

Personal information Gholamreza Roshan



ghr.roshan@gu.ac.ir & r.rowshan@yahoo.com & ghr.rowshan@gmail.com

Skype Reza Roshan

Sex Male | Nationality Iran

SUMMARY OF THE PROFILE

Climate change has affected various aspects of human life. Therefore, one of my research interests has been studying the consequences of climate change on different sectors, energy, thermal comfort, agriculture, etc. At the same time, Urban climate, climate risks are also among my research interests. In these years, I have had scientific cooperation with various researchers from all over the world Belgium, South Africa, China, Poland, Germany, France, Russia, Oman, Spain and Brazil in the field of publishing articles and carrying out research projects related to climatology.

I am also the editor-in-chief of the Persian-language Journal of climate change research, which is published by Golestan University press. I am currently teaching and doing research work as an associate professor (faculty me member) in the geography department of Golestan University.

Research interest

Climate change, Thermal comfort, Climate and Architecture, Renewable Energy, Climatic modeling

Education	
2007-2011	Ph.D.; Physical Geography-Climatology, University of Tehran, Tehran, Iran
	Thesis Topic: Regional climate change scenarios and their impacts on water
	requirements for wheat production in Iran
2004-2006	M.S.; <u>Physical Geography-Climatology</u> , University of Tehran, Tehran, Iran Thesis Topic: Synoptic study of Widespread Flood on the southern coasts of the Caspian Sea
2000-2005	B.A.; Physical Geography-Climatology, Kharazmi University, Tehran, Iran

AWARDS & HONORS		
2011	Top Ph.D. Student in University of Tehran	
2012-2014	Selected researcher of the Faculty of Literature and Humanities, Golestan University	
2015	Selected researcher of the Faculty of Literature and Humanities, in Golestan Province	
2016	Top Researcher, Golestan University	
2017-2019	Selected researcher of the Faculty of Literature and Humanities, Golestan University	
2020	Selected researcher of the Faculty of Literature and Humanities, in Golestan Province	
2021	Top Researcher, Golestan University	

Book

• Kristie L. Ebi, Ian Burton, Glenn R. McGregor., Biometeorology for adaptation to climate variability and change, Publisher Springer Dordrecht, Translated by Gholamreza Roshan 2014, Golestan University Press.

Journal papers

Evaluating the wind cooling potential on outdoor thermal comfort in selected Iranian climate types (vol 92, 102660, 2020)

G Roshan, M Moghbel, S Attia JOURNAL OF THERMAL BIOLOGY 98

Corrigendum to Evaluating the wind cooling potential on outdoor thermal comfort in selected Iranian climate types [Vol 92, August 2020, 102660]

G Roshan, M Moghbel, S Attia Journal of thermal biology 98, 102966

Climatic clustering analysis for novel atlas mapping and bioclimatic design recommendations

G Roshan, M Farrokhzad, S Attia Indoor and Built Environment 30 (3), 313-333

Comparative assessment of farmers' perceptions on drought impacts: the case of a coastal lowland versus adjoining mountain foreland region of northern Iran

M Hesam, G Roshan, SW Grab, AR Shabahrami Theoretical and Applied Climatology 143 (1), 489-503

Rain and snow event cooling effect: a comparison on outdoor and indoor thermal comfort in Ardabil, northwest of Iran

G Roshan, M Moghbel Theoretical and Applied Climatology 142 (3), 1581-1594

Quantifying the cooling effect of rain events on outdoor thermal comfort in the southern coastal stations of the Caspian Sea

G Roshan, M Moghbel Journal of Thermal Biology 93, 102733

climate change threats to cultural and heritage tourism in Iran

JM Fitchett, G Roshan

Cultural and Heritage Tourism in the Middle East and North Africa, 218-238

Evaluating the wind cooling potential on outdoor thermal comfort in selected Iranian climate types

G Roshan, M Moghbel, S Attia Journal of Thermal Biology 92, 102660

Developing a thermal stress map of Iran through modeling a combination of bioclimatic indices

G Roshan, M Faghani, JM Fitchett Environmental Monitoring and Assessment 192 (8), 1-21

The role of physical geographic parameters affecting past (1980–2010) and future (2020–2049) thermal stress in Iran

