# CURRICULUM VITAE FOR TENDERING

**TYPE OF EXPERTISE:**

**CATEGORY:**

1. **Family name:**   **TRIBOUILLARD**

2. **First names:**   **Nicolas**

3. **Date of birth:**   **1965**

4. **Nationality:**   **French**

5. **Education:**

| Institution<br>[ Date from - Date to] | Degree(s) or Diploma(s) obtained: |
|---|---|
| **INSA School of Lyon France**<br>(1993-1994) | Computing Master |
| **University of Dijon, France**<br>(1987 -1988) | Post-graduate Degree in Company Administration |
| **University of Dijon, France**<br>(1982 -1987) | Post-graduate Degree in Geology |

6. **Language skills:**  Indicate competence on a scale of 1 to 5 (1 - excellent; 5 - basic)

| Language | Reading | Speaking | Writing |
|---|---|---|---|
| French | 1 | 1 | 1 |
| English | 2 | 3 | 3 |
| German | 5 | 5 | 5 |

7. **Membership of professional bodies: -**

8. **Other skills: -**

9. **Present position:** Independent Consultant

10. **Years within the firm:** -

11. **Key qualifications:**

Nicolas TRIBOUILLARD has a post-graduate diploma in Geology from the University of Dijon and a computing Master from the INSA School of Lyon. He is Hydrogeologist, with a specialization in the simulation software in the field of ground waters.
Since 2002, he worked as independent in technical expertise and the development of complete computing applications:
   - Hydrogeological study and assessment of ground water resources,
   - Modelling of groundwater (Modflow, Feflow),
   - Data processing, database (Access), GIS (MapInfo)
   - Geographical Information Processing,
   - Programming (VB.NET and Fortran),
   - Training of users.

## 12. **Professional experience**

| Year | Location | Company | Position | Description |
|------|----------|---------|----------|-------------|
| 2023 | France | BURGEAP | Computer Scientist | Calculation codes for hydrodynamic and transport modeling – Study of the feasibility of transferring Mosaic to Modflow – Fortran programming |
| | France | BRGM | Modeller | Seran River basin – Update of the hydrogeological model created in 2015 (Modflow) - Simulations for the determination of the maximum pumping volumes in aquifers |
| 2022 | France | Archimed Environnement | Modeller | Underground parking in Epernay – Hydrogeological impact study, groundwater modelling (Modflow) |
| | France | BURGEAP | Computer Scientist | Development of a tool for calculating river flood wave duration (VBA programming based on Excel data) |
| 2021 | France | BURGEAP | Modeller | *NAPELY* Software – East Lyon aquifers - Recalibration of the groundwater mathematical model with 2012-2019 datas (MOSAIC code) |
| | France | Archimed Environnement | Modeller | Rainwater retention basin in Vendenheim - Determination of residual groundwater flows at the bottom of the structure – Modflow modeling |
| 2020 | France | BURGEAP | Modeller | Meyzieu Valley - Quantitative impact on groundwater resources of boreholes for irrigation use modification - Modflow modeling |
| | France | BURGEAP | Computer Scientist | Wells and infiltration basins Database evolution on aquifers in the East of Lyon - SQL programming and VB.NET interfacing |
| 2019 | Saudi Arabia | SOFRECO | Modeller | Tawil deep aquifer - Study of the quantitative impact of new wells for the water needs of a mining operation - Recalibration of an existing model and long-term simulations (30 years) for different pumping rates - Modflow software |
| | France | BURGEAP | Computer Scientist | Well field of Crépieux-Charmy in Lyon - Integration of a module for groundwater levels characterization in *ROSALYE* software - VB.NET programming |
| 2018 | France | ARTELIA | Modeller | Essey-les-Nancy - Modflow hydrogeological modeling for impact determination of retention basin |
| | France | ADEME | Computer Scientist | *ESPER* software - Interfacing of deterministic and probabilistic methods for predicting soils remediation - VB.NET programming |
| 2017 | France | ARTELIA | Hydrogeologist, modeller | Gremillon Valley - Study of the quantitative groundwater impact of the creation of retention basins, Modflow modelling; several configurations studied and impact reduction solutions (impervious wall) |
| | France | BURGEAP | Modeller | Well field of Crépieux-Charmy in Lyon - Geographical extension of the groundwater model (MOSAIC code) from 12 to 28 km$^2$, long-term construction and calibration; new aquifer / river exchange rules, introduction of transient flow rates in boundaries |
| | France | ARTELIA | Hydrogeologist, modeller | Alluvial groundwater of Moselle river - Quantitative impact of the opening of a gravel pits in the alluvium by modelling (Modflow); study of different stages of gravel pits (opening and backfilling) |
| | France | BURGEAP | Computer Scientist, modeller | Development of a particle tracking and transfer time in aquifer software for the MOSAIC numerical model: FORTRAN computation code and VB.NET interfacing |
| 2016 | France | BURGEAP | Computer Scientist | *NAPELY* Software – East Lyon aquifers - Program and databases migration to the 64-bit environment : code rewriting (30,000 lines) using VB.NET in Visual Studio 2013 |
| | France | BURGEAP | Computer Scientist | *ROSALYE* Software – Coupling the mathematical model of surface hydraulics MAGE 7 / ADIS–TS (developed by IRSTEA) to the *ROSALYE* tool: VB.NET programming |
| | Mauritania | SEURECA | Hydrogeologist, modeller | Mauritania - Modelling of groundwater resources in the Taoudeni basin: simulations of long-term exploitation of aquifers (Modflow), determination of exploitable volumes; user training on Modflow software |
| 2015 | France | BURGEAP | Modeller | Grand Paris Metro – Calculation of groundwater levels for underground structures (stations and tunnel) : hydrogeological modelling and simulations with Feflow 6.2 |

