



# Call for Papers: The Challenge of Rendering Practical Legal Reasoning Through Computational Systems

**By:**

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Legal reasoning offers artificial intelligence both promise and challenge. For a field long claiming affinities with “logic”, “reason”, analytical rigor, and linguistic finesse, the law has been remarkably slow in capitalizing on advances in knowledge representation, natural language processing, probabilistic reasoning, machine and deep learning, and cognitive sciences. Indeed, the most amply resourced segments of the legal profession appear the least inclined to embrace computational artifacts that exploit those advances.

In this Research Topic, we will explore the intersection of AI and law through insightful re-evaluations of past encounters between the two disciplines as well as presentations and critiques of emerging computational methods for engaging legal reasoning, especially at the forefront of practice. We approach

that intersection with a set of orienting notions:

- AI approaches law through a spectrum of legal realities (ranging from formal law like legislation and judicial opinions, to practice documents like petitions, disclosure filings, and contracts, to recorded facts evidencing strategic behavior), and proceeds to construct data that are abstractions representing those legal realities while purportedly factoring out aspects that are not pertinent or not solvable.
- Legal practice and legal scholarship have advanced well beyond “classical” and “positivist” conceptions of law, have shifted the analytical boundaries between what’s pertinent and what’s not, and demand any technique of abstraction to be increasingly dynamic and situational in order to deliver value sufficient for consideration.
- AI’s momentum has increased with the growth of computing power, while its applications in the legal domain are experiencing a wave of commercialization as “legal tech”, generating potentially profound effects on AI research as well as on legal practice and legal scholarship.
- Innovation and critique should progress within an environment of experimentation, feedback, and open engagement, rather than being held hostage by conservatism in the institutions of law or AI.
- Scholars are uniquely positioned to re-imagine the pedagogic and practice paradigms that have preserved inefficiencies and inequalities in legal services and impeded the adoption of beneficial technologies by lawyers in pursuit of better ways to practice.

Accordingly, we invite contributions by practitioners, scholars, and educators in law, computer science, and other fields to address the following issues:

- Genealogy and Lessons: What are provocative and productive ways to map the history of efforts, from the 1970s onward, to apply AI to legal reasoning (especially in the form of tools for practice), and what can be learned (with regard to science, engineering or entrepreneurship) from such efforts and their mapping, in light of the intra-disciplinary trends and debates in the respective fields of AI and law?

- The “Logics” of Legal Reasoning and of Computer Science: Does legal reasoning adhere to an inherent or heuristic “order”? If so, can system analysis, structured documentation, formal semantic approaches, and algorithmic methods capture it? As comparative law teaches how important “culture” is to the shape of law, how can “culture” be factored into computational artifacts like specifications, concrete implementations, data, and test suites? How might the initial framework of legal tech shape the “logic of the law”?

- Situating AI in Transforming the Environments of Legal Practice: As any transformation of legal practice would, at least in part, be driven by the choices of the practitioners, what institutional dynamics (in law firms, in-house legal departments, NGOs, law schools, computer science departments, government agencies, and international organizations) structure the choices around the adoption of particular AI-based tools? How do the flow of research funding, capital expenditures, and operating expenses direct the development of technology for legal practice? How have venture capitalists, data and technology companies, large law firms, and other enterprises approached investing in legal tech start-ups?

- The Future of Law: What are the best metrics to measure gains in “efficiency”, “productivity”, “accuracy”, “outcome predictability”, “deal certainty”, “return on investment”, “client satisfaction”, or “job satisfaction” that legal tech promises? As a technologically sophisticated legal profession develops towards an “industry”, what are useful ways to understand “network effects”, “addressable markets”, “barriers to entry”, “scalability”, “market dominance”, “market access”, and “access to justice” for legal practitioners, legal institutions or legal tech enterprises?

Keywords: Law, automation, digital business, legal technology, Future of Law, Legal Reasoning, Legal Practice, Computational Applications for Law

For more information on submission, see [here](#).

Submitted by **Robert Chu**.

Robert Chu is the Founder and Managing Partner of Grundrisse Group, and leads the Group’s development, investment and advisory projects worldwide, focused on technological, institutional and geopolitical change, with a particular

interest in culturally complex situations that can be intelligible and actionable if pursued with diligence, honesty and cleverness. He is also the Chairman of Lexagle, a Singapore-based legal-tech startup.

In addition, Robert serves as an advisor to the Institute for Global Law and Policy at Harvard University, as the Co-Leader of the Banking and Finance Working Group of the Buffett Institute for Global Affairs at Northwestern University and as a member of the Dean's Advisory Committee for the Centre for Asian Legal Studies at the Peter A. Allard School of Law of the University of British Columbia.

Robert was a Partner at the law firm Sullivan & Cromwell LLP, and headed the firm's practice in Beijing, Melbourne and Sydney. He led the structuring and execution of some of the most challenging M&A and capital markets transactions across the Asia-Pacific region, the Americas, Europe and the Gulf region over the past 20 years – including deals that transformed global industries in financial services, technology, media, telecommunications, e-commerce, logistics, mobility, natural resources and food and beverage. He has advised Allianz, American Express, Bank of China, Goldman Sachs, Nomura, Ping An Insurance, Australia and New Zealand Banking Group, National Australia Bank, China Investment Corporation, D.E. Shaw, Thomson, China Telecom, Telstra, Sohu.com, UPS, Dubai Ports, Tata Motors, BHP, InBev and other enterprises in all stages of development. He was also a member of Sullivan & Cromwell's Managing Partners' Committee.

Before joining Sullivan & Cromwell, Robert was an Associate Professor at Rutgers Law School. His research and teaching focused on contract theory, public international law, international transactions and trade regulation. He also served as the first faculty advisor to the Rutgers Law Record, a pioneer among purely online law journals.

Robert earned an S.B. and an S.M. in electrical engineering and computer science from MIT and a J.D. from Harvard Law School.

While at MIT, Robert conducted research in device physics, semiconductor fabrication methods, design automation and massively parallel computer architectures.

While at Harvard Law School, Robert served as a Senior Fellow and coordinated the Research Workshop on the World Trading System.

Robert Chu

Grundrisse Group

**Email:** robert.chu@grundrissegroup.com.

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