G Roshan, SW Grab, MS Najafi Natural Hazards 102 (1), 365-399

Projecting spatiotemporal variations of sunshine duration with regards to climate change in Iran as a step towards clean energy

A Ghanghermeh, G Roshan, A Halabian Sustainable Energy Technologies and Assessments 53, 102630

Mitigation of climate change impact using green wall and green roof strategies: comparison between two different climate regions in Iran

G Roshan, M Moghbel, M Farrokhzad Theoretical and Applied Climatology, 1-18

Spatial analysis of bioclimatic patterns over Iranian cities as an important step in sustainable development

G Roshan, M Moghbel, M Taleghani Sustainable Cities and Society 83, 103939

Predicting climate change impact on hospitalizations of cardiovascular patients in Tabriz

G Roshan, A Ghanghermeh, V Mohammadnejad, P Fdez-Arróyabe, ... Urban Climate 44, 101184

Urban heat island and thermal comfort of Esfahan City (Iran) during COVID-19 lockdown G Roshan, R Sarli, JM Fitchett

Journal of Cleaner Production 352, 131498

Evaluation of effects of a green wall as a sustainable approach on reducing energy use in temperate and humid areas

K Karimi, M Farrokhzad, G Roshan, M Aghdasi Energy and Buildings 262, 112014

Proposing a Bioclimatic Atlas in Iran to Achieve Climate Responsive Architecture Strategies

M Farrokhzad, G Roshan

Journal of Architecture and Urban Planning 14 (34), 45-69

Future impact of cloudiness and wind changes on thermal comfort conditions in the city of Tabriz (Iran) in the frame of climate change

GR Roshan, R Oji, P Fdez-Arróyabe Sustainable Cities and Society 77, 103575

The case of Tehran's urban heat island, Iran: Impacts of urban 'lockdown' associated with the COVID-19 pandemic

G Roshan, R Sarli, SW Grab Sustainable Cities and Society 75, 103263

The potential impact of the eruption of huge volcanoes of the twentieth century on the temperature change of selected stations in Iran

G Roshan, M Davudi, M Salehizadeh Climate Change Research 2 (7), 13-32

The Reconstruction the Past Climate based on Temperature Pattern Changes from Tree Rings on Oak Habitats in Golestan Province

A Ghanghermeh, G Roshan, N Nazarnezhad Geography and Environmental Planning 30 (4), 115-138

Reconstructing the Environmental Changes in the Western Border of Lut Plain Based on the Study of Nebkhas

S Negahban, G Roshan ۲۱۷-۲۰۳ (غیزیک زمین و فضا ۴۵ (۶), ۲۰۳

Spatial and temporal displacements in wet and dry periods in the Southeast of the Caspian Sea: Golestan Province in Iran

A Yelghei, A Ghanghermeh, G Roshan Journal of the Earth and Space Physics 45 (4), 219-235

Comparison of impact of climate change on building energy-saving design for two different climates; Metropolitans of Moscow and Tehran

G Roshan

Journal of the Earth and Space Physics 45 (4), 189-202

Climatic clustering analysis for novel atlas maps and bioclimatic design recommendations

M Farrokhzad, G Roshan, S Attia Indoor and Built Environment

Modeling the impact of climate change on energy consumption and carbon dioxide emissions of buildings in Iran

G Roshan, M Arab, V Klimenko Journal of Environmental Health Science and Engineering 17 (2), 889-906

Evaluation and prediction of vegetation changes of Mazandaran, Iran from 2005 to 2017 using Markov chain method and Geographical Information Systems (GIS)

R Sarli, G Roshan, S Grab

Scientific-Research Quarterly of Geographical Data (SEPEHR) 28 (111), 149-162

Comparison of Threats and Opportunities Affected by Global Warming on the Energy Storage of Buildings in a Cold Desert Climate Type for Madrid in Spain and Mashhad in Iran

G Roshan, J Orosa

Geographical Planning of Space 9 (31), 191-208

Projecting the impact of climate change on design recommendations for residential buildings in Iran GR Roshan, R Oji, S Attia

Building and Environment 155, 283-297

Estimate of outdoor thermal comfort zones for different climatic regions of Iran

G Roshan, HS Almomenin, SQ da Silveira Hirashima, S Attia

Urban Climate 27, 8-23

Analysis tool for bioclimatic design strategies in hot humid climates

S Attia, T Lacombe, HT Rakotondramiarana, F Garde, GR Roshan Sustainable cities and society 45, 8-24

