

Réalisé par Atir Youssef (N°62)

1. Communauté des auteurs et de leurs institutions

a. Nettoyage des données

Le nettoyage des données effectué est le même déjà effectué dans le cadre des exercices précédents dans le même élément de module, Le guide de nettoyage déjà élaboré dans ce cadre est en annexe à ce rendu.

Un échantillon des données est le suivant :

Row number	Id	Auteur	Institution
1	0.0	El-Ghazel Soufian	Ibn Tofail Univ
2	0.0	Zeggar Hajar	Ibn Tofail Univ
3	0.0	Tahakt Mustapha	Ibn Tofail Univ
4	0.0	Tiyal Fathallah	Ibn Tofail Univ
5	0.0	Elmidaoui Azzedine	Ibn Tofail Univ
6	0.0	Taky Mohamed	Ibn Tofail Univ
7	1.0	Kouzbou Sanaa	Hassan II Univ Casablanca

b. Génération du graphe dans Table 2 Net

Type du graphe

Bipartite (two types of nodes) ▼



You will have to choose:

- Which column **X** will define the first type of nodes
- Which column **Y** will define the second type of nodes

## Nœuds du graphe : 1<sup>er</sup> et 2<sup>ème</sup> Type de Nœuds

ⓧ Which column defines the *first* type of nodes?

Institution

One expression per cell

Sample of nodes extracted with these settings: (🔄 sample)

univ castilla la mancha univ hassan 1 univ cadi ayyad univ carthage univ mohamed v agdal

