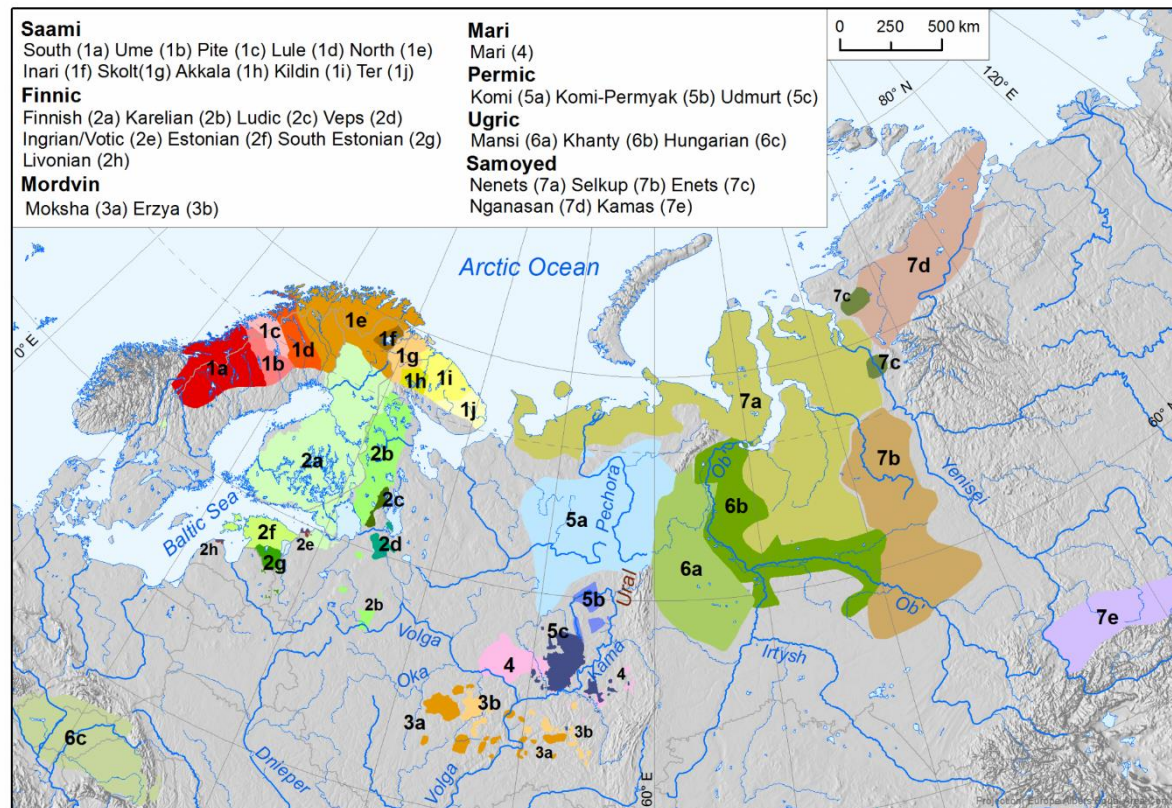# URKO: Uralilainen kolmio
Uralic triangulation
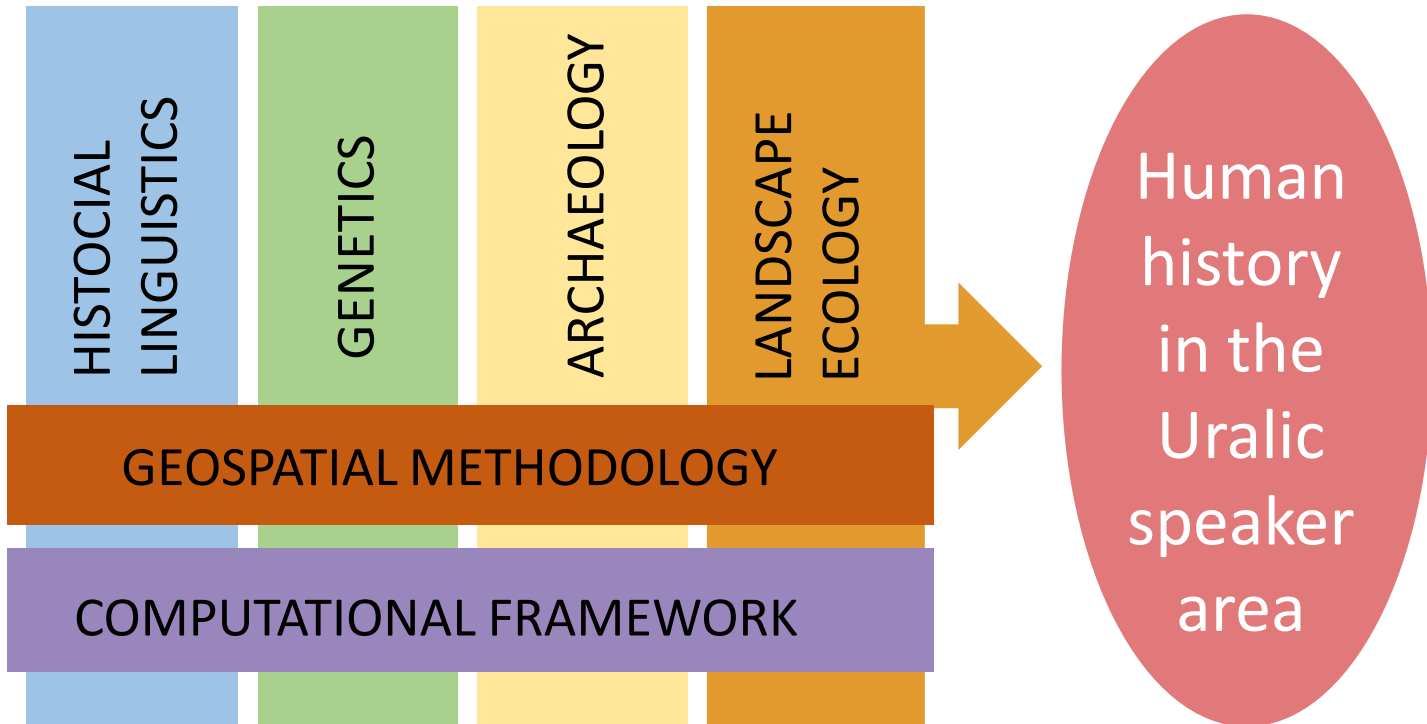
Consortium PI's: Päivi Onkamo, Sirkka Saarinen, Harri Tolvanen
Coordinating researcher: Outi Vesakoski

