

CENTRE DE COMPÉTENCES EN SCIENCE DES DONNÉES



**UNIVERSITÉ
DE GENÈVE**

16 September 2021

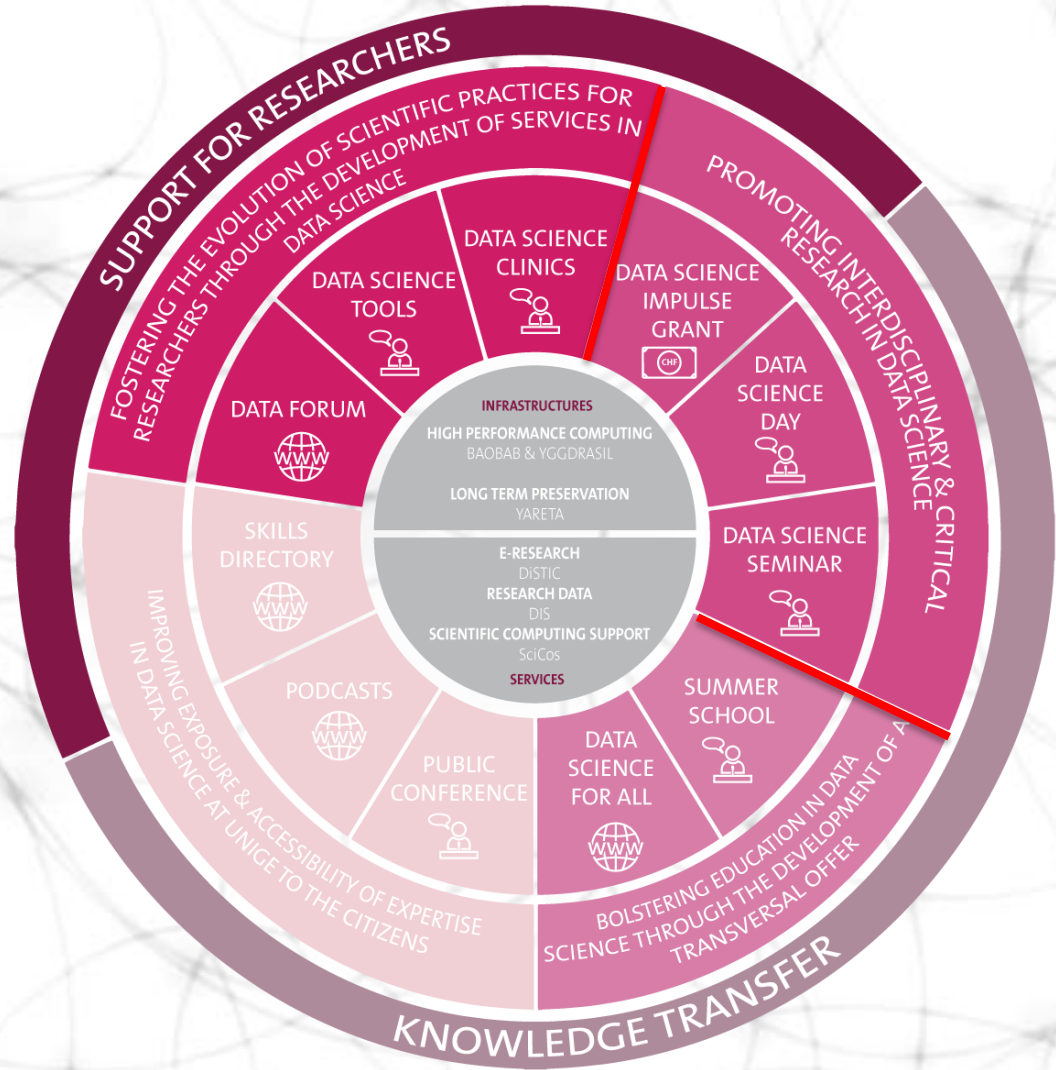
Guive Khan-Mohammad, PhD



CCSD'S Vision and Mission

- By leveraging our strengths of interdisciplinarity and critical transversal approach, **we apply data science to understand complex problems**, contributing to strengthen the status of **scientific excellence** of our university in the era of big data and to develop skills, initiatives and concrete solutions for the **public good**.
- The Data Science Competence Center (CCSD) at the University of Geneva's **mission is to bring together the skills and initiatives of UNIGE in data science**, with the aim, through transversality, of **promoting the emergence of innovative research** and of supporting a critical and informed **transformation of scientific culture** in the era of big data.

CCSD's structure



Promoting interdisciplinary research



Promoting interdisciplinary research



- **2020-21 Theme:**
 - Epidemics and (Big) Data: Contributions and Challenges of Data Science in the Study of Diffusion Phenomena

Promoting interdisciplinary research



- **2020-21 Theme:**
 - Epidemics and (Big) Data: Contributions and Challenges of Data Science in the Study of Diffusion Phenomena
- **2020-2021 Funded Project:**
 - Developing a multinetwork big data approach to the study of global epidemic governance: A pilot study on norm diffusion regarding antimicrobial resistance

Promoting interdisciplinary research



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 - Epidemics and (Big) Data: Contributions and Challenges of Data Science in the Study of Diffusion Phenomena
- **2020-2021 Funded Project:**
 - Developing a multinetwork big data approach to the study of global epidemic governance: A pilot study on norm diffusion regarding antimicrobial resistance
- **2021-2022 Theme:**
 - Shaping a better future with data : Data science for sustainable development goals

