

## **PROFILE**

Full name — Jyri Antero Näränen (male)  
Born — September 13th 1979, Hyvinkää, Finland  
Nationality — Finnish

## **EDUCATION**

University of Helsinki — PhD, astronomy, 2009 (PhD thesis: “Multiwavelength Studies of Regolith Effects in Planetary Remote Sensing”, Magna cum laude)  
University of Helsinki — MSc, Physical sciences, 2003 (Master’s thesis: “Light scattering measurements of planetary regolith analogs at small phase angles”, Eximia cum laude)  
Hyvinkää Sveitsi High school — secondary school graduate, 1998 (Natural Sciences Programme)

## **LANGUAGE SKILLS**

Finnish — Excellent (native)  
English — Excellent  
Swedish — Good  
German — Average  
Spanish — Average  
Russian — Basic knowledge (certificate on level A1)

## **CURRENT WORK**

### **RESEARCH MANAGER, DEPARTMENT OF GEODESY AND GEODYNAMICS, FINNISH GEOSPATIAL RESEARCH INSTITUTE — SEPTEMBER 2015-PRESENT**

Station Manager, Metsähovi Fundamental Geodetic Station. I’m currently leading the development of a new state-of-art satellite laser ranging system (operational in 2017) in Metsähovi. I’m co-PI of two Academy of Finland research projects (see below). Other duties entail, e.g., managing general station research infrastructure upgrading and upkeep. I’ve been managing a specially allocated 4.5 million euro grant from the Ministry of Agriculture and Forestry for Metsähovi renewal in 2012-2015 (see below). I’m also participating in geophysical and metrological research in gravimetry, specifically with the absolute gravimeter FG5X-221, Finnish national standard for the free-fall acceleration of gravity.

## **PAST WORK**

### **SENIOR RESEARCH SCIENTIST (ERIKOISTUTKIJA), DEPARTMENT OF GEODESY AND GEODYNAMICS, FINNISH GEODETIC INSTITUTE (FROM BEGINNING OF 2015 MERGED WITH THE NATIONAL LAND SURVEY AS THE FINNISH GEOSPATIAL RESEARCH INSTITUTE — JUNE 2009-SEPTEMBER 2015**

Station Manager, Metsähovi Fundamental Geodetic Station (since 2014). I was working first with the upgrade of the old Metsähovi station satellite laser ranging system. Since 2012 I’ve been working with the development of a completely new SLR system and with the general research station infrastructure renewal. Also doing geophysical and metrological research in gravimetry, specifically with the absolute gravimeter FG5X-221.

### **RESEARCHER/EXPEDITION LEADER IN THE FINNISH ANTARCTIC EXPEDITION 2014-2015**

Expedition organized by Finnish Antarctic Research Program (FINNARP). Geodetic and geophysical gravity measurements at the Norwegian Antarctic Research Station, Troll. The expedition lasted 5 weeks in total.

#### **RESEARCHER IN THE FINNISH ANTARCTIC EXPEDITION 2011-2012**

Expedition organized by Finnish Antarctic Research Program (FINNARP). Visited four research stations (Aboa, Maitri, Novolazarevskaya, and Troll) for geodetic and geophysical gravity measurements. The expedition lasted 2,5 months in total.

#### **SENIOR RESEARCH SCIENTIST (VANHEMPI TUTKIJA), DEPARTMENT OF GEODESY AND GEODYNAMICS, FINNISH GEODETIC INSTITUTE — SEPTEMBER 2008-MAY 2009**

Working with the upgrade of the FGI Metsähovi fundamental geodetic station satellite laser ranging system and with measurements of, e.g., the Finnish first order absolute gravimetry network.

#### **RESEARCHER (TUTKIJA, TOHTORIKOULUTETTAVA), DEPARTMENT OF ASTRONOMY, UNIVERSITY OF HELSINKI — JULY 2005-AUGUST 2008**

A graduate student position. Studied viewing-geometry-related effects in X-ray spectroscopy of regolith surfaces in the solar system with special emphasis on the forthcoming European Space Agency mission to Mercury, BepiColombo. Also performed photometrical investigations of the Moon with the ESA SMART-1/AMIE data.

#### **HONORARY VISITING FELLOW, UNIVERSITY OF LEICESTER — OCTOBER 2007-MARCH 2008**

Space Research Center of the Department of Physics and Astronomy at the University of Leicester, England. Two research visits between Oct. 2007 - Mar. 2008, three months in total.

#### **STUDENT SUPPORT ASTRONOMER, NORDIC OPTICAL TELESCOPE, LA PALMA, SPAIN — MAY 2004-JUNE 2005**

A graduate student position. The job involved supporting visiting astronomers in making observations, instrument maintenance, and independent research.

#### **RESEARCHER (TUTKIJA), DEPARTMENT OF ASTRONOMY, UNIVERSITY OF HELSINKI — JANUARY 2004-APRIL 2004**

Part time position. Performed laboratory experiments on backscattering of light from paper pigments and other white materials.