Saami
South (1a) Ume (1b) Pite (1c) Lule (1d) North (1e)
Inari (1f) Skolt(1g) Akkala (1h) Kildin (1i) Ter (1j)
Finnic
Finnish (2a) Karelian (2b) Ludic (2c) Veps (2d)
Ingrian/Votic (2e) Estonian (2f) South Estonian (2g)
Livonian (2h)
Mordvin
Moksha (3a) Erzya (3b)

Mari
Mari (4)
Permic
Komi (5a) Komi-Permyak (5b) Udmurt (5c)
Ugric
Mansi (6a) Khanty (6b) Hungarian (6c)
Samoyed
Nenets (7a) Selkup (7b) Enets (7c)
Nganasan (7d) Kamas (7e)

0   250   500 km

Arctic Ocean

Baltic Sea

Pechora

Ural

Volga

Oka

Dnieper

Ob

Yenisei

Irtysh

Kama

80° N
120° E
0° E
60° N
60° E

The Big Picture

Kirch & Green 2001: "Triangulation" is reconstructing human history through data and inference from genetics, linguistics and archaology

URKO is based on

GENETIC PAST

ArGeoPop
Finnish prehistory reconstructed in the light of archeological and population genetic data

SUGRIGE
Ancient genes of North-Eastern Europe

PI Päivi Onkamo

AKA 2009-2013; Jane ja Aatos Erkko Foundation 2017-2021

LINGUISTIC PAST

BEDLAN
Biological evolution and diversificiation of languages

PI Outi Vesakoski
Kone Foundation projects

Interdiciplinary data

KIPOT JA KIELET
Pots and languages

PI Päivi Onkamo,
Visa Immonen,
Sirkka Saarinen, Outi Vesakoski
UTU 2018-2021

Interdiciplinary consortium

URAHOLI review (*ms*)

The human histor of the westnerd Eurasian Taiga: Uralic languages, genes and societies
Large authorship, PI Outi Vesakoski
Ella and Georg Ehrnrooth Foundation, 2016. 2018

URKO consortium parties

Dept. of Biology

Prof. Päivi Onkamo
+ Post doc in
computational
sciences:

Human genetics
Probablistic statistics

**Dept. of Finnish and
Finno-Ugric languages**

Prof. Sirkka Saarinen
+ Dr. Outi Vesakoski

Uralic linguistics
Computational
linguistics

**Dept. of Geography
and geology**

Univ. lecturer's Harri
Tolvanen
Tua Nylén
+ PhD student

Biogeography
Spatial modelling

URKO's aims

1) User interfaces
2) Teaching digital humanistics
3) Studies on integrative human past

URKO's implementation

Dept. of Biology

Post doc hired

Archaeological data

Cooperation with the Finnish Heritage Agency, Museovirasto

Chronological studies on Uralic past

Computational expertise

Dept. of Finnish and Finno-Ugric languages

Post doc hired

Language typological data
Cooperation with Uppsala University, Tartu University and JENA MPI

Computational studies on linguistic past

URKO coordination

Dept. of Geography and geology

PhD student hired

Cartographical data of language speaker areas
Co-operation with University of Oulu and Zürich

Spatial studies of Uralic past

GIS expertise

User interfaces

Digitized database of Finnish archeological artefacts, Muinaisjäännös-rekisteri

Typological classification
Photos
Coordinates
Etc.

Easy access to catalogy of artefacts, until know physical visit to museum collections needed.

Possibility to vigorous statistical and spatial analyses of the findings

Eura Luistari, burials AD 600-1100

Suomussalmi, Viking Age

Neolithic (ca. 5200-1800 calBC) elk-head sculpture

Bronze Age (ca 1800-500 calBC) rhomb axe

User interfaces

Two typological data sets of Uralic languages

1) Uralic languages into global Granbank database (195 traits)
2) Within Uralic variation in typology (150 traits)

Binary (yes/no) answers to question such as does language X has vowel harmony

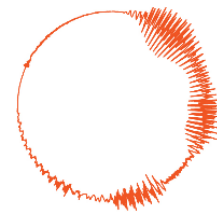No such data existed earlier. Important for research and teaching.