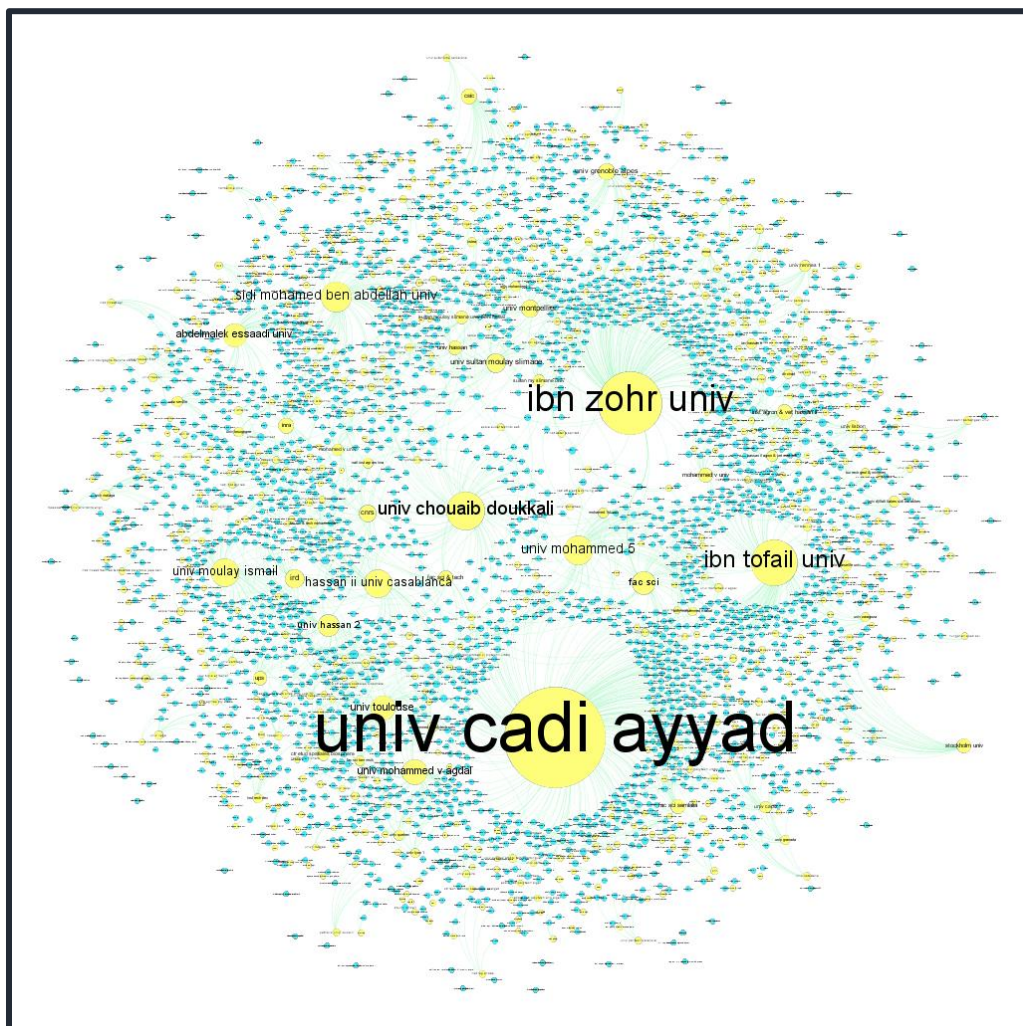
Auteur

One expression per cell

Sample of nodes extracted with these settings: (🔄 sample)

el hajjaji samir candela lucila paredes paula zazou hicham mahe gil

## Carte Résultante



## 2. Évolution de la production scientifique dans le domaine de l'eau par année

### a. Données

**OpenRefine** WOS Water MA Total.xls [Permalink](#) Open... Export Help

Facet / Filter Undo / Redo 6 / 6 757 rows Extensions: Wikidata

Show as: rows records Show: 5 10 25 50 rows « first < previous 1 - 50 next > last »

Article Title	Source Title	Publication Year
NANOFILTRATION PROCESS COMBINED WITH ELECTROCHEMICAL DISINFECTION FOR DRINKING WATER PRODUCTION: FEASIBILITY STUDY AND OPTIMIZATION	JOURNAL OF WATER PROCESS ENGINEERING	2020
CFD SIMULATION AND ANALYSIS OF REACTIVE FLOW FOR DISSOLVED MANGANESE REMOVAL FROM DRINKING WATER BY AERATION PROCESS USING AN AIRLIFT REACTOR	JOURNAL OF WATER PROCESS ENGINEERING	2020
USE OF BATHYMETRY AND CLAY MINERALOGY OF RESERVOIR SEDIMENT TO RECONSTRUCT THE RECENT CHANGES IN SEDIMENT YIELDS FROM A MOUNTAIN CATCHMENT IN THE WESTERN HIGH ATLAS REGION, MOROCCO	CATENA	2020
FACTORIAL DESIGN FOR OPTIMIZING AND MODELING THE REMOVAL OF ORGANIC POLLUTANTS FROM OLIVE MILL WASTEWATER USING A NOVEL LOW-COST BIOADSORBENT	WATER AIR AND SOIL POLLUTION	2020
RELATIONSHIP BETWEEN LANDSLIDE AND MORPHO-STRUCTURAL ANALYSIS: A CASE STUDY IN NORTHEAST OF MOROCCO	APPLIED WATER SCIENCE	2020
SPATIAL AND STATISTICAL ASSESSMENT OF NITRATE CONTAMINATION IN GROUNDWATER: CASE OF SAIS BASIN, MOROCCO	JOURNAL OF GROUNDWATER SCIENCE AND ENGINEERING	2020
RECOGNITION OF THE HYDROGEOLOGICAL POTENTIAL USING ELECTRICAL SOUNDING IN THE KHEMISSET-TIFLET REGION, MOROCCO	JOURNAL OF GROUNDWATER SCIENCE AND ENGINEERING	2020
ASSESSMENT OF GROUNDWATER VULNERABILITY TO POLLUTION AS PART OF INTEGRATED MANAGEMENT IN COASTAL AREAS: CASE OF GHISS-NEKKOUR BASIN (NORTH EAST OF MOROCCO)	HOUILLE BLANCHE-REVUE INTERNATIONALE DE L'EAU	2020
THEORETICAL AND EXPERIMENTAL STUDY OF THE ADSORPTION CHARACTERISTICS OF METHYLENE BLUE ON TITANIUM DIOXIDE SURFACE USING DFT AND MONTE CARLO DYNAMIC SIMULATION	DESALINATION AND WATER TREATMENT	2020
DISTINCT AND COMBINED IMPACTS OF CLIMATE AND LAND USE SCENARIOS ON WATER AVAILABILITY AND SEDIMENT LOADS FOR A WATER SUPPLY RESERVOIR IN NORTHERN MOROCCO	INTERNATIONAL SOIL AND WATER CONSERVATION RESEARCH	2020
THE APPLICATION OF PROXIMAL VISIBLE AND NEAR-INFRARED SPECTROSCOPY TO ESTIMATE SOIL ORGANIC MATTER ON THE TRIFFA PLAIN OF MOROCCO	INTERNATIONAL SOIL AND WATER CONSERVATION RESEARCH	2020
ON SOLVING GROUNDWATER FLOW AND TRANSPORT MODELS WITH ALGEBRAIC MULTIGRID PRECONDITIONING	GROUND WATER	2020
SEDIMENT MOBILIZATION STUDY ON CRETACEOUS, TERTIARY AND QUATERNARY LITHOLOGICAL FORMATIONS OF AN EXTERNAL RIF CATCHMENT, MOROCCO	HYDROLOGICAL SCIENCES JOURNAL- JOURNAL DES SCIENCES HYDROLOGIQUES	2020
SPATIAL ASSESSMENT OF SOIL EROSION RISK BY INTEGRATING REMOTE SENSING AND GIS TECHNIQUES: A CASE OF TENSIFT WATERSHED IN MOROCCO	ENVIRONMENTAL EARTH SCIENCES	2020