Analysis and comparison of spatial-temporal entropy variability of Tehran city microclimate based on climate change scenarios

A Ghanghermeh, G Roshan, JA Orosa, ÁM Costa Entropy 21 (1), 13

Quantification and assessment of effective of global warming on the occurrence of heat and cold waves in some selected stations in Iran

GR Roshan, A Ghanghermeh, E Neyazmand ۱۶۵-۱۲۷, (٤), مین و فضا ٤٤ (٤), ۱۶۵-۱۲۷

Building Energy Consumption and Carbon Dioxide Emissions in a Small Region with a Warm and Semi-humid Climate Type (Iran)

G Roshan, JA Orosa, ÁM Costa, R Bouzón Conference of the Arabian Journal of Geosciences, 179-182

Adaptation Strategies and Resilience to Climate Change for Warm, Dry-Summer Continental Climate in Iran

G Roshan, JA Orosa, ÁM Costa, R Bouzón Conference of the Arabian Journal of Geosciences, 175-177

بازنگری در تعیین دمای پایه آسایش حرارتی مناطق اقلیمی متفاوت ایران به منظور محاسبه شاخص درجه-روز مورد نیاز سرمایشی و گرمایشی

قانقرمه, عبدالعظیم, روشن, شاهکویی, اسمعیل فصلنامه علمی-پژوهشی اطلاعات جغرافیایی «سیهر» ۲۷ (۱۰۵), ۱۲۳–۱۲۳

The review of determining the thermal comfort base temperature in different climatic regions in order to calculate the required Degree-Day index for cooling and heating

A Ghanghermeh, G Roshan, S Shahkooeei Scientific-Research Quarterly of Geographical Data (SEPEHR) 27 (105), 127-143

Assessment of the climatic potential for tourism in Iran through biometeorology clustering

G Roshan, R Yousefi, K Błażejczyk International journal of biometeorology 62 (4), 525-542

Spatial and temporal analysis of outdoor human thermal comfort during heat and cold waves in Iran

GR Roshan, AA Ghanghermeh, Q Kong Weather and climate extremes 19, 58-67

Meteorological modeling of the effect of Zeriwar Lake on the supply and demand of energy surrounding areas

GR ROSHAN, G LAKZASHAKOUR JOURNAL OF WETLAND ECOBIOLOGY 10 (35), 65-78

Assessment of extreme heat stress probabilities in Iran's urban settlements, using first order Markov chain model

G Roshan, PT Nastos Sustainable cities and society 36, 302-310

Testing a new application for TOPSIS: monitoring drought and wet periods in Iran

G Roshan, AA Ghanghermeh, SW Grab

Theoretical and applied climatology 131 (1), 557-571

A comprehensive analysis of physiologically equivalent temperature changes of Iranian selected stations for the last half century

G Roshan, R Yousefi, A Kovács, A Matzarakis Theoretical and applied climatology 131 (1), 19-41

Suggestion a new base temperature for calculating the amount of energy demand based on thermal comfort indices and temperature—Physiologic

G Roshan

Journal of the Earth and Space Physics 43 (3), 601-621

Regional simulation model of the meteorological effects of Maharlu Lake on the human climate health of Shiraz in Iran

G Roshan, MK Nematchoua, V Mohammad Nejad, R Yousefi

Land use planning based on human-bio meteorological potentials of some selected cities of Iran

G Roshan

Journal of the Earth and Space Physics 43 (2), 385-404

آمایش سرزمین بر مبنای پتانسیلهای هواشناسی زیست انسانی چندین نمونه از شهرهای ایران روشن روشن فیزیک زمین و فضا ۲۳ (۲), ۳۸۰-۴۰۶

Synoptic approach to forecasting and statistical downscaling of climate parameters (Case study: Golestan Province)

A Ghanghermeh, G Roshan, T Nasrabadi Pollution 3 (3), 487-504

Wind turbines design corrections for next Galicia climatic conditions

JA Orosa, AM Costa, G Roshan, EJ García-Bustelo Scientia Iranica 24 (3), 926-932

Identify different patterns of sea surface temperature using a cluster analysis GROSHAN

JOURNAL OF WETLAND ECOBIOLOGY 9 (32), 53-70

Modelling spatial, altitudinal and temporal variability of annual precipitation in mountainous regions: The case of the Middle Zagros, Iran