| | France | BURGEAP | Modeller | Seran river basin – Study of determination of groundwater maximum pumping rates: modelling of the aquifer (Modflow), exploitation and development scenarios |
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| | France | CNR | Hydrogeologist, modeller | Rhone river in Vallabregues - Modelling hydrogeological impacts of bank reinforcement works: piezometric incidence of impervious wall and variants (Modflow) |
| | France | BURGEAP | Computer Scientist | *ROSALYE* Software – Program migration to the 64-bit environment : code rewriting (50,000 lines) using VB.NET in Visual Studio 2013 |
| 2014 | Mauritania | SEURECA | Hydrogeologist, modeller | Mauritania – Study of Groundwater resources on Taoudeni basin : construction and calibration of multilayer Modflow model on an area of 100 000 km$^2$ |
| | France | 2CEL | Hydrogeologist, modeller | Lyon Gerland – Hydrogeological effect study for the setting up of heat pumps, hydrodynamic Modflow model and thermic transfer in groundwater (using SEAWAT) |
| | France | BURGEAP | Computer Scientist | *ROSALYE* Software – Software developments : automatic calculation of infiltration basins flow, integration of 96 pumping rates |
| 2013 | France | BURGEAP | Modeller | Chautagne Swamp – Hydrogeological impact study for drain modifications: multilayer groundwater modelling (Modflow), simulations |
| | France | BURGEAP | Modeller | Miribel Jonage Park – Hydraulic restructuring rivers project: hydrogeological impact study, groundwater modelling (quantitative and qualitative) with Modflow |
| 2013 | France | BURGEAP | Computer Scientist, modeller | *ROSALYE* Software – Mathematical model calibration and software developments |
| 2012 | France | BURGEAP | Hydrogeologist, modeller | East Lyon Railway – Groundwater Modelling (Modflow), simulation of impervious structures |
| | France | BURGEAP | Computer Scientist | *OREOS* Software – NAPL simulation interfacing (Non-Aqueous Phase Liquid in soils) - VB2008 language |
| | France | BURGEAP | Hydrogeologist, modeller | Impervious river bank project Rhone river – Hydrogeological impact on wells by groundwater modeling (Modflow) |
| 2011 | France | Roannaise de l'Eau | Hydrogeologist, modeller | Well field of Roanne – Groundwater Modelling: simulations of new wells and cases of pollution (Modflow using MT3D) |
| | Benin | IGIP | Hydrogeologist | New Hydrogeological Map of Benin - Hydrogeological synthesis and cartography on GIS (MapInfo): integration into the hydrogeological team for processing and interpretation map (5 000 boreholes), GIS cartography at 1: 500 000 and 1:200 000 of the country (110 000 km$^2$) |
| | France | BURGEAP | Hydrogeologist, modeller | Gravel pits on Moselle river - Groundwater Modelling (Modflow), simulations of water plans extension |
| 2010 | France | AERMC | Computer Scientist | Development of a tool for calculating the cost of hydromorphological restoration of rivers in the RM & C basin: software development (VBA programming based on Excel data) |
| | France | BURGEAP | Hydrogeologist, modeller | Pollution of Moselle River aquifer - Study of chlorinated solvents pollution, groundwater modelling (code ModFlow using RT3D) |
| | France | BURGEAP | Computer Scientist | *Nappe du Drac* Software – Specific interfacing (VB6) of the Drac River groundwater model (ModFlow), training of users |
| 2009 | France | BURGEAP | Computer Scientist | *ROSALYE* Software - Setting up and development of a computing processing for the protection in real time of the Lyon well field (Drinking Water Supply 300 000 m$^3$/d) |
| | France | GINGER | Hydrogeologist, modeller | Underground parking in Mérignac – Hydro geological impact study, groundwater modelling (Modflow) |
| | France | BURGEAP | Modeller | Isere River aquifer – Hydrogeological modelling (Modflow) for industrial impact. |

