

**Eastern Ontario Symposium for Educational Technology (EOSET)  
2009 conference**

**The Perk Station: A training station for  
percutaneous interventions**

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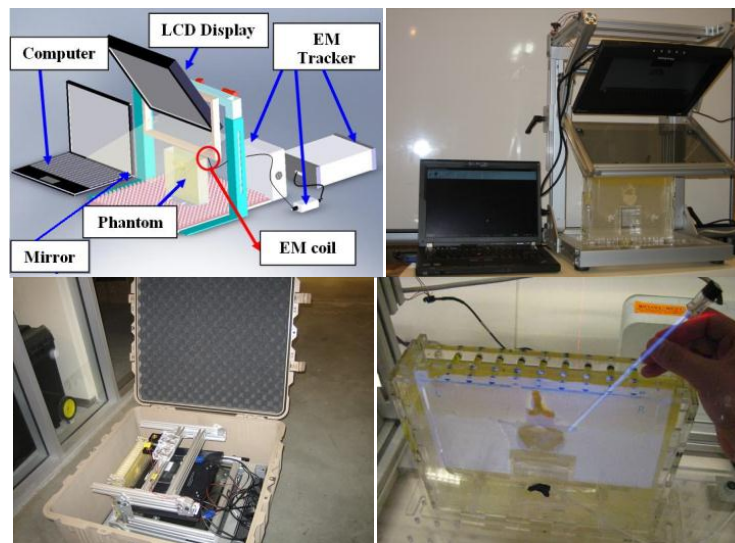
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## The Perk Station: A training station for percutaneous interventions

**Theme:** Experiential or exploratory learning

Image-guided percutaneous needle-based surgery has become part of routine clinical practice in performing procedures such as biopsies, injections and therapeutic implants. We have developed a training station for percutaneous interventions called *The Perk Station*. The primary objective is developing training station for the novice physicians and medical students. However, the design simplicity/portability, the hands on approach makes it as potentially excellent teaching aid as well. The Perk Station is a replicable and adaptable device for teaching computer-assisted surgery at all levels, from high-school science classes to clinical residency. The Perk Station comprises of the assistance device (i.e. overlay of laser guide), a magnetic tracking system, a tracked needle, a phantom, and a stand-alone laptop computer. The Perk Station has been successfully built. The system has been debuted in undergraduate teaching in fall 2008 at Queen's University. We described here the design and development of the system for measuring operator performance of different assistance techniques for needle-based surgical guidance systems.



(top left) CAD design of the Perk Station with image overlay, (top right) actual prototype, (bottom left) the Perk Station fits in a suitcase, (bottom right) needle insertion in spine phantom