

<b>Titre de l'annonce</b>	<h1>Hippocampal dynamics underlying learning and memory</h1>
<b>Ville</b>	Paris
<b>Pays</b>	France
<b>Texte de l'offre</b>	<p>Two post-doctoral positions are available to investigate brain dynamics underlying learning and memory in the Zugaro lab (<a href="http://zugarolab.net">http://zugarolab.net</a>), hosted in the Center for Interdisciplinary Research for Biology at the Collège de France, in the historic center of Paris. Our team is characterized by a diversity of backgrounds (biology, engineering) and a friendly atmosphere.</p> <p>The hippocampus plays a key role in learning and memory. In the spatial domain, fast sequential activation of hippocampal 'place cells' anticipates future trajectories, associates traveled paths with rewarding or aversive stimuli, and underlies certain forms of memory formation and consolidation. The goal of our research is to decipher the various roles of hippocampal dynamics, including their interactions with cortical and subcortical activity (in e.g. prefrontal cortex, ventral striatum, etc.), and dissect their network mechanisms in freely moving rodents.</p> <p>We have shown that the formation of new memories requires the activation of fast sequences of hippocampal assemblies paced by theta oscillations [1-2]. Subsequent replay of the same sequences during sleep ripples mediates a hippocampo-cortical dialogue also involving delta waves and spindles and is instrumental for memory consolidation [3-7]. An unexpected role of delta waves is to isolate an ever-changing minority of cortical assemblies involved in memory consolidation [8].</p> <p>One candidate should have a strong background in recordings of large neuronal ensembles and optogenetics in freely behaving rodents. Good Matlab</p>

	<p>programming skills are welcome.</p> <p>The other candidate should have a solid background in data analysis of brain signals. Experimental training would also be extremely useful.</p> <p>Both positions are available for up to 3 years. Selection will be open until the positions are filled. Applicants should send their CV, a cover letter detailing their research experience and interests, and two letters of reference.</p> <ol style="list-style-type: none"> <li>1. Drieu et al. (2018) Science 362:675-9</li> <li>2. Cei et al. (2014) Nature Neuroscience 17:719-24</li> <li>3. Girardeau et al. (2009) Nature Neuroscience 12:1222-3</li> <li>4. Peyrache et al. (2009) Nature Neuroscience 12:919-26</li> <li>5. Benchenane et al. (2010) Neuron 66:921-36</li> <li>6. Girardeau et al. (2014) Journal of Neuroscience 34:5176-83</li> <li>7. Maingret et al. (2016) Nature Neuroscience 19:959-64</li> <li>8. Todorova and Zugaro (2019) Science 366:377-81</li> </ol>
<b>Date de fin de publication :</b>	01/12/2021
<b>Type d'emploi</b>	Post-Doctorat - Post-Doctoral position
<b>Type de contrat</b>	Post-doctoral fellowship
<b>Rémunération brut mensuelles</b>	(standard CNRS postdoc salary)
<b>Date limite de candidature</b>	ASAP
<b>Date début de fonction</b>	ASAP
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