



## CPS Paper

### A Coevolution Model of Network Formation and Content Generation on Social Reading Platform

**Author:** Mr Mirai Igarashi

**Coauthors:** Nobuhiko Terui

**Submission ID:** 403

**Reference Number:** 403

#### Presentation File

[abstracts/ottawa-2023\\_5e7aedef2bac062470e125733900cd6fd.pdf](https://abstracts/ottawa-2023_5e7aedef2bac062470e125733900cd6fd.pdf)

#### Brief Description

In the context of the coevolution modeling, the formation of social networks and the behaviors of individuals are jointly modeled as they influence each other.

However, too little attention has been paid to qualitative aspect of the behavior such as sentiment and topic of contents.

This study proposes a Bayesian coevolution model incorporating dynamic network model and topic model to describe the content generation process.

The proposed model are empirically applied to the data in Japanese story telling platform.

#### Abstract

Understanding how individuals form social relationships and generate contents on social media is fundamental for both academic and practitioners. In the context of the coevolution modeling, the formation of social networks and the behaviors of individuals are jointly modeled as they influence each other. However, too little attention has been paid to qualitative aspect of the behavior such as sentiment and topic of contents. This study proposes a Bayesian coevolution model incorporating dynamic network model and topic model to describe the interdependent processes of network formation and content generation. The proposed model are empirically applied to the data in Japanese story telling platform.