Data from grammar books and by interviews; Miina Norvik & Eva Saar & an informant
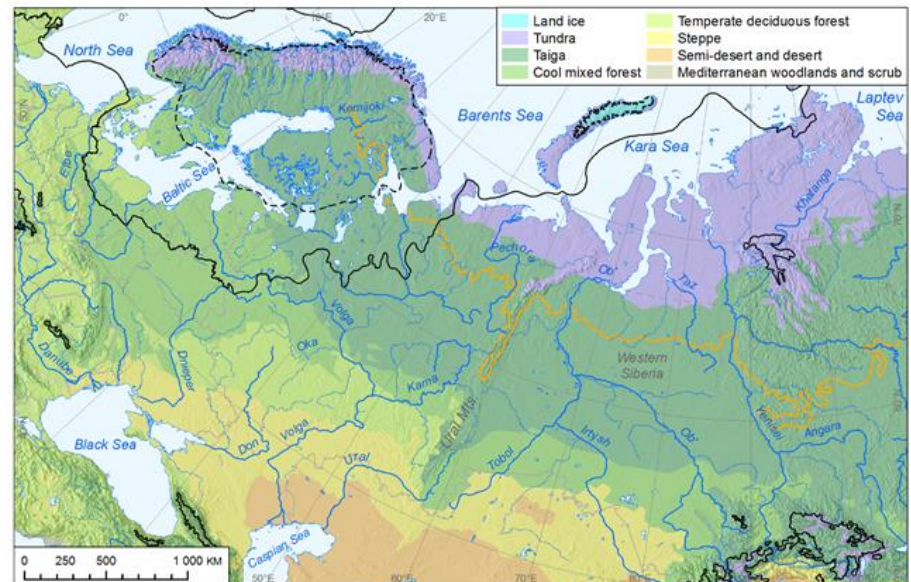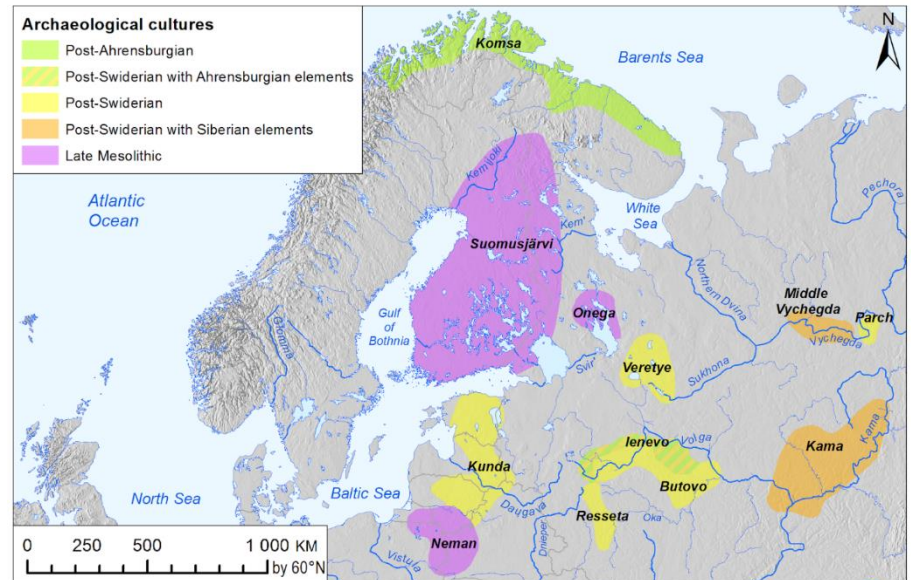
Karl Pajusalu

User interfaces

**Spatial Data of
Uralic Speaker Area**

1) Cartographical Database of
Uralic Languages
2) Environmental, archaeo-
logical and genetic data

*Classical and current speaker
areas digitized from literature
and up-dated with the authorship
of Oxford Guide for Uralic
languages*

*Other data collected in UraHoli
review process*

No earlier digital spatial data
existed earlier.

URKO's research

Linguistic inheritance: **Vertical and horizontal transfer of material** within Uralic family and with Uralic languages and its neighbours. Typological data sets analysed with so called Tiger partition analyses (developed in Syrjänen et al. ms).

Test of different **chronological scenarios** of spread of Siberian genetic ancestry, Finnic languages and Tarand and other burial practice around Baltic Sea area in the Early Iron Age (innovated from Lang 2018 hypothesis), studied with Bayesian chronology paradigm

Appying ecological niche hypothesis to human spread: Are human (cultural) **distribution ranges and dispersal constrained by biogeographical environment**? Studied with species distribution modelling.

KIITOKSET
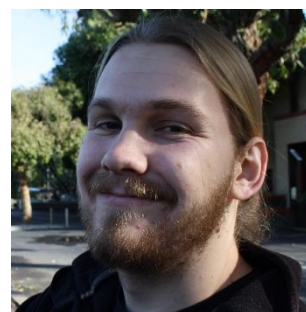
Check KiKi in Facebook!

Petro Pesonen

Ulla Moilanen
Jarkko Saipio
Richard Kowaleck

Miina Norvik
Minerva Piha
Eva Saar

Luke Maurits

Terhi Honkola
Timo Rantanen