The diversity of the lithic technologies and behavioral adaptations across Eurasia over the last one million years

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Our understanding of human evolution and hominin behavioral adaptations has largely been shaped by the records, where the East African Rift has yielded extensive, high-resolution environmental and archaeological sequences extending over 3 million years. By contrast, despite being the world's largest continent, Eurasia has long been considered a peripheral chapter in the human story, primarily viewed as a recurrent refuge for successive waves of hominin dispersal out of Africa.

This perspective is now shifting. Accumulating fossil and molecular discoveries across Eurasia reveal a previously underappreciated diversity of hominin populations dating back approximately one million years. For instance, the hypothesis that the Yunxian 2 represents an early divergence of the *Homo sapiens* lineage highlights China's important position in human evolution. This finding is similar to that of the European *Homo antecessor*, whose flattened midfacial morphology has also been interpreted as ancestral to modern humans.

Nevertheless, as a vast continent comprising highly diverse ecological niches, the behavioral adaptations of Eurasian hominins remain poorly understood. A growing body of interdisciplinary research is now uncovering new evidence of advanced toolkits and complex behaviors. This session aims to summarize? these developments by presenting new archaeological findings and in-depth case studies from across Eurasia over the past one million years.