R Saeidabadi, MS Najafi, GR Roshan, JM Fitchett, S Abkharabat Asia-Pacific Journal of Atmospheric Sciences 52 (5), 437-449

A new way to define better improvement options of existing buildings for energy saving

NR Barkhudaryan, G Roshan, JA Orosa International Journal of Sustainable Energy 35 (9), 903-913

The impacts of drying of Lake Urmia on changes of degree day index of the surrounding cities by meteorological modelling

G Roshan, JM Samakosh, JA Orosa Environmental Earth Sciences 75 (20), 1-14

A new approach to downscaling and project of the climatic components, with emphasis on the temperature parameter (Case Study: Golestan province)

G Roshan, A Ghangherme Journal of the Earth and Space Physics 42 (1), 197-212

Wind resource assessment over Iran using weather station data

S Al-Yahyai, G Roshan, AA Ghanghermeh International Journal of Sustainable Energy 35 (3), 230-243

Relationship between landform and soil salinity in the surface and subsurface soils (case study: Southeast of Fars Province, Iran)

M Mokarram, M Najafi-Ghiri, S Negahban, G Roshan Modeling Earth Systems and Environment 2 (1), 1-11

Long-term trends in tourism climate index scores for 40 stations across Iran: the role of climate change and influence on tourism sustainability

G Roshan, R Yousefi, JM Fitchett International journal of biometeorology 60 (1), 33-52

Landform classification using topography position index (case study: salt dome of Korsia-Darab plain, Iran)

M Mokarram, G Roshan, S Negahban Modeling Earth Systems and Environment 1 (4), 1-7

Modeling of the effects of climate change on rainy and gully erosion potential of Kor-chamriz watershed in Fars province

G Roshan, S Negahban Modeling Earth Systems and Environment 1 (3), 1-12

Modeling the behavior of Vegetation Indices in the salt dome of Korsia in North-East of Darab, Fars, Iran

M Mokarram, M Hojjati, G Roshan, S Negahban Modeling Earth Systems and Environment 1 (3), 1-9

Application of TOPSIS Index in Monitoring of Droughts and Wet for Golestan providence

A Ghanghermeh, G Roshan

Journal of the Earth and Space Physics 41 (3), 547-563

Regional climate changes and their effects on monthly energy consumption in buildings in Iran

G Roshan, J A Orosa Natural Environment Change 1 (1), 31-48

Development of a new low-cost procedure for wind farm maintenance with a view to decrease soil pollution

AM Costa, F Fraguela, JA Orosa, G Roshan Pollution 1 (3), 275-285

Evaluating the consequences of the new standards on noise conditions in ships

R Bouzón, AM Costa, G Roshan, JA Orosa Pollution 1 (2), 127-138

Effects of climate change on wind energy production in Iran

G Roshan, MS Najafei, ÁM Costa, JA Orosa Arabian Journal of Geosciences 8 (4), 2359-2370

The influence of Atlantic-Eurasian teleconnection patterns on temperature regimes in South Caspian Sea coastal areas: a study of Golestan Province, North Iran

AA Ghanghermeh, G Roshan, S Al-Yahyai Pollution 1 (1), 67-83

A new procedure to analyze the effect of air changes in building energy consumption

N Barkhudaryan, JA Orosa, G Roshan

Journal of Environmental Health Science and Engineering 12 (1), 1-12

Effect of climate change on outdoor thermal comfort in humid climates

JA Orosa, ÁM Costa, Á Rodríguez-Fernández, G Roshan Journal of Environmental Health Science and Engineering 12 (1), 1-9

Spatio-temporal variation in phenological response of citrus to climate change in Iran: 1960–2010

JM Fitchett, SW Grab, DI Thompson, G Roshan Agricultural and forest meteorology 198, 285-293

Increasing frost risk associated with advanced citrus flowering dates in Kerman and Shiraz, Iran: 1960–2010

JM Fitchett, SW Grab, DI Thompson, G Roshan International journal of biometeorology 58 (8), 1811-1815

Thermal comfort and forecast of energy consumption in Northwest Iran

G Roshan, A Ghanghermeh, JA Orosa Arabian Journal of Geosciences 7 (9), 3657-3674