| 2008 | France | CG69 | Computer Scientist | Aquifers of the east of Lyon – Database for boreholes and infiltration basins, mapping (Access) |
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| | Chad | IGIP | Computer Scientist | Eastern Chad (Ouaddaï-Biltine) – Computing support on the database (Access) and GIS (MapInfo) of two Village hydraulic projects, training of users |
| 2008 | France | BURGEAP | Hydrogeologist, modeller | Valley of Garon – Modelling of the ground water 3D, pollution transfer in saturated and unsaturated zone (FeFlow) |
| 2007 | France | BURGEAP | Computer Scientist | Software of piezometrical mapping for Grenoble City - Management of database and modules of routes/correction of maps of the ground water level 2D/3D |
| | France | BURGEAP | Hydrogeologist, modeller | Water catchment area of the Water Trade Union of the North East of Lyon - Study of the moving of pumping wells, modelling of the ground water (ModFlow) |
| | France | BURGEAP | Modeller | *Napely* Software – Update of the simulation software of the ground water level with a new mathematical model (code MOSAIC) |
| 2006 | France | BURGEAP | Computer Scientist | *Basse Vallée of Ain* Software – Interfacing of a ground water model (ModFlow), specific screens, training of users. |
| | China | SEURECA | Hydrogeologist, modeller | AEP Project 100 000 $m^3$/d Weinan (China) - Construction and setting of the hydrogeological model (ModFlow - aquifer multilayer), simulations |
| | France | BURGEAP | Computer Scientist | *Triterre Database* – Management and sorting of polluted lands (Access, VBA programming) |
| 2005 | France | Vincent RIOU Consultant | Hydrogeologist, modeller | Water plan of Peyrolles in Provence - Study and hydro geological modelling, issue of the drop of the ground water level |
| | France | BURGEAP | Computer Scientist | Development of utilities for modelling software (ModFlow, UTGMS) |
| | France | BURGEAP | Hydrogeologist, modeller | Well field of Crépieux-Charmy in Lyon – Definition of transfer of isochrones, hydrogeological modelling (MOSAIC code) |
| 2004 | China | SEURECA | Modeller | AEP Project 100 000 $m^3$/d Weinan (China) – Assistance to the prime contractor on the hydrogeological modelling side |
| | Chad | BURGEAP | Computer Scientist | Village hydraulic program Ouaddaï-Biltine (Chad) – Mission of computing support on the database of the project (Access) |
| | France | BURGEAP | Hydrogeologist, modeller | Aquifers of the east of Lyon - Setting up of a management global model of aquifers (3 hydrogeological corridors) in the framework of SAGE: creation of the numerical model, development of the simulation software *NAPELY*, boreholes database |
| | France | BURGEAP | Computer Scientist | R&D development of utilities of transfer between modelling software (UtChem – Simuscopp - GMS) |
| 2003 | Chad | BURGEAP | Hydrogeologist | Almy Bahaïm 2 Project (Abéché - Chad) – Hydrogeological support mission, synthesis of works of water research |
| | France | BURGEAP | Hydrogeologist, modeller | *NAPELY* Software - Modelling of the groundwater in the East of Lyon (code MOSAIC), database (Access) |
| | France | BURGEAP | Hydrogeologist, modeller | Well field of Crépieux-Charmy in Lyon - Definition of the exploitable maximum outflow, hydrogeological modelling |
| | France | Vincent RIOU Consultant | Hydrogeologist, modeller | Water catchment area of Sanary s/Mer - Hydrogeological modelling for the dynamic protection of well fields (Modflow) |