Promoting interdisciplinary research



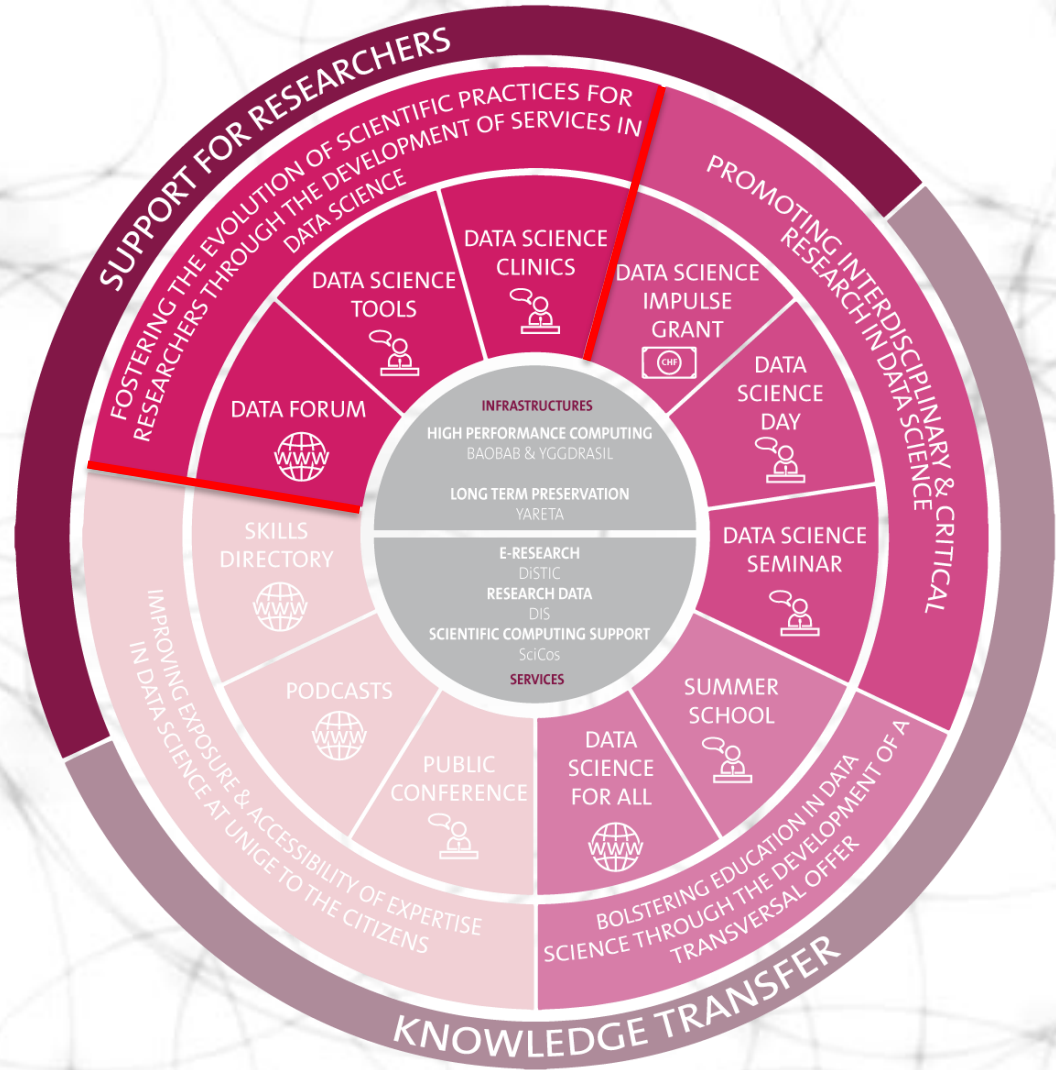
- "Exploring together cutting-edge themes of data science"
- **2020-2021 Program:**
 - 11 Nov. '20: **Exploring Data Quality**
 - 11 Jan. '21: **How data is powering more open and collaborative forms of science**
 - 11 Mar. '21: **When nothing is easy: Dealing with heterogeneous data and interoperability issues**
 - 11 May '21: **Data Protection and Ownership**
- datascience.unige.ch/recherche/data-science-seminars/

Promoting interdisciplinary research



- "Exploring together cutting-edge themes of data science"
- **2021-2022 Program:**
 - 11 Nov. '21: **Natural language processing**
 - 11 Jan. '22: **Social biais in/on data**
 - 11 Mar. '22: **Images processing**
 - 11 May '22: **Machine learning**
- datascience.unige.ch/recherche/data-science-seminars/

CCSD's structure



Transformating scientific practices



Transformating scientific practices



- "Finding solutions to methodological issues through interdisciplinary collaboration"
- **2020-21 Program :**
 - 12 Oct. '20 : Research Center for Statistics (RCS)
 - 11 Dec. '20 : Scientific Computing Support (SciCOS)
 - 11 Feb. '21 : Bioinformatics Support Platform
 - 12 Apr. '21 : Consulting Platform in Applied Mathematics and Statistics (CAMAS)
- datascience.unige.ch/recherche/data-science-clinics/

Transformating scientific practices



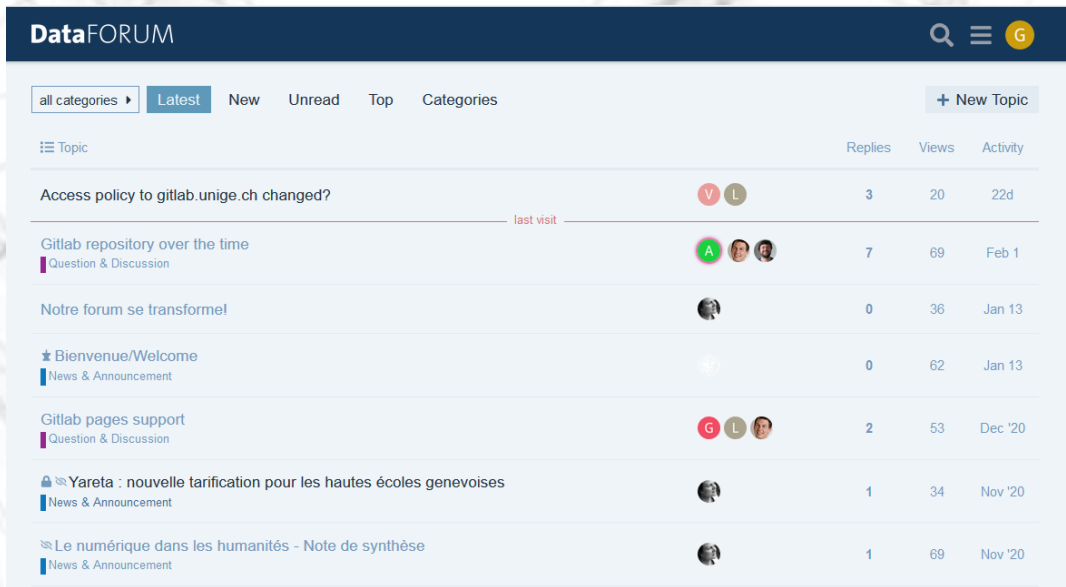
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Transformating scientific practices



