

# LBS 2016

13<sup>th</sup> Conference on Location-Based Services  
Vienna, 14–16 November 2016



K.N.Toosi University of Technology  
Department of Geodesy and Geomatics  
Faculty of GIS

## **AN IMPROVED INDOOR POSITIONING SYSTEM BASED ON WLAN**

Mohsen Ahmadkhani, Mohamad Reza Malek



## Outline

Introduction

Procedure

Study Area

Methods

Manipulation

Database

Results

- Introduction
- Procedure
- Study Area
- Methods
- Manipulation
- Database
- Results



Outline

Introduction

Procedure

Study Area

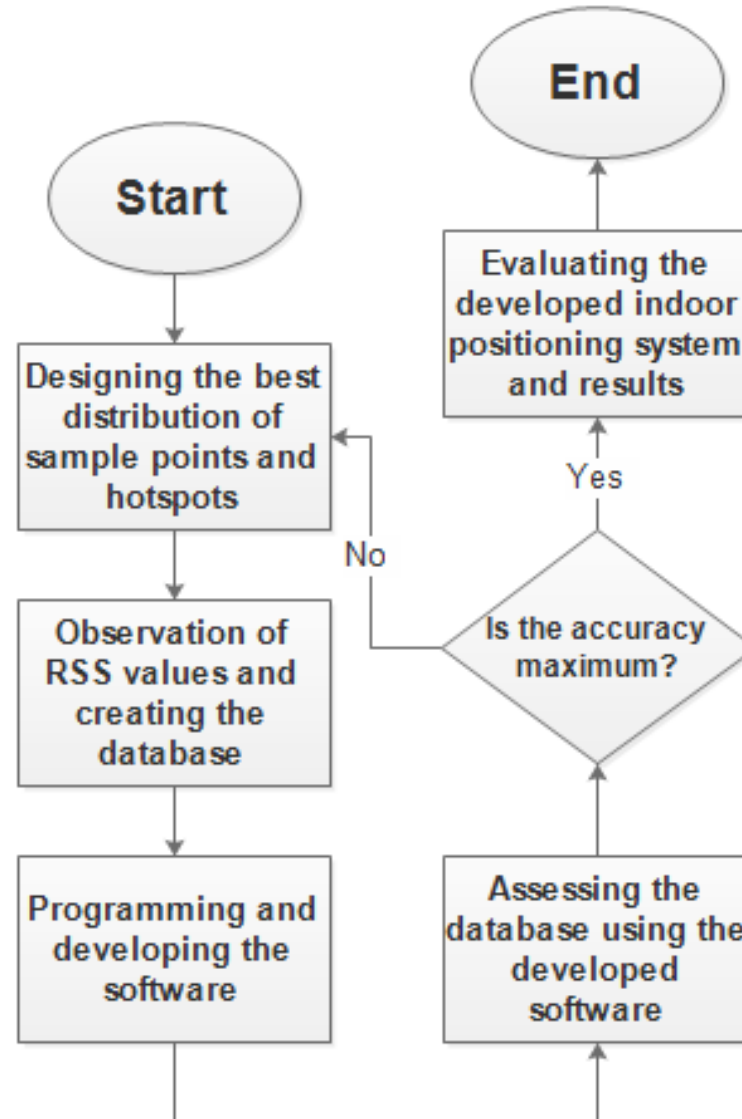
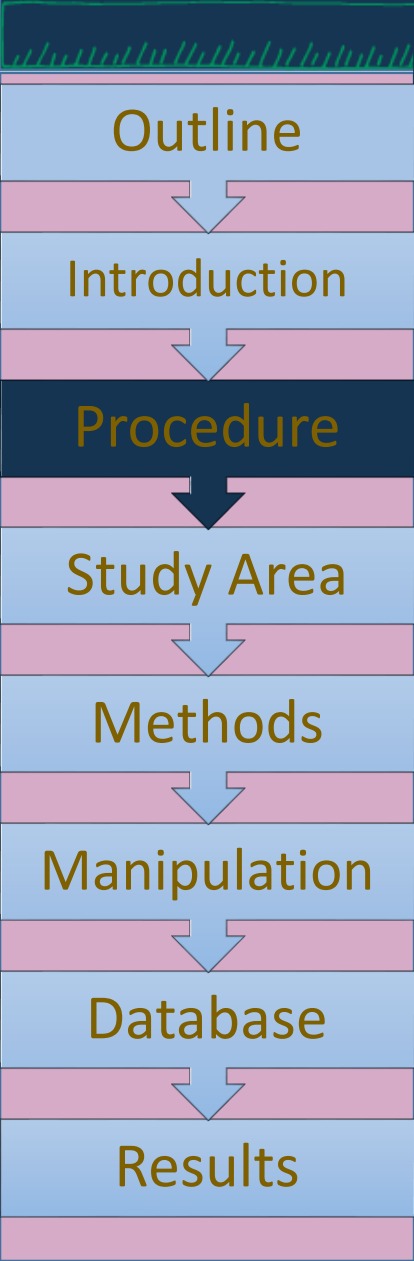
Methods

