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Brain mechanisms for spatial memory and sharing emotion.
Implication for the design of humanoids.

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ABSTRACT OF THE TALK

I will summarise recent experimental results (Using fMRI, experiments with neurological patients and intracranial recordings in epileptic patients) concerning the neural mechanisms underlying the cognitive strategies (egocentric/allocentric) for navigation and spatial memory.

I will consider both navigation in virtual reality environments and real locomotor behaviour. I will also show an hypothesis and recent results concerning the empathy (sharing emotions with others) based on manipulation of spatial reference frames. These results have implications for the understanding of neurological and psychiatric deficits but also for the conception of humanoid robots and their interactions with humans.

References

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- Il senso del movimento (Mc Graw Hill) (Trans Harvard Univ Press The brain's sense of movement)
- Physiologie de l'action et phénoménologie Avec J.L. Petit (Trans Oxford Univ Press . Phenomenology an Physisology of action)
- L'empathie (Avec G. Jorland) O. Jacob