



*Short Communications*

## IV Seminar on Categories and Applications

Bellaterra, 6 to 9 of June of 2007

---

**Kathryn Hess, École Polytechnique Fédérale de Lausanne**

*Bundles of bicategories with connection*

Here are natural, categorical notions of “parallel transport”, “connection” and “curvature” for bundles of bicategories. I will define these notions both globally, in terms of lifting properties, and locally, in terms of a cocycle condition, and explain why the two definitions are equivalent.

I will then show that a charted bundle over a topological bicategory, in the sense of Baas-Dundas-Rognes, and a principal 2-bundle, in the sense of Baez-Schreiber, as well as a module over a ring, all give rise naturally to flat bundles of bicategories.

**Contact address:** [kathryn.hess@epfl.ch](mailto:kathryn.hess@epfl.ch)

---