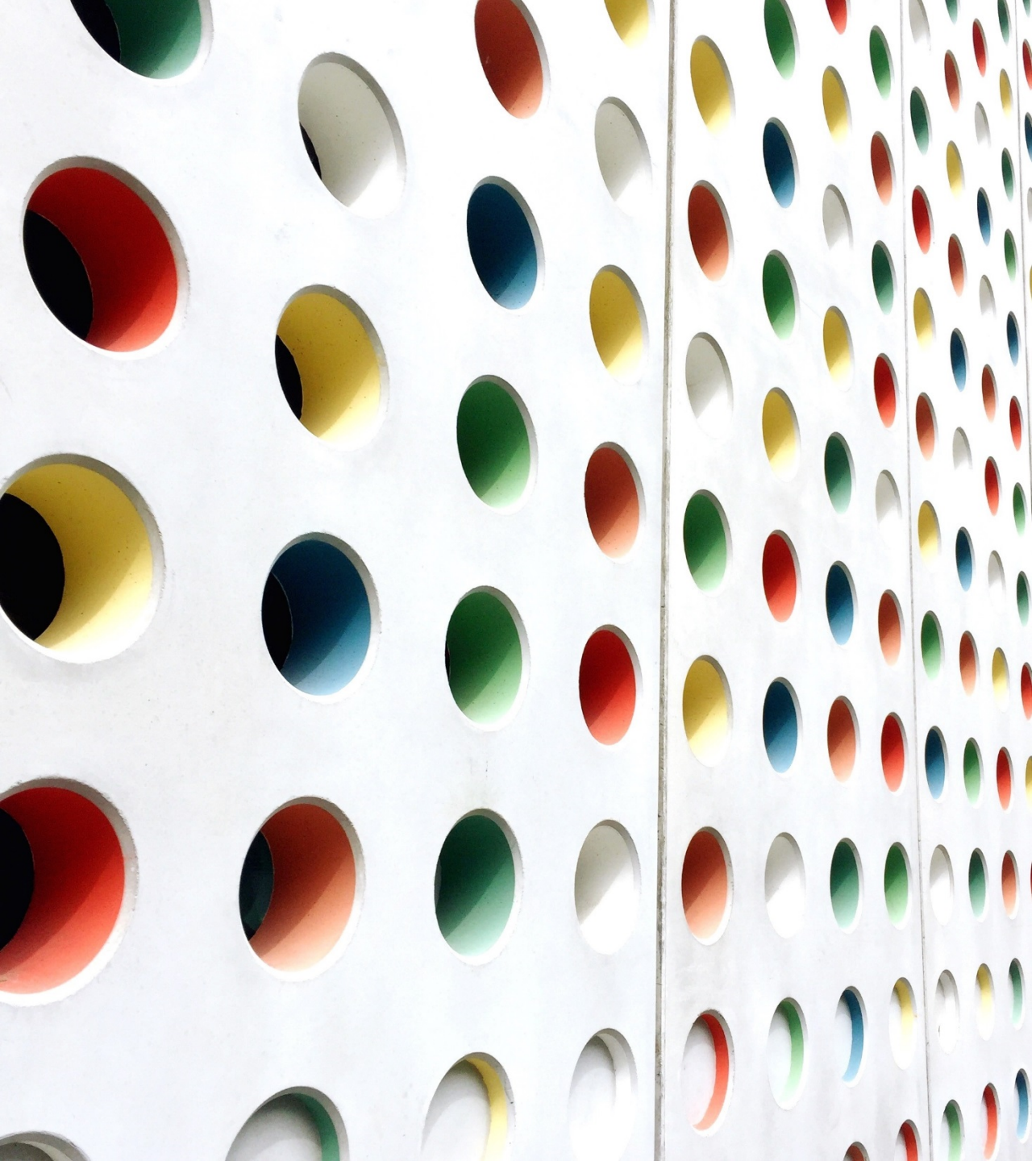


DFG 2020
BECAUSE RESEARCH MATTERS

Amirkabir University of Technology
(Tehran Polytechnic)

AUT - DFG

Joint Matchmaking Webinar

April 2021

Keivan Aghababaei Samani
Mahdi Hajihashemi

Structure and dynamics of complex networks;