Manipulation

Database

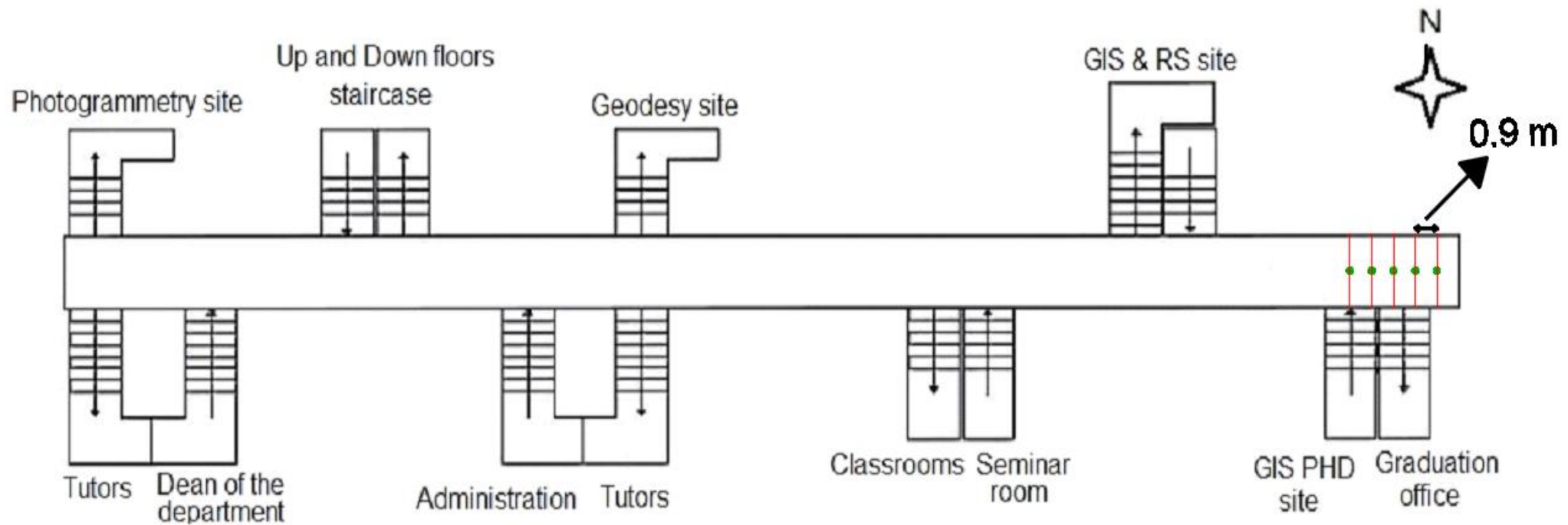
Results







## Third floor of Geodesy and Geomatics faculty of K. N. Toosi University of Technology





Outline

Introduction

Procedure

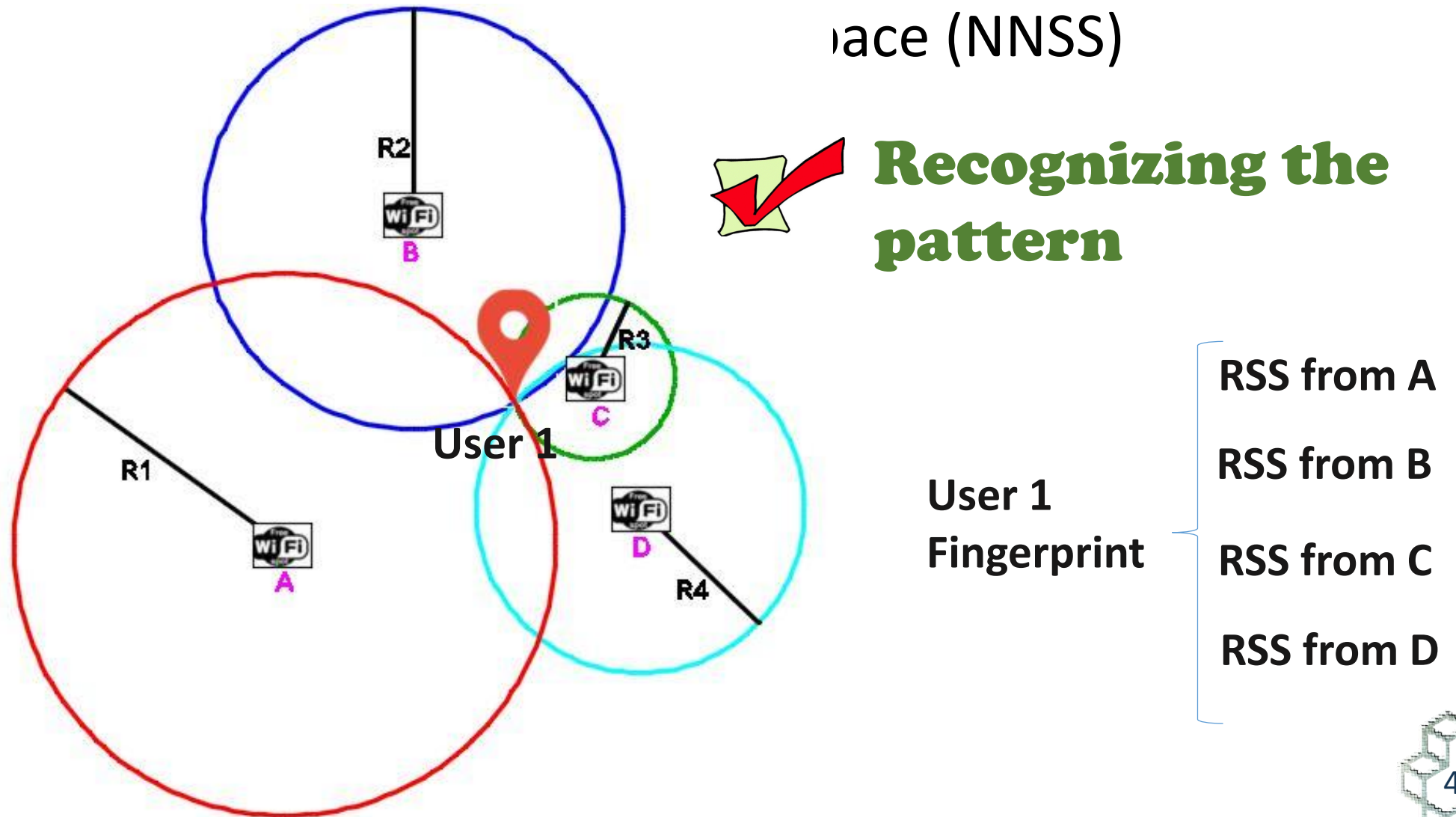
Study Area

Methods

Manipulation

Database

Results





Outline

Introduction