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| **2002** | France | BURGEAP Lyon Office | Hydrogeologist Engineer | Wetland of Lavours and Chautagne - Modelling of a multilayer aquifer for an environmental study on the Haut-Rhône (Modflow) |
| | | | | Setting up of Mage/Adis - Adaptation of a software of hydraulic simulation and mass transfer for the Rhone river |
| | | | | Lyon Airport - Saint Exupery - Hydrogeological study for the setting up of infiltration basins, mathematical modelling (MOSAIC code) |
| | | | | Modelling of Rhone aquifer- Osiris project: study of hydrogeological effect of industrial pumping, mathematical modelling (Modflow) |
| | | | | Virgule TGV Avignon - Hydrogeological effect of underground structures (MOSAIC code) |
| | | | | Well field of Chasse s/Rhone – Hydrogeological modelling for the qualitative diagnosis of water catchment areas (MOSAIC code) |
| **2001** | France | BURGEAP Lyon Office | Hydrogeologist Engineer | CET Savoie - : Inventory and database on the landfills in Savoie county |
| | | | | Django Reinhardt Basin - Hydrogeological impact (quantitative and qualitative) of an infiltration basin of rain waters in Chassieu |
| | | | | *Nappe of Gapeau* Software - Creation of a protection software of water catchment areas against the intrusions of sea water, mathematical modelling (MOSAIC code) |
| | | | | Aquifers Lebanon West OEB - Study of vulnerability of the resource ground water: multicriteria analysis (geology, soils occupation) on the basis of geographical information processing |
| **2000** | France | BURGEAP Lyon Office | Hydrogeologist Engineer | Lyon Airport Saint Exupery A432 - Qualitative effect study on the ground water of the project concerning the highway bypassing of the airport |
| | | | | Database Karstic Patrimony - Hydrogeological synthesis, bibliography on the karst housing projects of the south of France |
| | | | | Graviere Pougny - Hydrogeological impact study in anticipation of the filling of a gravel pit, mathematical modelling |
| | | | | Collecteur Nord de Vaulx-en-Velin - Impact study of waste in river on water supply pumping in alluvial ground water, mathematical modelling |
| **1999** | France | BURGEAP Lyon Office | Hydrogeologist Engineer | Heat pumps Lyon - Various private promoters: hydrogeological effect study for the setting up of heat pumps, hydrodynamic modelling and thermic transfer in ground water (MOSAIC code) |
| | | | | Databasa routes in karstic environment - : Database on the routes in karst environment on the tracing of the Rhône-Alpes area, geographical information processing (Mapinfo) |
| | | | | Ground water of Albian and of Néocomian - Database (Access) of deep forages drillings in Ile de France area |
| | | | | Climb of Choulans in Lyon - Geotechnical expertise followed up the pipe breakage at high output |
| **1998** | France, Mexico | BURGEAP Lyon Office | Hydrogeologist Engineer | Hydrosystems Rhône - Database and multicriteria analysis tools for the characterization of the hydraulic system |
| | | | | ZAC des Fours Culoz - : Geotechnical study, monitoring of pre loading on compressible grounds |
| | | | | Mali: Database for village hydraulics |
| | | | | *MASAGUAS* Software (Aguascalientes - Mexico) - Setting up and development of a software of projected management of groundwater on the basis of mathematical modelling (MOSAIC code) of underground outflows |