- “Sharing expertise on existent tools and methods in Data Science”
- **2020-21 Program :**
 - 1 Oct. '21 : Jupiter Notebook – Lorenzo Perrozi
 - 1 Nov. '21 : Jupiter Hub – Jonathan Chambers
 - 1 Dec. '21 : Regression methods – Marta Pittavino
 - 1 Feb. '22: Explore – Béatrice Joyeux-Prunel
 - 1 Mar. '22: GEPHI.org – Tommaso Venturini
 - ...

Transformating scientific practices

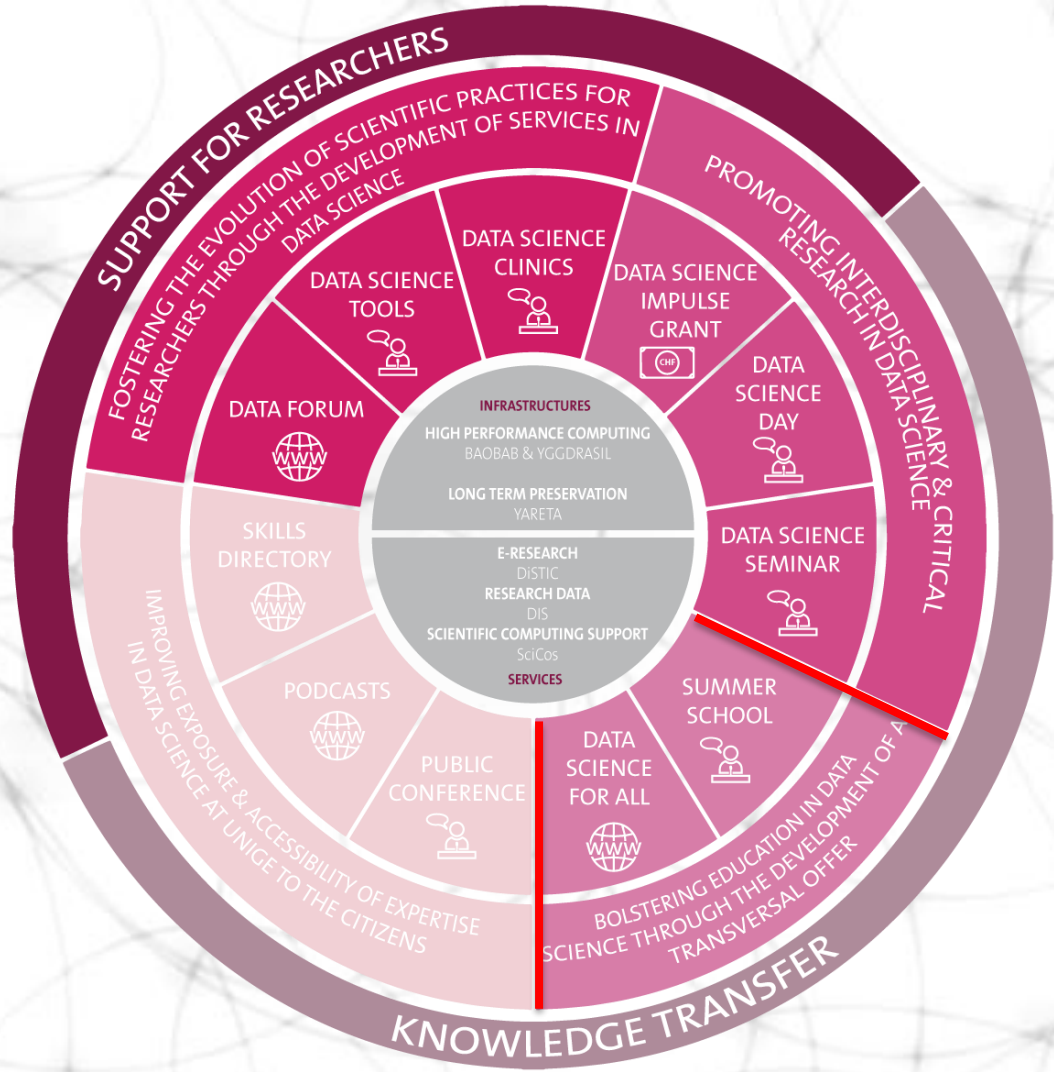


The screenshot shows the DataFORUM forum interface. At the top, there's a navigation bar with 'DataFORUM' and search, menu, and user icons. Below it, a filter bar shows 'all categories' and 'Latest' (selected), along with 'New', 'Unread', 'Top', and 'Categories' tabs. A '+ New Topic' button is on the right. The main content area lists forum topics with columns for 'Topic', 'Replies', 'Views', and 'Activity'. The topics listed are: 'Access policy to gitlab.unige.ch changed?' (3 replies, 20 views, 22d), 'Gitlab repository over the time' (7 replies, 69 views, Feb 1), 'Notre forum se transforme!' (0 replies, 36 views, Jan 13), '★ Bienvenue/Welcome' (0 replies, 62 views, Jan 13), 'Gitlab pages support' (2 replies, 53 views, Dec '20), 'Yareta : nouvelle tarification pour les hautes écoles genevoises' (1 reply, 34 views, Nov '20), and 'Le numérique dans les humanités - Note de synthèse' (1 reply, 69 views, Nov '20). Each topic entry includes a category icon (e.g., 'Question & Discussion' or 'News & Announcement') and user avatars.