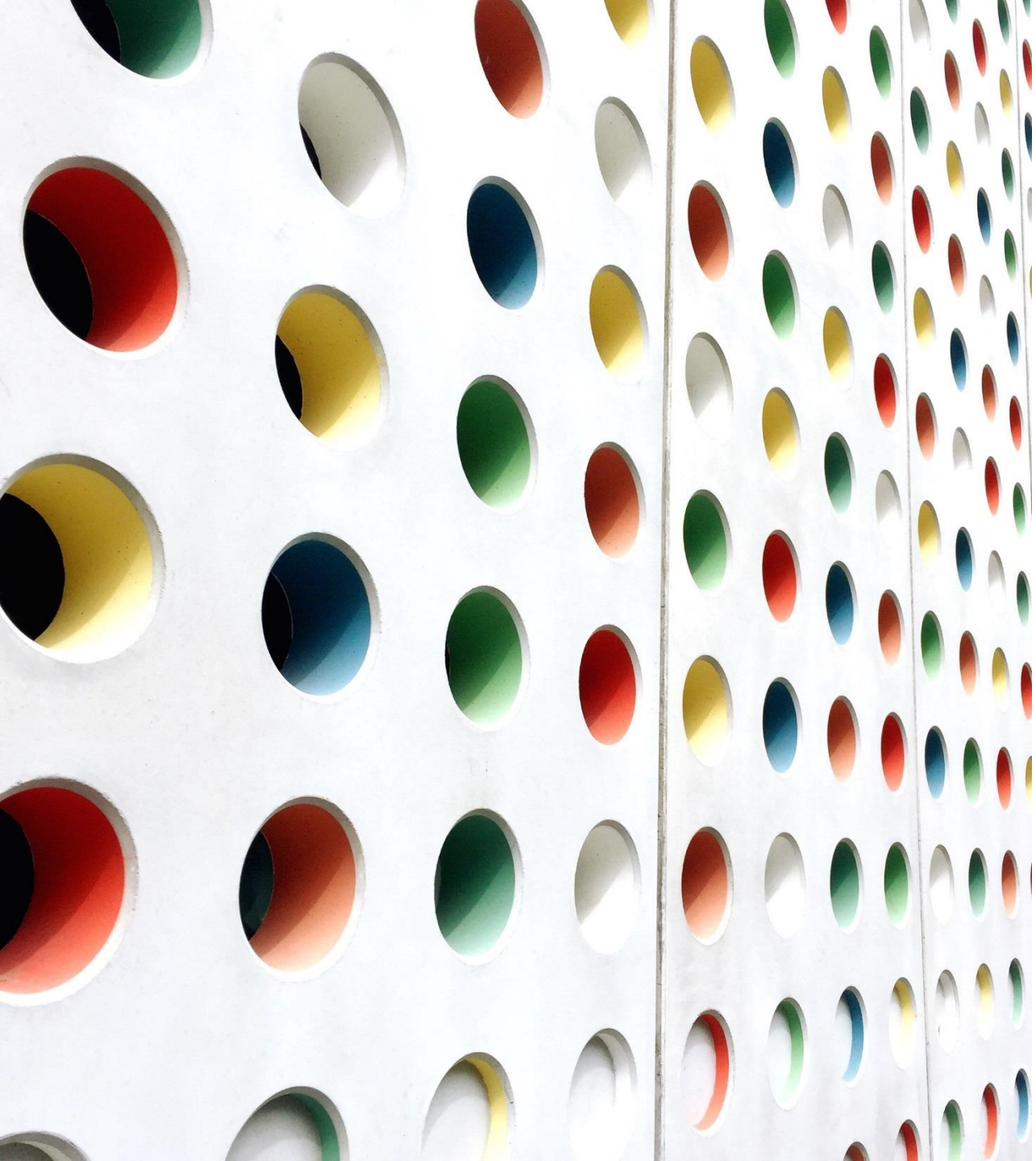
Evolutionary dynamics on complex networks.

Group Research/Industrial Projects

Investigating fixation time and fixation probabilities of the Moran process on complex networks

Group Contact Information

samani@iut.ac.ir



DFG 2020
BECAUSE RESEARCH MATTERS

Amirkabir University of Technology
(Tehran Polytechnic)

AUT - DFG

Joint Matchmaking Webinar

April 2021

Research Group CV

Name:	**Maryam Mostajeran**
Sex:	Female
Nationality:	Iranian
Languages:	Persian (native) & English
Institution and department:	Yazd University, Physics department
Work address:	Yazd University, University Blvd-Safayieh- Yazd
Telephone number:	989131080239
e-mail:	mostajeran@yazd.ac.ir, most.maryam@gmail.com
Website :	https://pws.yazd.ac.ir/mostajeran/

Research Group CV (VISITING SCHOLAR:)

Institute:	National Synchrotron Radiation Center (NSRRC), Taiwan
Period:	23December 2006- 22December 2007
Description:	I attended in RF team, my research was dealing with multipacting phenomenon.
Institute:	ESS Proton linear accelerator, Uppsala, Sweden.
Period:	December 11-17, 2011.
Description:	I invited to visit there (RF team) and participated in the workshop.
Institute:	Rostock University, Germany
Period:	5 September – 5 October 2016, 22 July – 23 August 2017, 23 July-23 August 2018.
Description:	I invited to visit there and I joined with the group of General Electrical Engineering. My research was dealing with multipacting phenomenon

