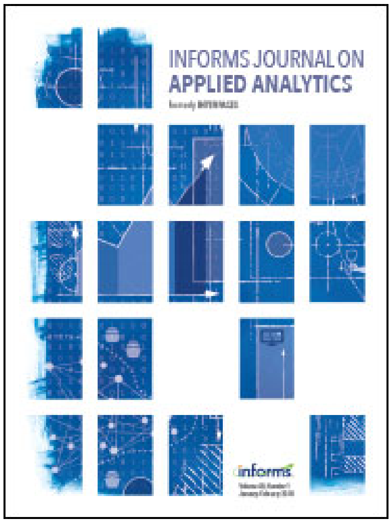

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Special Issue of INFORMS Journal on Applied Analytics—Blockchain Analytics

Guest Editors: Daniel Conway, Kiran Garimella, Pramita Mitra, Chen Zur, Michael Gorman

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Call for Papers

Special Issue of *INFORMS Journal on Applied Analytics*—Blockchain Analytics

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Introduction

Blockchain is no longer a niche technology used only for virtual currency, but rather a critical component of business ecosystems, identity systems, interorganizational systems related to finance and supply transactions, and enterprise systems. We classify the value of blockchain to organizations using several perspectives, such as the disintermediation of trusted third parties, diminished need for reconciliation, lower transaction costs, fault tolerant/resilient/available systems, automatically executed contracts, and a single version of interorganizational truth.

The use of blockchain requires several mind shifts, including critical system migration to the cloud, mutable to immutable data, agreements managed by people to computer logic, trusted third parties to trusted network and direct trading, and proprietary code to open source code. As we evolve from a state of benevolent dictator through oligarchy, stakeocracy, federation, and meritocracy to democracy, we face challenges related to governance. Other challenges include integration with existing systems, regulatory uncertainty, and a skills deficit. The gains outweigh the struggles associated with change.

Special Issue Scope and Topics

Within this context, authors are invited to submit applied papers describing successful *implementations of analytics* involving blockchain, use cases, and ecosystem analytics by organizations leveraging blockchain. The following list of potential topics is not intended to be exhaustive:

- edge analytics, including
    - information: determination of information that should be immutable for ecosystem blockchain;
    - data-of-interest: identification of fraction of data to be persisted and shared;
    - events-of-interest: intelligence on the edge to determine process anomaly;
- enterprise blockchain analytics, including
    - capability to reconcile transactions as they are reflected on the "ecosystem blockchain" with the same transactions as they are captured on the "individual enterprise ERP";
    - analytics to capture and identify trends and abnormalities on an ecosystem level (based on transactions captured in the ecosystem blockchain, for example, a token transfer that is greater than 10 times the average);
    - analytics aimed at "ecosystem-level available-to-promise (ATP)" of a product along the disparate supply chain;
- analytics of assurance/audit and intelligent audit as a service, including the following example:
    - use of an ecosystem blockchain to approve the audited entity's "client liability balances" rather than the traditional use of "client balance approval letters";
- on-chain analytics to identify
    - trends and abnormalities on how the chain is growing and being utilized;
    - patterns of off-chain communication and external oracle usage; and
- blockchain analytics, including measuring and improving
    - the value of disintermediation of traditional trust;
    - the value of decentralization; and
    - measures of security in blockchain usage.

Submission Instructions

Authors should review the instructions on preparing a paper for the *INFORMS Journal on Applied Analytics* at https://pubsonline.informs.org/page/inte/submission-guidelines.

Papers must be submitted online at https://mc.manuscriptcentral.com/inte.

When submitting a paper, please note the following:

- Under "Step 1: Type, Title, & Abstract," select "Special Issue" for "Type."
- Under "Step 5: Details & Comments," answer "This paper is for which special issue?" with "Blockchain Analytics."

Timelines

The editors encourage potential authors to contact them with ideas for papers before a making a full submission of a paper. Please note the following dates:

- **October 31, 2020:** Letter of intention to publish due to the editors, with an abstract including the organization at which the work was implemented.
- **January 31, 2021:** Target deadline for first round of submissions.
- **April 1, 2021:** First round of reviews completed; decisions (and requests for revision, if appropriate) delivered to authors.
- **August 31, 2021:** Target deadline for first revisions.
- **October 1, 2021:** Second round of reviews delivered to authors.
- **January 31, 2022:** Final versions of accepted papers must be submitted.