Topic	Replies	Views	Activity
Access policy to gitlab.unige.ch changed?	3	20	22d
Gitlab repository over the time Question & Discussion	7	69	Feb 1
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dataforum.unige.ch

CCSD's structure



Bolstering education in data science



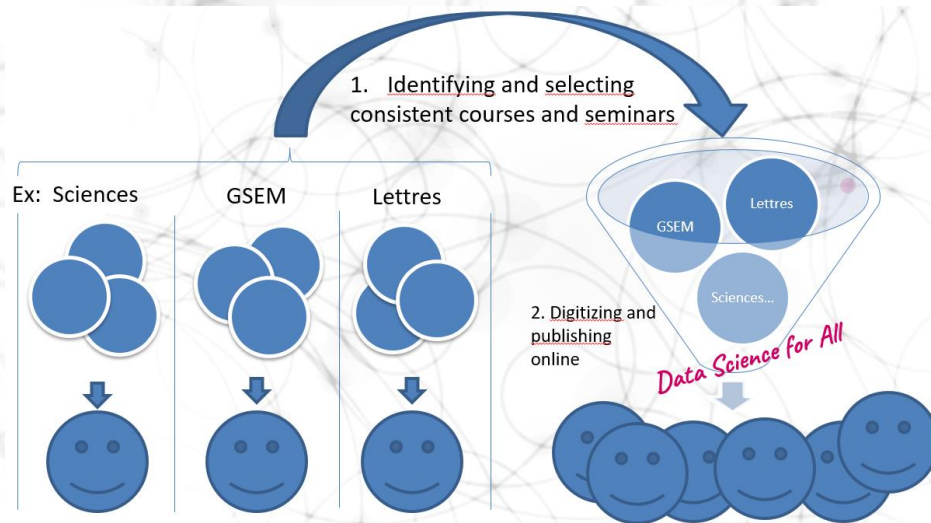
DS Summer
School

Bolstering education in data science



DS Summer
School

- “Making available an interdisciplinary and original learning offer in data science to the entire UNIGE student community, by digitizing courses and seminars in the form of pedagogical video capsules, and publishing them on a dedicated platform”



Bolstering education in data science

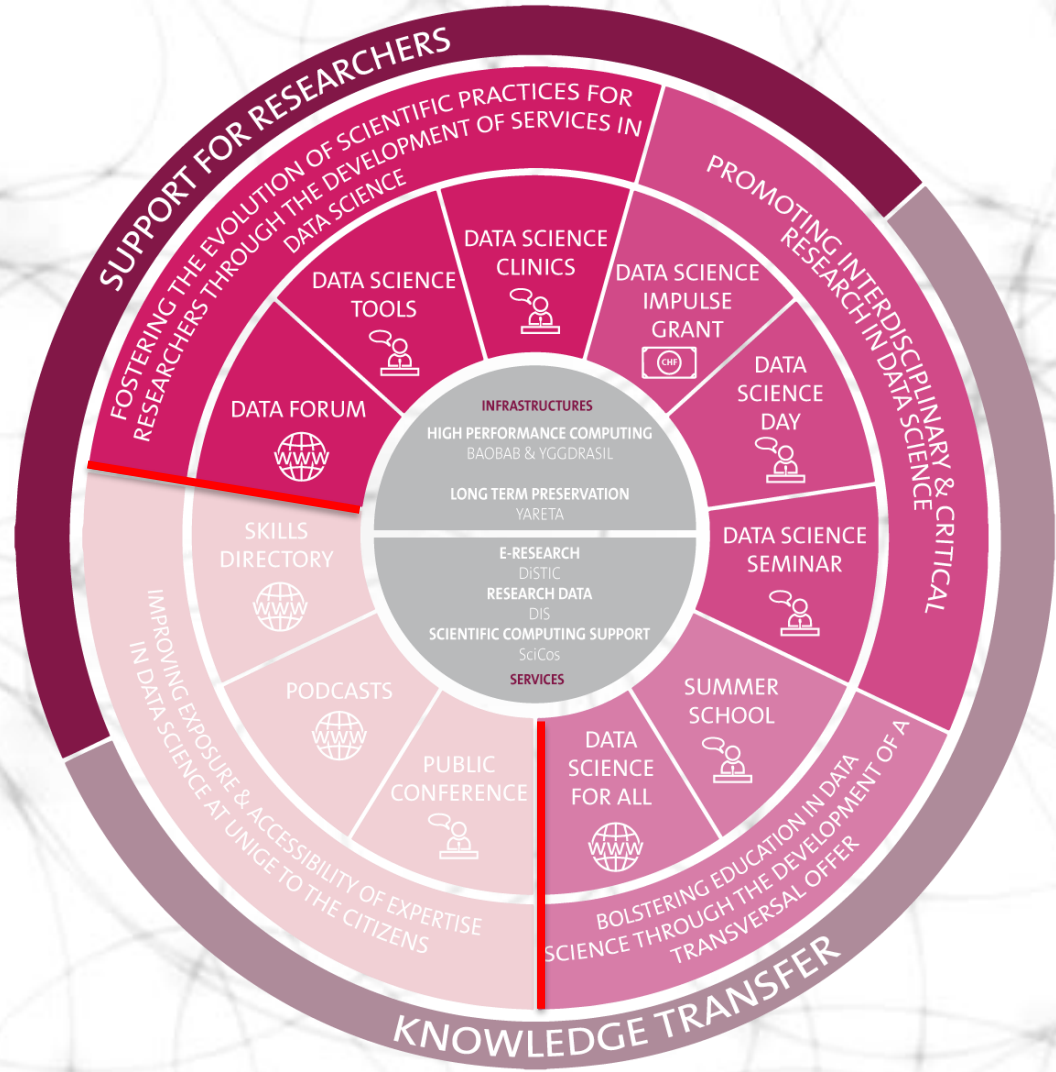


DS Summer
School

- “Deepening and applying the learning content of Data Science for All”