Procedure

Study Area

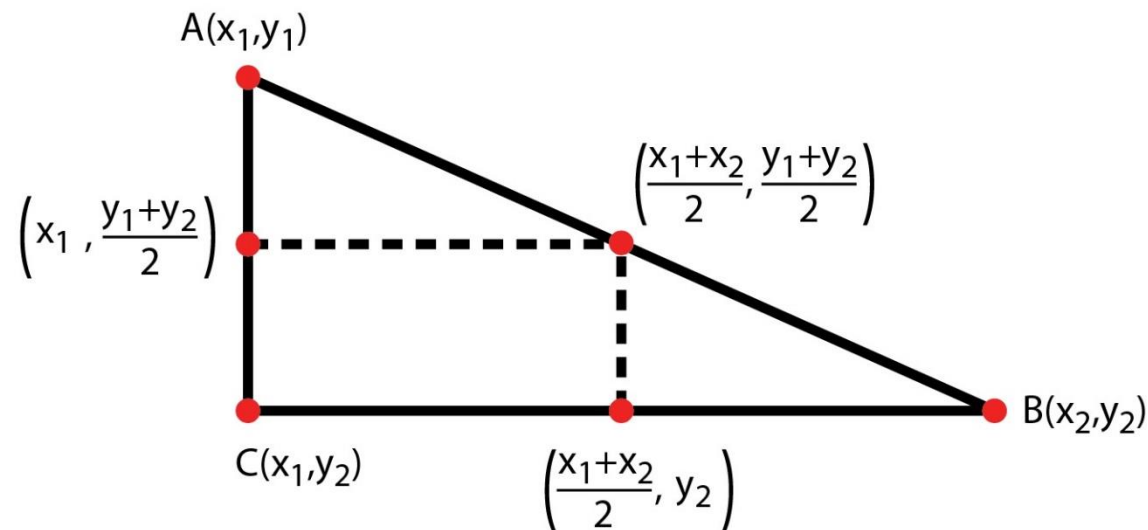
Methods

Manipulation

Database

Results

$$d_j = \sqrt{\sum_{i=1}^m (S_i - s_{ij})^2}, j = 1, 2, \dots, n$$

**Matching the  
pattern**



Outline

Introduction

Procedure

Study Area

Methods

Manipulation

Database

Results

LOCATING YOUR RECEIVED RSS:

Clear

kntu

-46

Personal\_AP

-74

afagh\_16t

-90

AZP

-91

Default

-67

STC\_N6

-88



your location is:

X:

Your direction:

Y:

Reliability:

(Zero is desired)

Adding a new Pattern Point:

Number

point#

Direction

kntu

Personal\_AP

afagh\_16t

AZP

Default STC\_N6



stc\_n6  
integer

-88

-91

-91

-95

-90

-90

-90

-95



Outline

Introduction

Procedure

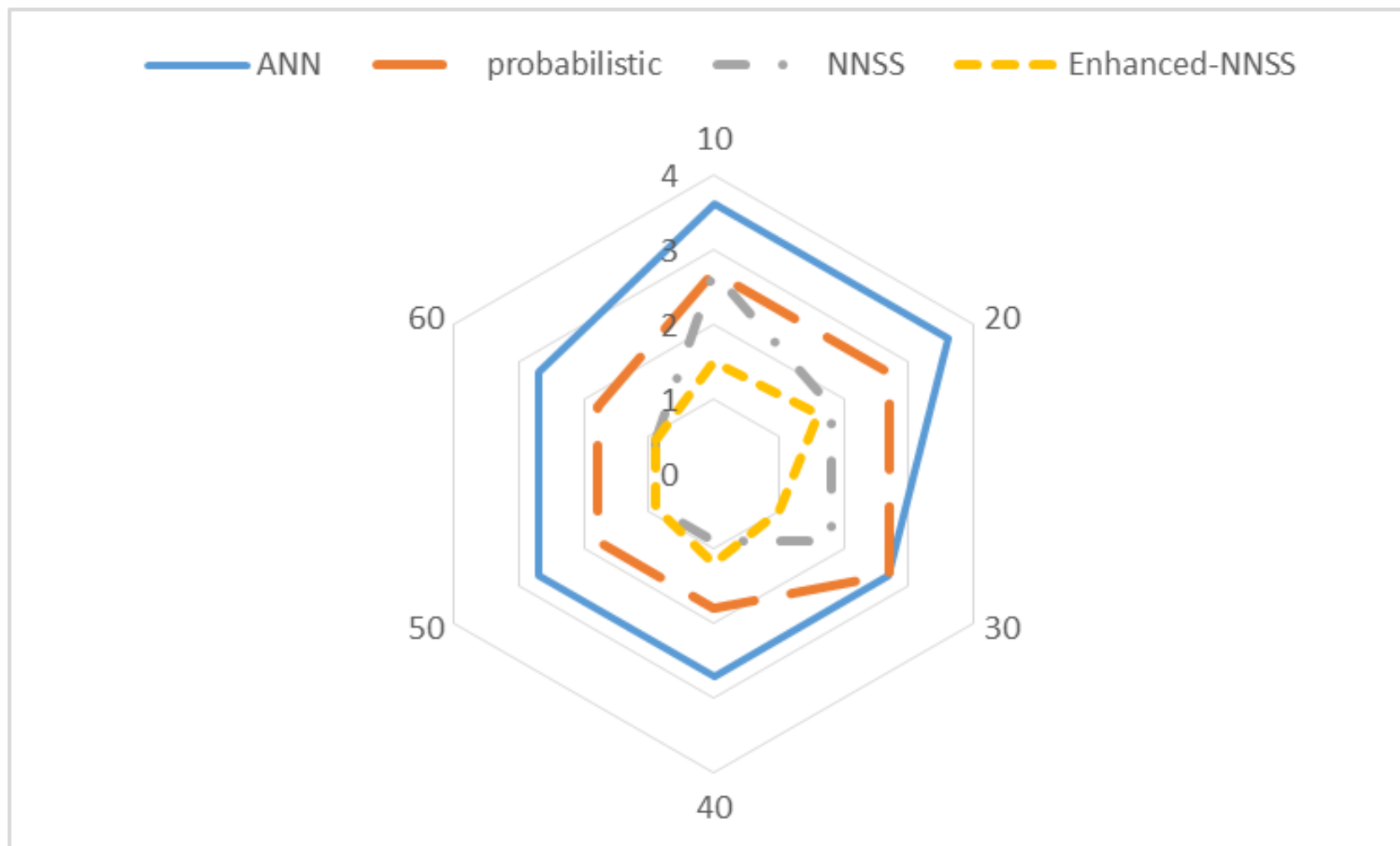
Study Area

Methods

Manipulation

Database

Results





# Thanks for your attention !