

Interested in helping to shape the world of tomorrow?

The Fraunhofer Institute for Integrated Circuits IIS, one of more than 60 application-oriented institutes that make up the Fraunhofer-Gesellschaft research network, is focused on providing the technological foundation for a wide range of innovative products.

The Power Efficient Systems department has an immediate opening within the Integrated Energy Supply group for a

## **Research Intern (f/m)** for working on tunable generators used for vibration-based energy harvesting

Vibration transducers for supplying energy to small electronic systems currently have low power output (few hundred microwatts) and extremely limited bandwidth (few Hertz). For real applications where usable vibrations are distributed across a certain bandwidth, the system is therefore unable to produce the maximum electrical power.

This internship shall cover the development of a vibration generator that can be tuned to specific resonance frequencies.

### **Your responsibilities**

- Familiarizing yourself with the topic of energy harvesting systems that rely on vibration transducers
- Simulation and calculation of the output power and frequency-dependency of the tunable transducer
- Development of a tunable vibration transducer
- Verification and comparison of the simulation with the transducer

### **Your profile**

- Currently pursuing a degree in mechatronics, mechanical engineering, physics or electronics engineering
- Hands-on experience with measurement technology and laboratory equipment
- Know-how in the calculation of dynamic electromechanical systems  
Experience with MATLAB a plus

You also have the opportunity to write your thesis in the above-mentioned field while working at Fraunhofer IIS. This is assigned and completed in accordance with the guidelines of your university. Please consult the professor who is in the best position to monitor and supervise your thesis activities.

At Fraunhofer IIS, you will enjoy an open and friendly work environment and the latitude to develop your interests and skills.

### **Have we piqued your interest?**

If so, we look forward to hearing from you. Send your complete application under reference code 634347 and don't forget to tell us how you learned about this opportunity:

**Fraunhofer Institute for Integrated Circuits IIS**

**HR Recruiting - 634347**

**Am Wolfsmantel 33**

**91058 Erlangen - Germany**

**If possible, please submit your application in PDF format via e-mail:  
personalmarketing@iis.fraunhofer.de**