#### **RESEARCHER (TUTKIJA), FINNISH GEODETIC INSTITUTE — JANUARY 2004-APRIL 2004**

Part time position. Further developed and operated a field-portable spectrogoniometer. The work was related to BRDF measurements of different types of targets for Earth remote sensing (e.g., snow, understory vegetation)

#### **PRINCIPAL INVESTIGATOR — 2003**

6th ESA Student Parabolic Flight campaign, project "Scattering@Zero-g", July-August 2003, Bordeaux, France

#### **RESEARCH ASSISTANT (TUTKIMUSAVUSTAJA), FINNISH GEODETIC INSTITUTE — 2001-2003 (12 MONTHS IN TOTAL)**

Four different periods of employment during 2001-2003. The work description same as above.

### **RESEARCH FUNDING AND RESEARCHER TRAINING**

#### **METSÄHOVI RENEWAL 2012-2015, 4.5 MILLION EUROS**

I worked in a major/managerial role in the renewal/upgrade project of the Metsähovi Geodetic Fundamental Station. The project was funded through special funding allocated by the Ministry of Agriculture and Forestry in 2012-2015 (total of 4.5 million euros). The largest part of the funding, 2.5 million euros, was dedicated to the new satellite laser ranging system whose development and building I've been leading since 2013. This has entailed, e.g., designing (both scientific and technical design) the new system (with co-workers), and specifying and managing an international call for tenders for a million-euro-class telescope system.

## **RESEARCHER TRAINING**

I have co-supervised one PhD and one MSc thesis at the Department of Astronomy, University of Helsinki in 2009 (with Prof. Karri Muinonen).

## **TEACHING EXPERIENCE**

### **COURSE LECTURER, DEPARTMENT OF ASTRONOMY, UNIVERSITY OF HELSINKI — 2006-2011**

Two different courses; Practical Tools for Astronomy one semester as the sole lecturer and Fundamentals of Observational Astronomy: Optical Astronomy five semesters as the co-lecturer.

### **COURSE ASSISTANT, DEPARTMENT OF ASTRONOMY, UNIVERSITY OF HELSINKI — 2001-2003**

Three different courses, six semesters; Fundamentals of Observational Astronomy: Optical Astronomy three times at different semesters, Fundamentals of Observational Astronomy: Radio Astronomy once, and Fundamentals of Astronomy once.

## **SCIENTIFIC AND ACADEMIC ACHIEVEMENTS**

### **CO-PI IN TWO ACADEMY OF FINLAND RESEARCH PROJECTS**

ALBEDO (2016-2020) in consortium with Univ. Helsinki (co-PI Prof. Karri Muinonen) and G-EPOS (2016-2019) in consortium with VTT/MIKES (co-PI Dr. Thomas Fordell)

### **VICE MEMBER, THE NATIONAL COMMITTEE ON POLAR RESEARCH — 2015-2017**

### **CHAIRMAN, THE FINNISH NATIONAL COMMITTEE TO THE INTERNATIONAL UNION OF GEODESY AND GEODYNAMICS (IUGG) — 2014-2015**

### **CHAIRMAN OF THE BOARD, THE GEOPHYSICAL SOCIETY OF FINLAND -2014-2015**

Also known as Geofysiikan seura ry

### **MEMBER OF THE BOARD, THE GEOPHYSICAL SOCIETY OF FINLAND — 2012-2014, 2015-2016**

Also known as Geofysiikan seura ry

### **SECRETARY, FINNISH NATIONAL COMMITTEE IN ASTRONOMY — 2007-2010**

Also known as Suomen tähtitieteen kansalliskomitea

### **SCIENCE OPERATIONS COORDINATOR — 2006-2013**

MIXS/SIXS instrument (X-ray spectrometer) of the European Space Agency BepiColombo spacecraft.

### **PRESIDENT, FINNISH ASTRONOMER ASSOCIATION — 2005-2009**

Also known as Suomen Tähtitieteilijäseura ry.

### **MEMBER OF THE BOARD, DEPARTMENT OF ASTRONOMY, UNIVERSITY OF HELSINKI — 2004-2006**

### **VICE-MEMBER OF THE BOARD, DEPARTMENT OF ASTRONOMY, UNIVERSITY OF HELSINKI — 2001-2003**

### **HAS ACTED AS A REFEREE FOR THREE PEER-REVIEWED JOURNAL ARTICLES**

### **SCIENTIFIC AND SOCIETAL IMPACT**

I have authored in 31 refereed scientific articles (3 first author), in 7 refereed scientific articles in conference proceedings (3 first author), and in 26 nonrefereed scientific articles in conference proceedings (8 first author).

I have a total of 1143 citations, H-index is 17 (in Google Scholar, and 13 in ISI web of Science), and i10-index of 18.