Study of dioxide carbon concentration and indoor àir quality in some buildings in the equatorial region of Cameroon (Yaoundé)

M Kameni Nematchoua

 $Study of Dioxide Carbon Concentration and Indoor Air Quality in Some Buildings in the Equa \ \dots \\$

Impact of climate change on the wheat-growing season over Iran

G Roshan, R Oji, S Al-Yahyai

Arabian Journal of Geosciences 7 (8), 3217-3226

Case study of weather maintenance in wind power generation

ÁM Costa, G Roshan, JA Orosa, Á Rodríguez-Fernández Arabian Journal for Science and Engineering 39 (7), 5615-5624

Temporal responses of peak citrus flowering to climate change in Iran: 1960-2010

J Fitchett, S Grab, D Thompson, GR Roshan

EGU General Assembly Conference Abstracts, 593

Impact of climate change on outdoor thermal comfort and health in tropical wet and hot zone (Douala), Cameroon

M Kameni Nematchoua, G Roshan, R Tchinda Iranian Journal of Health Sciences 2 (2), 25-36

Study of dioxide carbon concentration and indoor àir quality in some buildings in the equatorial region of Cameroon (Yaoundé)

MK Nematchoua, R Tchinda, JA Orosa, G Roshan Iranian journal of health sciences 2 (1), 1-15

Climate change effect on outdoor ambiences in Iranian cities

JA Orosa, G Roshan, S Negahban

Environmental monitoring and assessment 186 (3), 1889-1898

Probability of the effect of climate change on the graph of the intensity and frequency of effective precipitation in the regions of the northwest of Iran.

G Roshan, A Ghanghermeh

Geography and Environmental Planning 25 (2), 61-84

Measuring the Relationship between the Fluctuations of the Precipitation Cluster and the Cycle of Sun Spots in Iran

GR Roshan, AA Ghanghermeh, E Shahkooeei

Asian Journal of Research in Social Sciences and Humanities 4 (9), 217-227

Evaluating the effect of climatic human comfort on the human infant health, case study of Shiraz city, Iran

G Roshan, E Shahkooeei

Asian Journal of Research in Social Sciences and Humanities 4 (8), 349-360

Evaluating the effect of climatic human comfort on the human infant health, case study of Shiraz city, Iran

G Roshan, E Shahkooeei

Asian Journal of Research in Social Sciences and Humanities 4 (8), 349-360

IMPACT OF INDOOR CLIMATE CHANGES IN GALICIA ON THE AMOUNT OF ENERGY CONSUMED

N Barkhudaryan, JA Orosa, MJ Hermida-Castro, G Roshan International Journal of Energy, Environment and Economics 21 (5/6), 437

New climatic indicators for improving urban sprawl: a case study of Tehran city

A Ghanghermeh, G Roshan, JA Orosa, JL Calvo-Rolle, ÁM Costa Entropy 15 (3), 999-1013

Effect of global warming on intensity and frequency curves of precipitation, case study of Northwestern Iran

G Roshan, AA Ghanghermeh, T Nasrabadi, JB Meimandi Water resources management 27 (5), 1563-1579

The relation between the number of sunspots and fluctuation in the trend of climatic components in Iran during recent decades

G Roshan

Environmental Resources Research 1 (1), 65-87

Modeling Caspian Sea water level oscillations under different scenarios of increasing atmospheric carbon dioxide concentrations

GR Roshan, M Moghbel, S Grab

Iranian journal of environmental health science & engineering 9 (1), 1-10

Synoptic climatology of the formation of algal blooms in the South Caspian

A Ghanghermeh, G Roshan

Journal of Geography and Environmental Hazards 1 (2), 85-100

A new approach to technique for order-preference by similarity to ideal solution (TOPSIS) method for determining and ranking drought: A case study of Shiraz station

R Gholamreza, M Gafar, S Ali

International Journal of Physical Sciences 7 (23), 2994-3008

Simulation of climate change impact on energy consumption in buildings, case study of Iran Roshan

Energy Policy 49, 731-739

Assessment of suitable general atmosphere circulation models for forecasting temperature and precipitation amounts in Iran under condition of global warming