Research Group Interest

- Electromagnetic fields in Accelerator physics
- Multipactor phenomenon
- Uncertainty Quantification for Accelerator devices
- Nonlinear systems

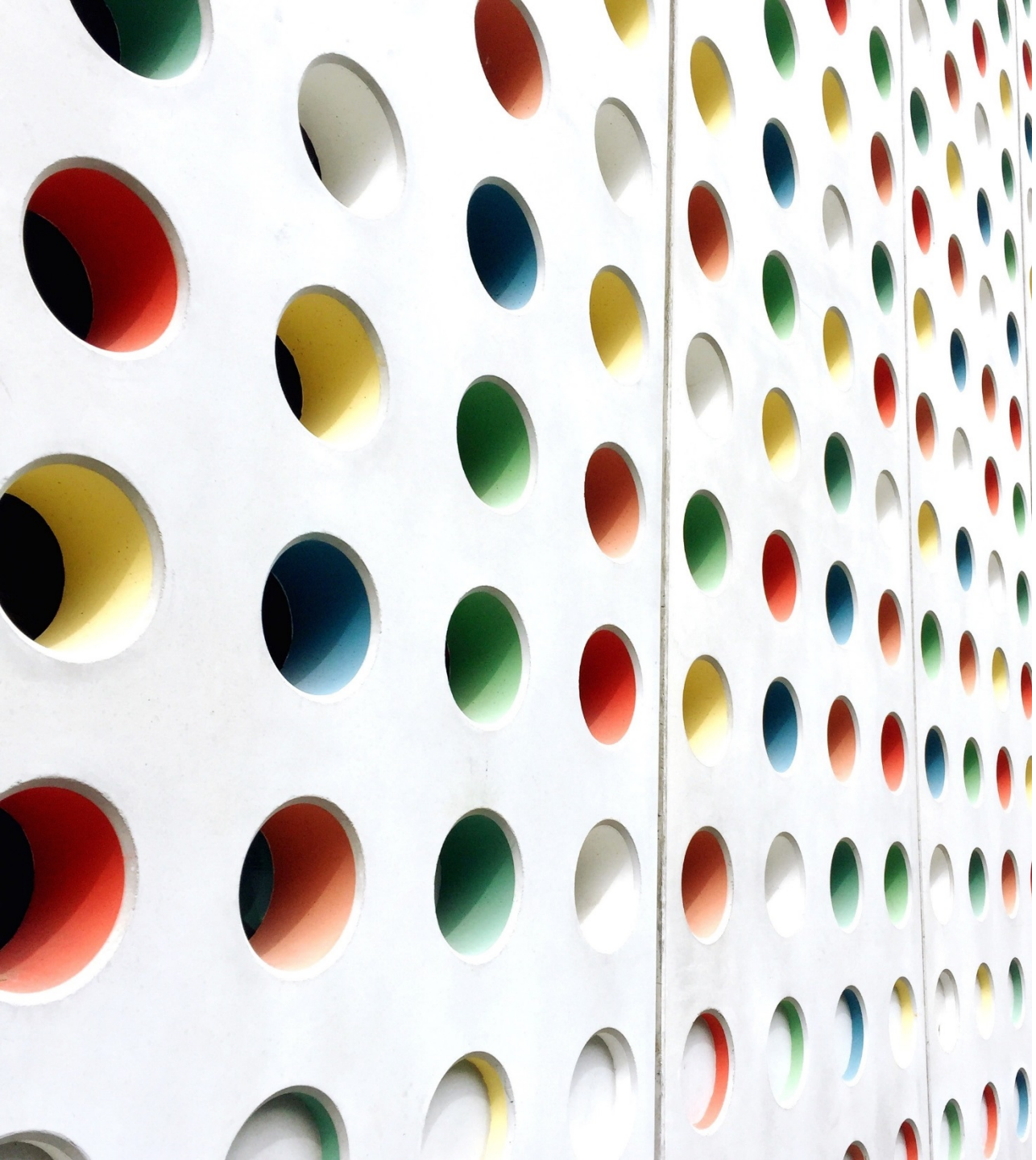
Group Research/Industrial Projects

International Project:

Funding for the Initiation of International Collaboration, supported by DFG, Germany, 2016.

Out Put:

M. Mostajeran, E. T.Tulu. U. Van Rienien, “ Uncertainty in the multipactor threshold of isosceles triangular grooved surfaces based on polynomial chaos”, ” Nuclear Inst. and Methods in Physics Research, A 165001 (2021).