### b. Carte

On présente dans les images suivantes l'évolution par ordre chronologique de la production scientifique dans le domaine de l'eau par année :



### 3. Thématiques de recherche

#### a. Nettoyage des données

On sélectionne d'abord les colonnes concernées par les thématiques de recherche, principalement la colonne « Keyword Plus » :

The screenshot shows the OpenRefine interface with a dataset named 'WOS Water MA Total.xls'. The 'Keywords Plus' column is selected, displaying 21 rows of data. The first few rows are:

1. FREE CHLORINE; PERFORMANCE; DEMINERALIZATION; INACTIVATION; ELECTRODES; MEMBRANE; ANODE
2. LIQUID MASS-TRANSFER; GAS; HYDRODYNAMICS; OXIDATION; DYNAMICS
3. CHECK-DAM SEDIMENTATION; PREDICTING SOIL-EROSION; LAND-USE CHANGE; RIVER SEDIMENTS; LOESS PLATEAU; SURFACE SEDIMENTS; CLIMATE-CHANGE; BASIN; WATER; DELIVERY
4. ACTIVATED CARBON; ANAEROBIC-DIGESTION; PHENOLIC-COMPOUNDS; AQUEOUS-SOLUTIONS; ADSORPTION; OPTIMIZATION; VALORISATION; PARAMETERS; EFFLUENTS; CHITOSAN
5. SLOPES
6. TEMPORAL VARIABILITY; AQUIFER; POLLUTION; WATERS
7. HYDROGEOPHYSICS
8. NONPOINT-SOURCE POLLUTION; INTRINSIC VULNERABILITY; AQUIFER; GIS; CONTAMINATION; REGION; INDEX
9. MILD-STEEL CORROSION; TEXTILE DYES; FT-IR; REMOVAL; TiO2; DERIVATIVES; KINETICS; INHIBITORS; MODEL; NANOPARTICLES
10. SOIL-EROSION; RIVER-BASIN; SWAT MODEL; RUNOFF; YIELD; VARIABILITY; MANAGEMENT; SERVICES
11. REFLECTANCE SPECTROSCOPY; NIR SPECTROSCOPY; TOTAL NITROGEN; LEAST-SQUARES; PREDICTION; CARBON; CLAY; SPECTRA; QUALITY; FIELD
12. ALGORITHM; SIMULATION
13. EROSION POTENTIAL METHOD; SOIL LOSS EQUATION; LAND-USE CHANGES; WATER EROSION; RIVER-BASIN; TRANSPORT CAPACITY; VEGETATION COVER; YIELD; MODEL; RATE
14. LOSS EQUATION RUSLE; INFORMATION-SYSTEM; AREA; CATCHMENT; COVER; BASIN; RATES; USLE
15. PERFORMANCE ENHANCEMENT; LUMINESCENCE PROPERTIES; HYDROTHERMAL SYNTHESIS; METHYLENE-BLUE; RHODAMINE-B; NANOPARTICLES; PHOTODEGRADATION; DEGRADATION; EXCITATION; ENERGY
16. WASTE-WATER; FLUORIDE; REMOVAL
17. ANTIOXIDANT ENZYME-ACTIVITIES; ARBUSCULAR MYCORRHIZAL FUNGI; OXIDATIVE STRESS; SOIL PROPERTIES; LIPID-PEROXIDATION; PHENOLIC-COMPOUNDS; DROUGHT TOLERANCE; ORGANIC-MATTER; LEAVES; CROPS
18. HIGH ATLAS MOUNTAINS; HYDROLOGICAL MODELS; DRIP IRRIGATION; SATELLITE; CALIBRATION; SIMULATION; PRODUCTS; SNOWMELT; IMPACTS; EVENTS
19. CLAY-MINERALS; HEAVY-METALS; MERSIN AREA; HIGH-PLAINS; GENESIS; ATLAS; PLYGORSKITE; PLEISTOCENE; CARBONATES; CALICHE
20. AQUEOUS-SOLUTIONS; WATER; REMOVAL; EQUILIBRIUM; DYE-TESTS; ADSORBENT; KINETICS; EFFLUENT; BIOCHAR; COTTON
21. HIGH SPATIOTEMPORAL RESOLUTION; ENERGY FLUXES; WATER-STRESS; WHEAT CROP; EVAPORATIVE FRACTION; DIURNAL BEHAVIOR; SENSING DATA; HEAT-FLUX; MICROWAVE; RETRIEVAL