CCSD's structure



Improving exposure and accessibility



DS Skills
Repository

Improving exposure and accessibility



Discover "**Learning from Data**", the podcast that delves into the research of the University of Geneva and, above all, into their data, in the company of those who explore them.

On the program: artificial intelligence, digital law, digital humanities... **A fascinating and interdisciplinary journey to the heart of the data science expertise of the UNIGE community.**

A new episode every month!

DS Skills
Repository



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Apple Podcasts



Listen on
Spotify Podcasts

Improving exposure and accessibility



DS Skills
Repository



Réseau d'expert-es

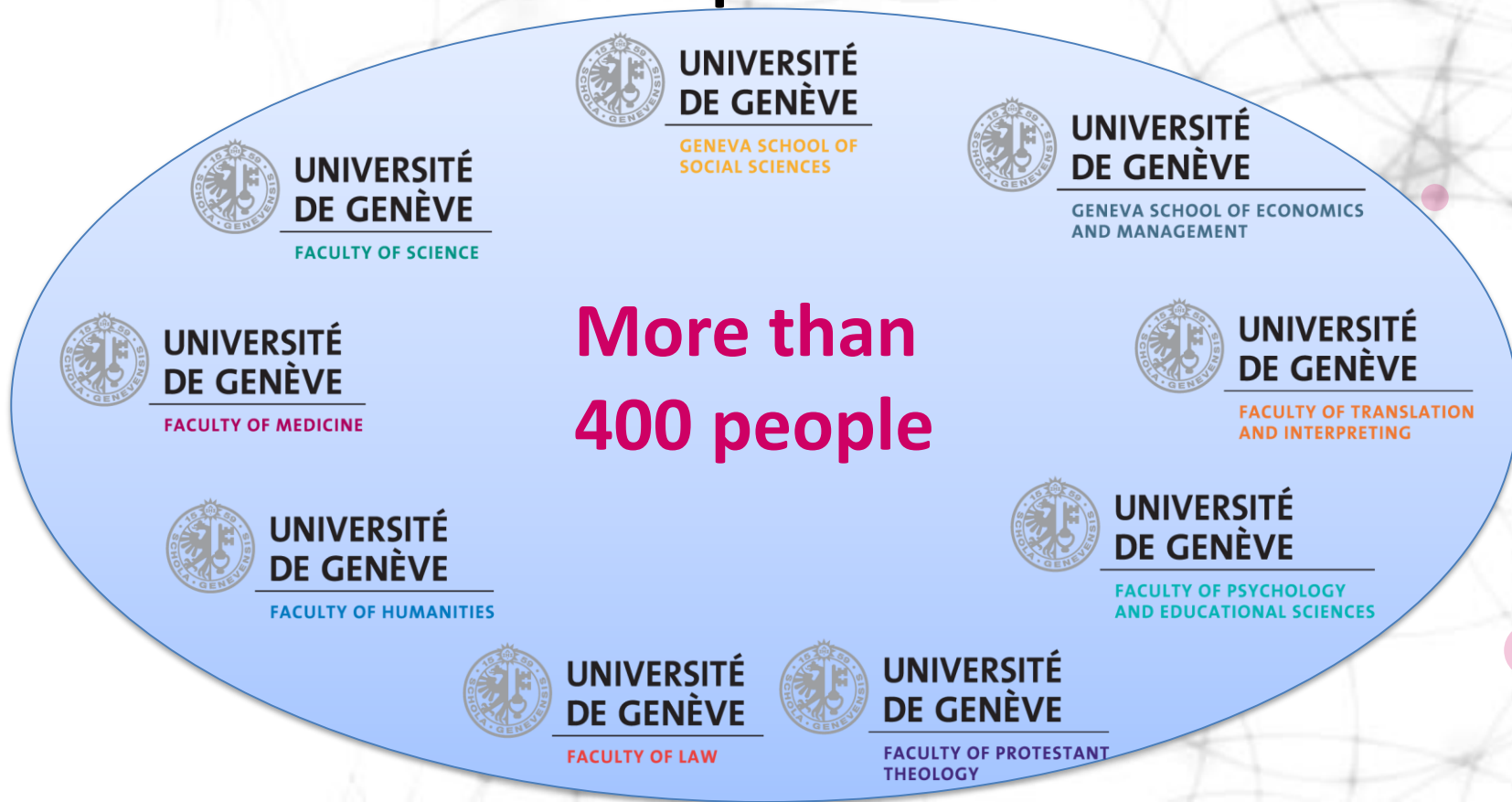
Pour rejoindre le réseau du CCSD, suivez [ce lien](#).

