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Abstract for an Invited Paper  
for the APR11 Meeting of  
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### **Electron-Ion Collider as a Gluon Microscope<sup>1</sup>**

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This talk will present an overview of conceptual designs of the next generation electron- ion colliders (EIC), covering four individual proposals including LHeC at CERN, ENC at GSI, eRHIC at BNL and MEIC at JLab. After a brief discussion of the main science drivers for an EIC and top level machine requirements, my talk will focus on EIC design concepts, features and present status as well as technical innovations and accelerator R&D challenges. I will also talk briefly about activities of the EIC Collaborations and a reference timeline leading toward realization of an EIC in the US.

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