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Abstract for an Invited Paper
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**The Electromagnetic Search for Close-Separation Supermassive Black Hole Binaries: Periodicity,
Doppler Shifts and Lensing**

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Despite their importance for understanding the mutual build-up of supermassive black holes and their host galaxies, and the emission of low frequency gravitational waves, there is yet no definitive evidence for sub-parsec separation supermassive black hole binaries in galactic nuclei. This is partly because presently employed methods, which aim to identify such binaries via electromagnetic radiation, rely on indirect evidence that takes many years to accumulate. I will discuss these and novel methods that may provide the first definitive evidence for supermassive black hole binaries at sub-parsec separations. I will additionally discuss some intriguing candidates.