Postdoctoral fellowship (18 months)
Web-Of-Browsers: Towards a fully decentralized web

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The WIDE team is recruiting a post-doctoral researcher for a duration of 18 months, with an imme-
diate starting date.

1 Context: Decentralized Programmability of Browser-Based Systems

The project Web-of-Browsers aims at exploring the construction of a decentralized and browser-based
web. This objective stems from the observation that browsers have become the most widely deployed
execution environments in the world. Initially only designed to display HTML pages, they have evolved
into comprehensive runtime platforms able to execute complex local code, interact with humans, and with
remote web services. The recent introduction of WebRTC has further extended the capability of browsers
by introducing support for browser-to-browser communication. This turns browsers into a decentralized
execution environment where interactions between human and web services are enabled without third
party.

2 Research Objectives

The objective of this post-doctoral project is to explore the programmability of browsers as the building
block of a decentralized web. We would in particular like to develop a framework for emergent localities on
the basis of our existing work [1, 2, 3, 4], i.e. allow practionners to easily construct advanced decentralized
services by assembling simpler and composable distributed bricks. The postdoc offers scope for both
algorithmic and experimental developmental work, notably in the domains of information discovery,
routing, and coordination.

The project holds potential for strong synergies with related on-going projects running in the WIDE
group, notably on private decentralized aggregation, privacy-preserving decentralized learning, and browser-
fingerprinting anonymisation.

3 Candidate Profile and Eligibility

The recruited post-doctoral researcher should hold a PhD in Computer Science, with ideally a focus on
large distributed computer systems and web technologies. The candidate should be a driven and creative
individual, with an interest in innovative and paradigm changing technologies.

Due to funding conditions, the offer is limited to candidates who have spent at least 12 months outside
of France over the last 3 years.

4 Application

Applicants should apply, in the first instance, by submitting on-line a CV (up to two A4 pages), a short
statement outlining their research interests and motivation (up to half an A4 page), and the names and
addresses of at least two academic referees.

A rolling deadline applies.
References


