

Interdisciplinary and Transformative Research: Examples and Challenges

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Riverside Room, Kellogg Hotel

Reception to follow

Parking passes will be available

Bridging the gulf between disciplines has emerged as a major priority for twenty-first century research. Dynamic new fields that cross traditional disciplinary boundaries have emerged, for instance, among the spatial and information sciences. Using two case studies, this talk explores the opportunities and challenges afforded by this development. Multidisciplinary research requires the analysis of problems from more than one discipline. This kind of research becomes interdisciplinary when it requires systematic interaction between practitioners from the different disciplines. The resulting transition has been extensively documented by science studies in the twentieth century. A sharper transition takes place when these interactions between researchers results in the redefinition of the problems to be solved. Such a transition is often transformative and, if the problems being broached are substantive enough and have sufficient commonalities, it may lead to the institutionalization of a new field of inquiry. This talk will explore two cases of transformative transitions, the first of which is part of the ongoing formation of a new discipline. This first case consists of the coordinated spatial prioritization of areas for biodiversity conservation and sustainable wood production in the Merauke region of Papua province in Indonesian New Guinea. The transdisciplinary required for this problem is being institutionalized in the field of systematic conservation planning which potentially transformative consequences for conservation biology. The second case is the complex decision analysis required to determine whether certain disease vector insect species should potentially be forced to extinction using the new molecular technology of gene drives based on CRISPR/Cas9. It presents unusual challenges in integrating normative analyses from multiple domains (and stakeholder groups) with technological developments in genomics.