer/Ph.D. Candidate**Art-Science:
Curricular Models and Best
Practices. Leonardo Education
and Art Forum (LEAF) Workshop**

The Leonardo Education and Art Forum (LEAF) promotes the advancement of artistic research and academic scholarship at the intersections of art, science, and technology. Serving practitioners, scholars, and students who are members of the Leonardo community, we provide a forum for collaboration and exchange with other scholarly communities, including CAA, SIG-GRAPH, SLSA, and ISEA. Chaired by Shanken, our workshop at ISEA2010 will address difficulties typically encountered while undertaking art-science research, teaching, and when meshing curricula from diverse fields. Following a twenty-minute introduction to various aspects of this theme, attendees will participate in one of the ninety-minute working-group discussions led by Nikolov(a), Scott, and Thomas, international experts in the field. Our aim is to identify and share ways to surmount some of the difficulties commonly encountered in interdisciplinary art/science research and curricula with the aim of publishing a guide to effective models and best practices.

Issues addressed may include:

- How can the knowledge base and skills of different disciplines be integrated in the classroom?
- How can the credibility of references and key arguments in another field be judged?
- How can appropriate collaborators outside one's field be identified?

- How can interdisciplinary curricula be evaluated and gain accreditation?
- What are some best practices for interdisciplinary research practice and curriculum?

Nikolov(a) notes that in recent years art education programmes have shifted into the realm of knowledge economies in which certain art practice's are regarded as a creative form of knowledge production. The more we learn about the social and economical values of such knowledge productions the more Masters and Ph.D. artistic research programmes seem to appear all over the world. In order to address their pertinent research questions the researcher artists that enter such programmes often find themselves in complex trans-disciplinary structures for which collaborative and organisational skills are imperative. Too often a lack of these skills gets in the way of successful research practices. This sets a challenge for bachelor education curricula. How to prepare artists and scientists for future collaborations? How to develop a curriculum that facilitates these Master and Ph.D. programmes of artistic research? By bringing talented students from the University of Amsterdam and the Gerrit Rietveld Academie together in the experimental honours programme Art and Research we allow for early insights and hands on experience with the values and pitfalls of art-science collaborations. In this presentation I will address case studies that show the need for more focus on artistic research educational structures on the Bachelor level.

Scott points out that by now there are established Ph.D. programs that specialize in offering more established artists and designers from all disciplines the opportunity to focus on specific media and art research topics for their careers. For example, the Z-node (University of the Arts, ZHdK in Zurich) part of the international "Planetary Collegium," has established protocols for undertaking work that joins theory and practice, helping students make the transitions to scholarly reflection and robust research. The curriculum is supported by group communication and correlated research topics, composite sessions, and international conferences at which other Collegium nodes convene. This structure enables researchers to explore transdisciplinary and transcultural theory about communication, collaboration, social science, natural science, cultural difference and environmental sustainability. Scott's workshop will discuss how curriculum can relate art and design practices to applied scientific research, especially in the areas of psychology, biology, neuroscience, physics and artificial intelligence. The discussion will consider how to accomplish this goal, which demands: 1) exploring and defining new cultural and environmental epistemologies between design, art, science and technology; 2) searching for original hybrid combinations of media and art practices and scientific theories that are engaged with critical social and ethical discourses; and 3) theorizing the future impacts of art and technology on both western and eastern cultures.

Thomas observes that a profound shift is occurring in our understanding of postmodern media culture. Since the turn of the millennium the emphasis on mediation as technology and as aesthetic idiom, as opportunity for creative

initiatives and for critique, has become increasingly normative and doctrinaire. The focus is on implementing research strategies within the fine arts that challenge past disciplinary orthodoxies and epistemological constraints, in a quest for more productive and synergistic intellectual and practical methodologies between art, science and humanity. The focus will be on exploring capacity for critical engagement, socio-cultural reflection, situated academic critique and plastic processes. To explore ideas that will provide a basis for generating different and potentially more expansive understandings of complex transdisciplinary issues, taking account of multiple perspectives and contingencies. Institutional modeling of alternative curriculum approaches post new media is intended to demonstrate the academic viability, scope and rigor of transdisciplinarity.