

# A Brief History of Zooniverse: Designing for Multi-Domain Citizen Science

(Authors removed for reviewing)

## ABSTRACT

### Author Keywords

Citizen science, crowdsourcing, interface design

### ACM Classification Keywords

H.5.m. Information Interfaces and Presentation (e.g. HCI): Miscellaneous

## INTRODUCTION

Citizen-science is a form of human-powered computation [] that can be both beneficial to those who participate, as an educational tool and cognitively-stimulating source of entertainment, and an effective method of producing significant, novel scientific findings. Crowd-powered citizen science projects have already facilitated dozens (hundreds?) of findings [], through the collective contributions of hundreds of thousands of volunteers.

However, designing effective and efficient citizen-powered science systems that can achieve both of these goals can be challenging and time consuming. First, systems must cope with a wide range of participant expertise, ranging from no prior knowledge in the field to significant background and interest. Moreover, participants naturally feature a wide diversity of natural competencies; some people are simply much better at particular tasks than others. Finally, there are a large

variety of issues pertaining to keeping individuals motivated and interested while participating, and allowing individuals to engage with the system at a variety of different levels and degrees of investment, from the “sunday scientist” to regular participation.

In this paper, we provide a detailed case study of a citizen-science platform which offers the unique affordance of having expanded to more than twenty distinct, successful science projects over the course of its two year evolution, on top of a single unified framework known as Zooniverse. The path from its first experimental app, Galaxy Zoo, to the more than twenty different projects that have launched on the Zooniverse project required generalising the findings from the first project to different kinds of tasks in other scientific domains.

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