Search:

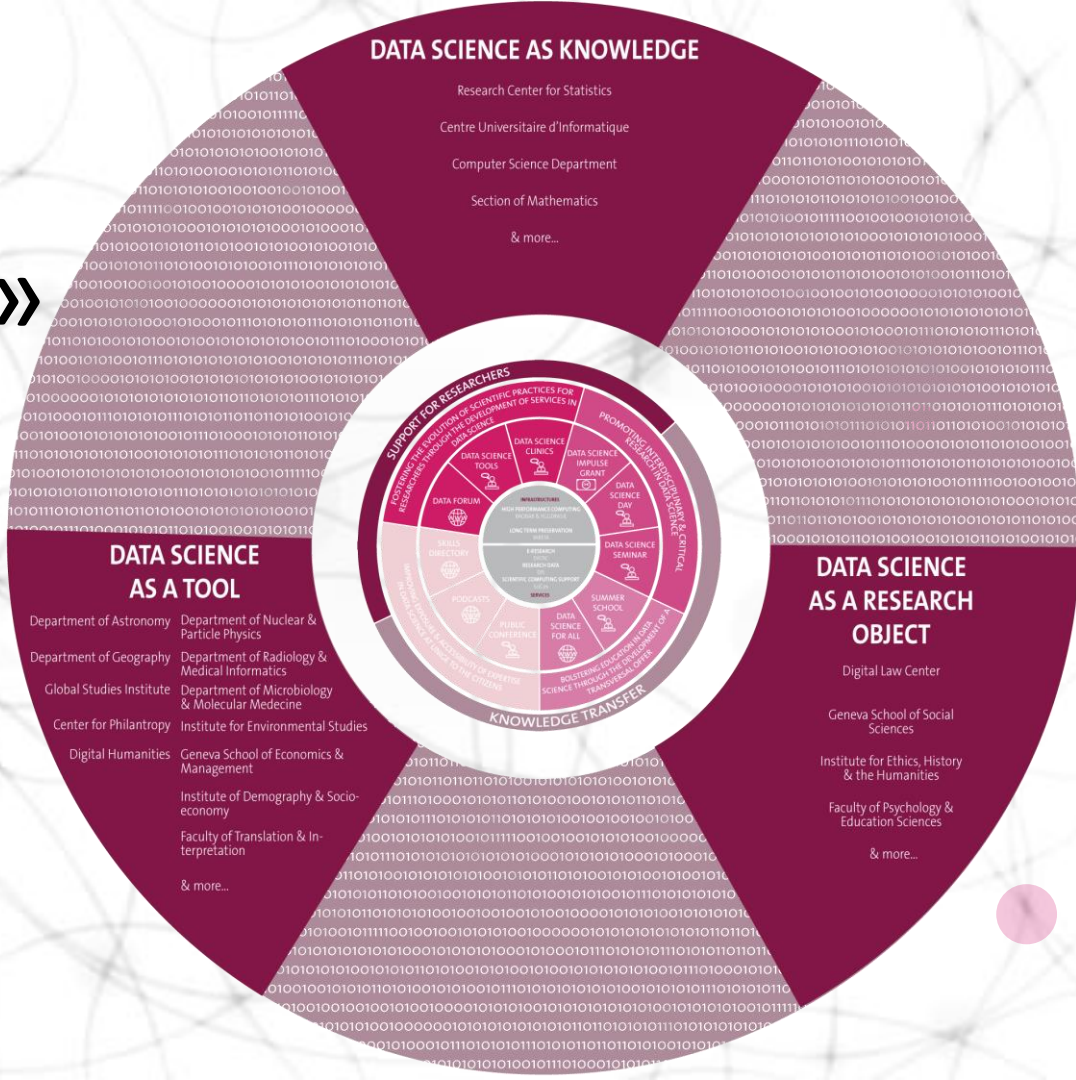
Nom	Prénom	Fonction	Faculté / Centre	Département / Section	Compétence clé
Benhamou	Yaniv	Senior Lecturer	Faculty of Law		Droit des données
Bologna	Guido	Chargé de cours	Faculté des sciences	Département d'Informatique	Apprentissage-machine
Caricchi	Luca	Professeur associé	Faculté des sciences	Sciences de la terre	Apprentissage-machine

<https://datascience.unige.ch/en/experts-network>

Data Science Experts Network



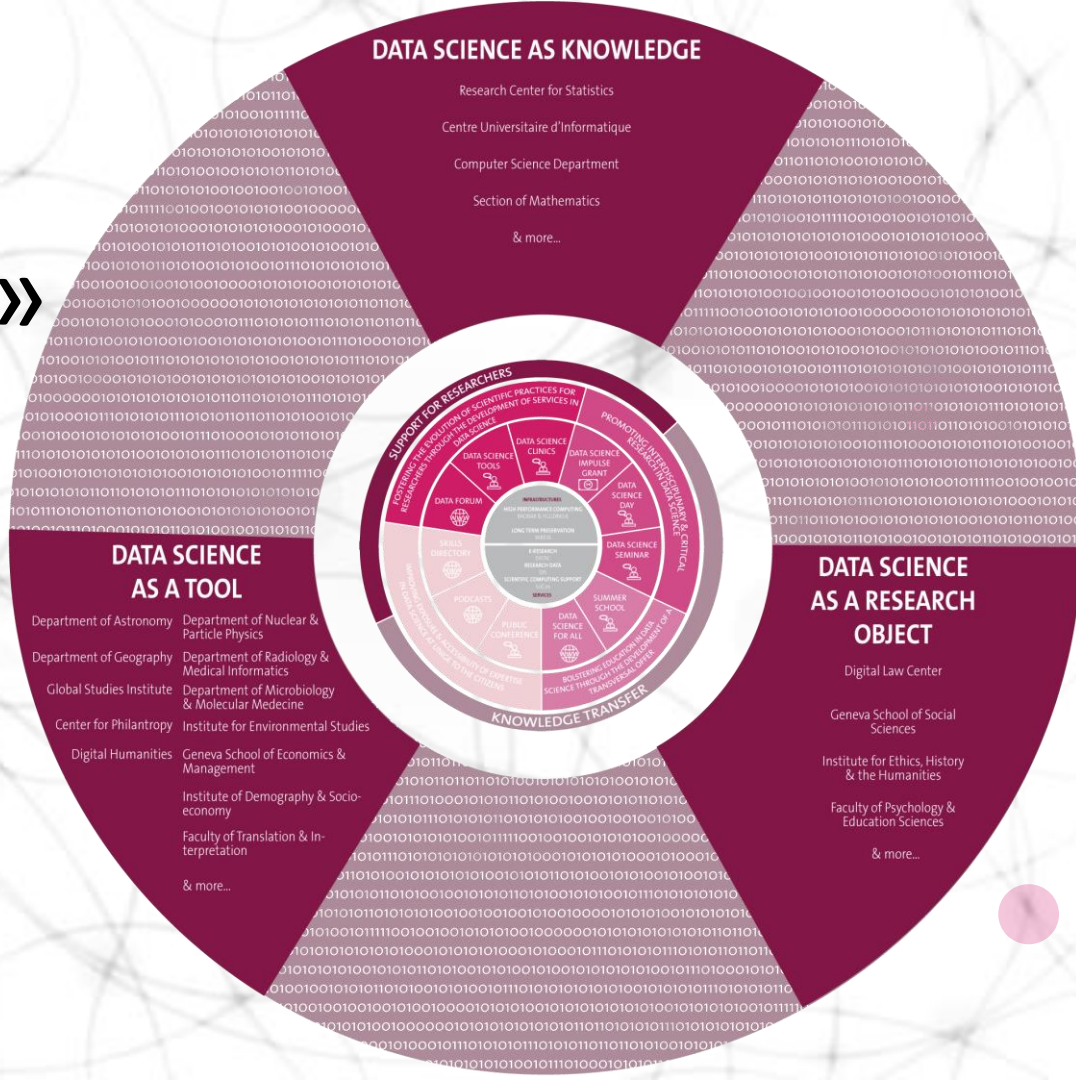
Three «communities»