DFG 2020
BECAUSE RESEARCH MATTERS

Amirkabir University of Technology
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AUT - DFG

Joint Matchmaking Webinar

April 2021

Research Group CV

Dr. Michael Fischer

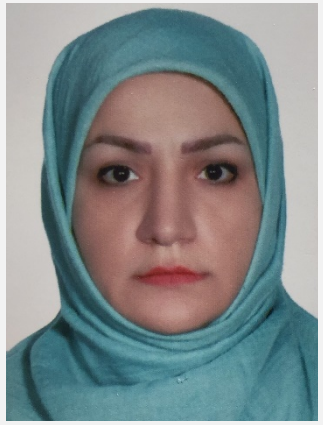
- **10/2002 to 12/2007: University of Hamburg**
  Studies in Mineralogy
  Degree: Dipl.-Min.

- **01/2008 to 12/2011: University of Hamburg**
  PhD studies in Inorganic Chemistry
  Degree: Dr. rer. nat.

- **02/2012 to 01/2014: University College London**
  Department of Chemistry
  Postdoctoral scholar (DFG-funded)

- **Since 02/2014: University of Bremen**
  Faculty of Geosciences
  Independent researcher (third-party funded) within the **Crystallography group**

Dr. Saeedeh Sarabadani Tafreshi



- **1998 to 2002 : Sharif University of Technology,** Tehran, Iran
  Department of Chemistry
  Degree: BSc in Applied Chemistry

- **2002 to 2005: Alzahra University**, Tehran, Iran
  Department of Chemistry
  Degree: MSc in Physical Chemistry

- **2011 to 2015: University College London**,
  Department of Chemistry
  Degree: PhD in Computational Chemistry

- **2017 to 2018 : Sharif University of Technology,** Tehran, Iran
  Department of Physics
  Post-doctoral researcher

- **Since 2018:** Amirkabir University of Technology (Tehran Polytechnic),
  Chemistry Department
  Assistant Professor

Research Group Interest

Dr. Michael Fischer

Computational studies of porous materials

- Force field based simulations
- Density functional theory (DFT) calculations
- DFT-based molecular dynamics

Zeolites

- Host-guest interactions
- Dynamics of framework atoms and extra-framework species
- Gas adsorption and separation
- Adsorption of organic pollutants

Host-guest interactions in metal-organic frameworks

Polymorphism and phase transitions in minerals and inorganic materials

Dr. Saeedeh Sarabadani Tafreshi

Density functional theory (DFT) studies in the fields of:

- Heterogeneous catalysis
- Semiconductor heterogeneous photocatalysis
- Drug delivery
- Solar cell
- Fuel cell
- Lithium-ion batteries
- Hydrogen storage

Group Research/Industrial Projects

Dr. Michael Fischer

Ongoing DFG project: *Beyond tetrahedral coordination in zeolite-type materials – A computational approach*

- Static and dynamic calculations on fluoride-containing all-silica zeolites
- Investigation of water adsorption in aluminophosphates and silicoaluminophosphates

New DFG project (from 10/2021):

- Adsorption of emerging contaminants, especially pharmaceuticals, in zeolites

Various research collaborations

- Department of Chemistry, University of Bremen (D)
- Mineralogical Institute, University of Hamburg (D)
- Max Planck Institute for Coal Research, Mülheim (D)
- Wroclaw University of Science and Technology (Poland)
- CICECO/University of Aveiro (Portugal)

Dr. Saeedeh Sarabadani Tafreshi

Research projects:

- Computational study of CO_2 hydrogenation on the early transition metal carbide surfaces using DFT.
- First-principles study of optic and electronic study of earth alkaline metals doped formamidinium lead iodide perovskite.
- DFT study of phosphorene as a new drug-delivery system to nitrogen mustards chemotherapy drugs.
- Computational design of Trimetallic Borohydrides as new hydrogen storage materials.
- DFT calculations on hydrogenation of CO through Fischer-Tropsch synthesis in the presence of metal catalysts.
- Computational study of CO hydrogenation through Fischer-Tropsch synthesis over graphene oxide based catalysts using DFT.
- DFT study of CO hydrogenation on SiO_2 based catalysts.
- Computational study of CO_2 hydrogenation on two dimensional transition metal nitride surfaces using DFT.

Group Supervised Labs

Dr. Michael Fischer

Computing facilities:

- Access to local and regional (HLRN) high-performance computing facilities

Experimental facilities:

- Within the Crystallography group: X-ray diffraction (powder, single crystal), thermoanalysis, microscopy
- Access to various other facilities within the University of Bremen via MAPEX Center for Materials and Processes

Dr. Saeedeh Sarabadani Tafreshi

Computing facilities for doing DFT calculations:

- A supermicro server at AUT chemistry department
- Access to Parallel processing services center of AUT (HPCRC)
- Access to the Advanced Research Computing at Cardiff (ARCCA)
- Access to the departmental cluster (ib-server) at UCL Chemistry Department

Group Contact Information

Dr. Michael Fischer

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28359 Bremen
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Email: michael.fischer@uni-bremen.de

Dr. Saeedeh Sarabadani Tafreshi

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