



Tampere University of Technology (TUT) ([www.tut.fi](http://www.tut.fi)) is an active scientific community of 1,700 employees and more than 8,300 students. The University operates in the form of a foundation and has a long-standing tradition of collaboration with other research institutions and industry. Many of the fields of research and study represented at the University play a key role in addressing global challenges. Internationality is an inherent part of all the University's activities.

### Doctoral Student (Tree and forest modelling)

The Inverse Problem Research Group (<http://math.tut.fi/inversegroup/>) is situated at Laboratory of Mathematics at TUT. The Group has done pioneering work on the quantitative structure modelling of trees from point cloud data and their applications on such topics as biomass estimation, species recognition, change monitoring and visualization. The Group has a large international collaborating network of experts on remote sensing, forestry, forest research and ecology. The main focus is on basic research leading to scientific breakthroughs on tree and forest modelling from laser scanner and other data, but more applied research is also welcomed. The research of the Group is part of the Centre of Excellence funded by Academy of Finland, which gives us a great opportunity for ambitious, long-term and risky research and frequent research visits.

**Job description:** The Inverse Problem Research Group is now looking for a doctoral student in the field of applied mathematics (tree and forest modelling). We offer many possible topics where to concentrate the research, including: methods for reconstructing quantitative structure models (QSMs) of trees and forests, automatic tree extraction from point cloud data, eco-physiological modelling of trees using QSMs, tree growth modelling and applications. The particular research topics will be discussed and planned to fit the research background and the main interests of the applicant.

**Requirements:** The applicant for the position of Doctoral Student is required to hold a MSc degree in mathematics, computer science, theoretical ecology, mathematical and theoretical biology or a related area. The topic of the MSc or the subsequent research of the applicant should be relevant to the position. We appreciate good programming skills (e.g. c, c++, python, matlab).

- Salary:** The salary will be based on both the job demands and the employee's personal performance in accordance with the University Salary System and will be at the beginning about 2300€ per month or more.
- Trial period:** Trial period of 4 months applies.
- Other:** The position will be filled for fixed term of 2+2 years, with possible extension. The earliest starting date is 1<sup>st</sup> of Jan 2018 and otherwise we hope the candidate could start as early as possible. We are also open to discuss some flexibility about the work location for international applicants: A few months per year could be worked somewhere else than in Finland.
- For more information, please contact:** Professor Mikko Kaasalainen, ([mikko.kaasalainen@tut.fi](mailto:mikko.kaasalainen@tut.fi)) and Senior research fellow Pasi Raumonen ([pasi.raumonen@tut.fi](mailto:pasi.raumonen@tut.fi)).
- How to apply:** Applications must be submitted via email in English or Finnish.
- Please, include the following attachments as PDFs:
- A short motivation letter describing your background and experience in research of relevant fields and research interests in general
  - CV including possible list of publications
  - Copy of degree certificates
  - Two references with contact information