Three «communities»

Data Science as a Knowledge:

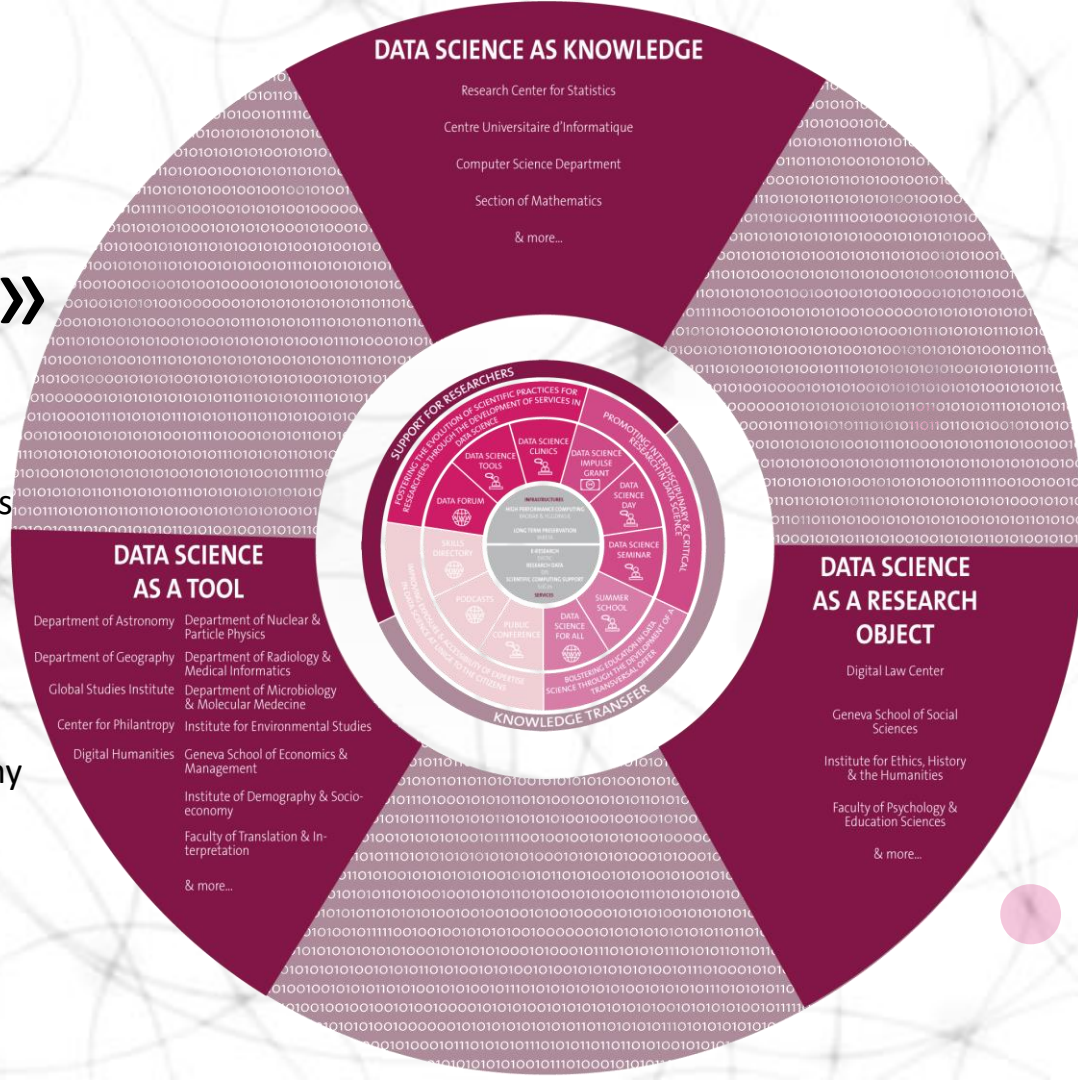
- Research Center for Statistics
- Centre Universitaire d'Informatique
- Computer Science Department
- Section of Mathematics
- & more...