On enregistre le fichier en format csv et on le charge dans Table2net.

#### b. Génération du graphe dans Table 2 Net

Type de Graphe

Normal (one type of node) ▼



You will have to choose:

- Which column **X** will define the nodes
- Which column **Y** will define the links

Nœuds avec le séparateur convenable ( « ; » )

Keywords Plus ▼

Semicolon-separated ";" ▼

Sample of nodes extracted with these settings: [↻ sample](#)

sediment yield field assessment next-generation water storage surface

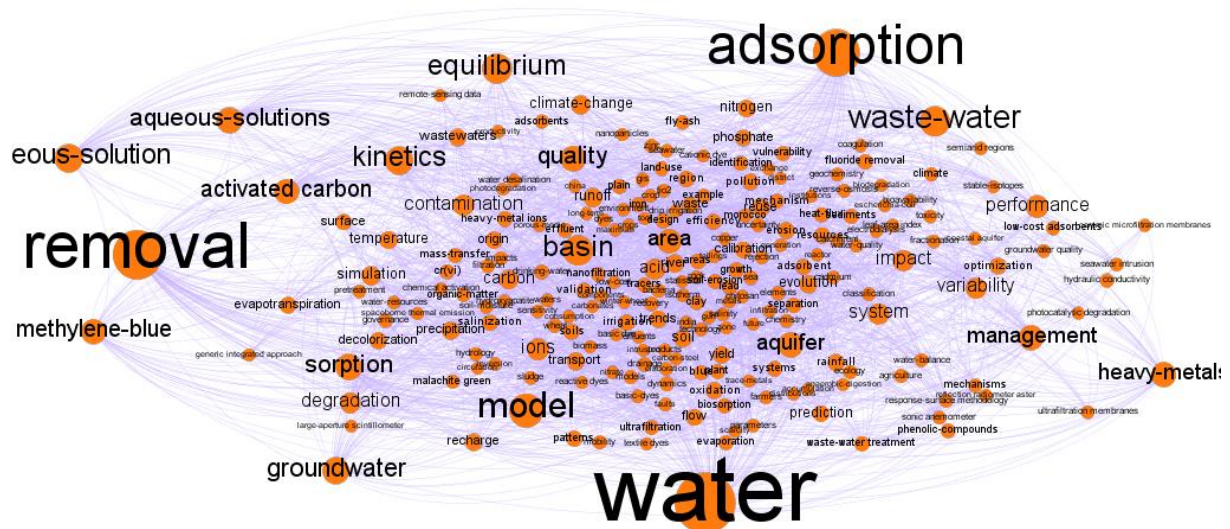


Liens Entre les nœuds c'est ce qui montre la notion de co-occurrence

Row number

One expression per cell

## Carte Résultante



Il est clair que les mots-clés Water, Removal, Absorption, Waste-Water sont les plus présents dans les articles de notre corpus.

#### 4. Revues de publication et leur facteur d'impact