GR ROSHAN, AF KHOSH, G Azizi GEOGRAPHY AND DEVELOPMENT 10 (27), 5-7

Global warming effect on comfort climate conditions in Iran

R Borna, G Roshan, AK Shahkoohi Advances in Environmental Biology, 3511-3518

Evaluating the climatic potentials of saffron cultivation in Khuzestan province using GIS (Geographical Information System)

BGR Reza, M Masuma

African Journal of Agricultural Research 5 (23), 3259-3272

Evaluating climatic potential for palm cultivation in Iran with emphasis on degree-day index

S Ali, R Gholamreza, ANK Ali

African journal of agricultural research 5 (13), 1616-1626

Studying wind chill index as a climatic index effective on the health of athletes and tourists interested in winter sports

G Roshan, G Mirkatouli, A Shakoor, V Mohammad-Nejad Asian Journal of Sports Medicine 1 (2), 108

Studying wind chill index as a climatic index effective on the health of athletes and tourists interested in winter sports

R Gholamreza, M Gafar, S Ali, MN Vahid

Studying wind chill index as a climatic index effe...

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Studying the effects of urban sprawl of metropolis on tourism-climate index oscillation: A case study of Tehran city

R Gholamreza, R Iman, R Mehdi Journal of Geography and Regional Planning 2 (12), 310-321

Study of spatial and temporal distribution of frost and sliding in Iran٠s mountain roads using climatic conditions matrix (Case Study; Karaj –Chalous Road)

B Reza, M Hossein, R Gholamreza Journal of Geography and Regional Planning 2 (9), 224-230

The role and function of small towns in rural development using network analysis method case: Roniz rural district (Estahban city, province Fars, Iran)

RR Mohammad, S Ali, RAR Saeed, R Gholamreza Journal of geography and regional planning 2 (9), 214-223

THE RELATION BETWEEN CLIMATIC FACTORS AND TEHRAN'S AIR POLLUTANTS WITH THE DEATH CAUSED BY CARDIAC DISEASES

F Khoshakhlagh, GR Roshan, R Borna Journal of Environmental Research And Development 3 (3)

Climate Change, Katrina and National Security

H Mohammadi, GR Roshan Scientific-Research Quarterly of Geographical Data (SEPEHR) 16 (61), 50-53

EVALUATION OF HYDRO CLIMATOLOGY OF COMPREHENSIVE FLOODS IN GORGANROUD WATER BASIN

H MOHAMMADIE, ALI SHAKOR, AF KHOSH, GR ROSHAN JOURNAL OF GEOGRAPHICAL SCIENCES 6 (89), 49-74

Assessment of a Number of Cases of Drought Indexes at Three Stations of Fars Province

F Khosh Akhlagh, G Roshan Scientific-Research Quarterly of Geographical Data (SEPEHR) 15 (57), 42-46

The role of flood anticipation and warming systems in flood risk management ALI SHAKOOR, G ROSHAN, M REZA

Research Projects

Mitigation of climate change impact using green wall and green roof strategies: comparison between two different climate regions in Iran

Spatial analysis of bioclimatic patterns over Iranian cities as an important step in sustainable development

Rain and snow event cooling effect: a comparison on outdoor and indoor thermal comfort in Ardabil, northwest of Iran

Projecting spatiotemporal variations of sunshine duration with regards to climate change in Iran as a step towards clean energy

Future impact of cloudiness and wind changes on thermal comfort conditions in the city of Tabriz (Iran) in the frame of climate change

Comparison of impact of climate change on building energy-saving design for two

different climates; Metropolitans of Moscow and Tehran

Evaluating the wind cooling potential on outdoor thermal comfort in selected Iranian climate types

Journals Reviewer

Energy and Buildings

Renewable energy

Energy and Buildings

Entropy

International Journal of Biometeorology

Theoretical and Applied Climatology

Arabian Journal of Geosciences

Scientific Reports

Urban climate

Natural Hazards (springer)

Sustainable Cities and Society

Asian Journal of Atmospheric Environment

Geographical Planning of Space Quarterly Journal

Geography and Environmental Planning

Geography and Sustainability and Environment

Journal of Arid Regions Geographic Studies

Journal of Climate Research

Journal of Geography and Environmental Hazards

Journal of Geography and Regional Development

Journal of the Earth and Space Physics

Journal Water and Soil Resources Conservation

Physical Geography Research Quarterly

Researches in Geographical Sciences

Language

- English (Professional working proficiency)
- **Persian** (Mother tongue)