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Heidelberg Quantum Physicist Heads New Emmy Noether Junior Research Group

A new Emmy Noether junior research group has taken up its work investigating model systems for magnetic materials at the Kirchhoff Institute for Physics at Heidelberg University. The team under the direction of Junior Professor Dr Fred Jendrzejewski is using experiments with ultracold gases. Over the next five years, the group of quantum physicists will receive funding from the German Research Foundation (DFG) totalling approximately 1.5 million euros. The group is an extension of Prof. Jendrzejewski's existing "Complex Quantum Matter" research group.

Press Release Heidelberg, 21 November 2017

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A new Emmy Noether junior research group has taken up its work investigating model systems for magnetic materials at the Kirchhoff Institute for Physics at Heidelberg University. The team under the direction of Junior Professor Dr Fred Jendrzejewski is using experiments with ultracold gases. Over the next five years, the group of quantum physicists will receive funding from the German Research Foundation (DFG) totalling approximately 1.5 million euros. The group is an extension of Prof. Jendrzejewski's existing "Complex Quantum Matter" research group.

"We are concentrating our work on how the properties of quantum systems can be explained and manipulated through their microscopic components. For example, we are working on magnetism, which was originally investigated in solid state physics," states Prof. Jendrzejewski. "In particular, we want to explore the role quantum mechanics plays in this complex enquiry." In their experiments, the researchers are working with ultracold atomic gases, which are known for their extreme versatility and accuracy. The group hopes their work will result in a fundamentally better understanding of magnetic materials.

Fred Jendrzejewski (b. 1986) studied physics at the Dresden University of Technology and the University of Hamburg. Study abroad took him to the École Polytechnique in Paris and the University of Paris-Sud, where he earned his doctorate in 2012. As a postdoc, Fred Jendrzejewski worked for three years in the USA at the Joint Quantum Institute, a research facility of the University of Maryland and the National Institute of Standards and Technology. The researcher has been a Junior Professor at the Kirchhoff Institute for Physics at Heidelberg University since 2015.

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