Three «communities»

Data Science as a Tool :

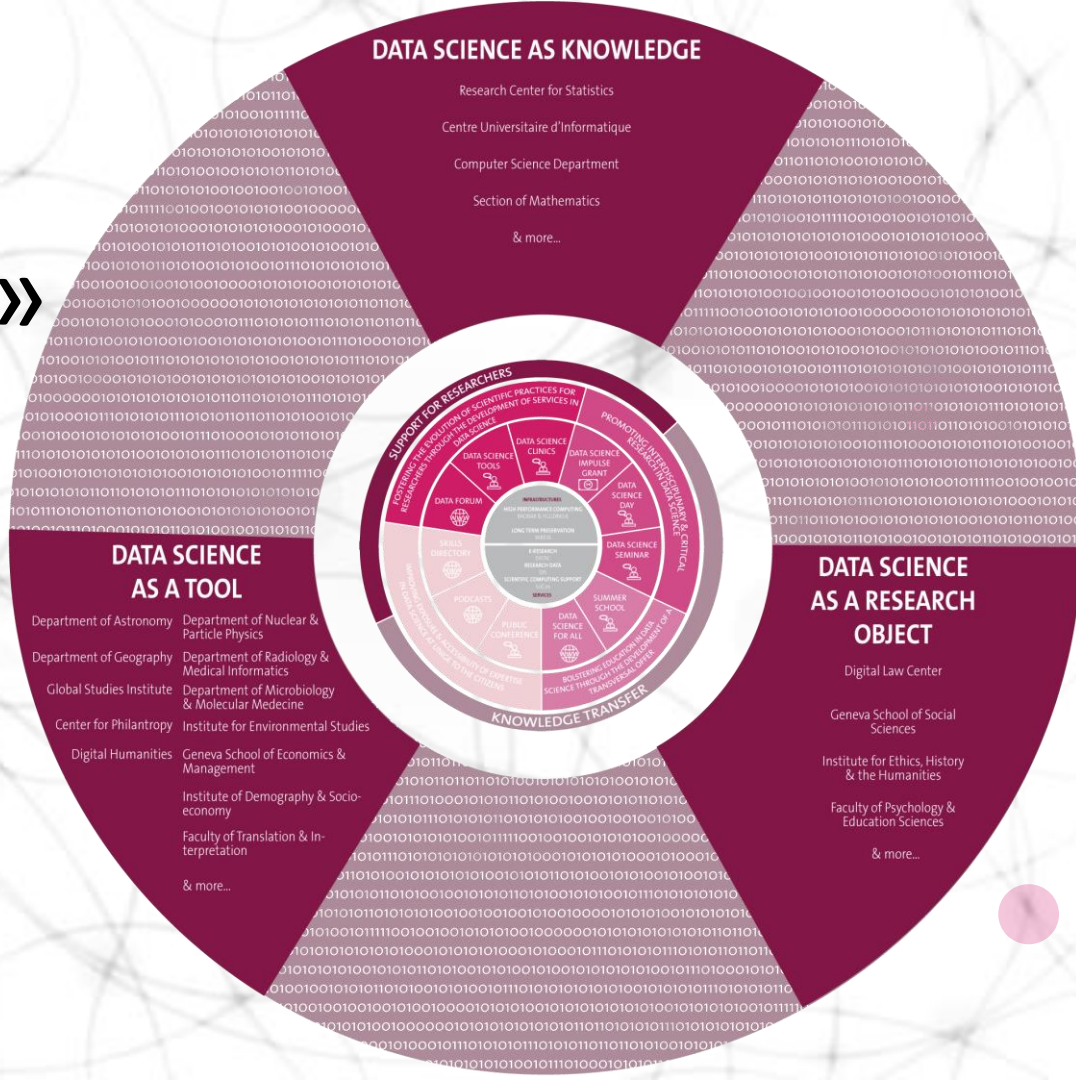
- Department of Astronomy
- Department of Nuclear and Particle Physics
- Department of Radiology and Medical Informatics
- Institute for Environmental Studies
- Geneva School of Economics and Management
- Institute of Demography and Socioeconomy
- Department of Geography
- Global Studies Institute
- Center for Philanthropy
- Digital Humanities
- Faculty of Translation and Interpreting
- & more...



Three «communities»

Data Science as a Research Object :

- Digital Law Center
- Geneva School of Social Sciences
- Institute for Ethics, History and the Humanities
- Faculty of Psychology and Educational Sciences
- & more...



All skills for all needs

- Data collection,
- Data management and engineering,
- Statistics,
- Algorithms,
- Machine learning,
- Semantics,
- Coding,
- Optimization,
- Visualization,
- Law
- ...

- **A strong community able to tackle the most ambitious and cutting-edge challenges**

Welcome to UNIGE's Data Science Day 2021



Data Science Day 2021



8h30-8h45: **Welcome and introduction** – Uni Mail, MR290

8h45-10h00: **Data Science and SDGs: Data-driven policy for public good** – Uni Mail, MR290

10h00-10h30 : **Coffee break** – Uni Mail, Cafeteria Marx

Stands – Uni Mail – Hall (Surface 1)

10h30-12h30 : **Data Science and SDGs : an overview of UNIGE's researchers contributions** – Uni Mail, MR290

12h30-14h00 : **Lunch break** – Uni Mail, Cafeteria Marx

Stands – Uni Mail – Hall (Surface 1)

14h00-15h30 : **The CCSD in 2020-21 : a hub for thriving interdisciplinary collaborations** – Uni Mail, MR290

15h30-16h00 : **Coffee break** – Uni Mail, Cafeteria Marx

Stands – Uni Mail – Hall (Surface 1)

16h00-17h30 : **Round tables**

Thank you

- More information on datascience.unige.ch
- For any questions, commentaries and contributions, do not hesitate to contact Guive.Khan@unige.ch or ccsd@unige.ch