| 1997 | France | BURGEAP Lyon Office | Hydrogeologist Engineer | UPEP – AERMC - Database on the unit of production of drinking water in the Rhône-Alpes area (Access and VBA programming)<br><br>St Jean de la Porte Chambery DUC - Creation of wells for the irrigation, hydrogeological modelling<br><br>Quartier Piemente Lyon - Geotechnical expertise after a pipe breakage, recovering<br><br>Well field of Crépieux-Charmy 2$^{nd}$ Tranche - Proportioning of a hydraulic barrier, mathematical modelling (MOSAIC code)<br><br>Moulins - Study for the protection of water catchment areas |
|------|--------|---------------------|-------------------------|---|
| 1996 | France | BURGEAP Lyon Office | Hydrogeologist Engineer | 1000 m$^3$/d Project in Miribel Tramoyes - Study of the resource of groundwater for the agricultural irrigation, mathematical modelling (MOSAIC code)<br><br>Well field of St Rémy - Hydrogeological study of water catchment areas, mathematical modelling<br><br>Simandre - Geotechnical study<br><br>Décines Meyzieu Jonage - Hydrogeological study for the protection of well fields |
| 1995 | France | BURGEAP Lyon Office | Hydrogeologist Engineer | Diagnosis NO3 Bourg en Bresse - Hydrogeological diagnosis on the nitrates in groundwater<br><br>Saone Turdine – Hydrogeological modelling linked to the Fe/Mn problem |
| 1994 | France | BURGEAP Lyon Office | Hydrogeologist Engineer | MS Mosaic - Setting up of a hydrogeological modelling software (VB6)<br><br>Hydrogeological synthesis of the Dombes - Inventory and hydrogeological study, setting up of a database concerning the hydrogeological field of the Dombes, geographical information processing (Mapinfo) |
| 1992 | France | CEBTP Nantes Office | Geotechnical Engineer | Geotechnical studies: buildings and infrastructures in the Bretagne/Pays de Loire areas<br><br>Missions of geotechnical controls<br><br>Control of the motorway site A421 Nantes |
| 1991 | France | CEBTP Nantes Office | Geotechnical Engineer | Geotechnical road Challans – Drill interpretation, laboratory tests, proportioning of roadways<br><br>Geotechnical studies for the Refinery of Donges - Drill interpretation, proportioning of deep foundations, substitution |
| 1990 | France | CEBTP Nantes Office | Geotechnical Engineer | Geotechnical study for landing stage in Indret: expertise, inclinometry<br><br>Expertise, foundation for the dry disaster - Drill interpretation, superficial foundations<br><br>Rehabilitation of site - Study of shrinkage<br><br>Coetquidan - Roadway geotechnical, proportioning of roadway |
| 1989 | France | CEBTP Nantes Office | Geotechnical Engineer | Airlines and electric posts in Bretagne and Pays de Loire areas EDF CRTTO - Geological studies, superficial and deep foundation proportioning<br><br>Bridge of Chevire Nantes - Concrete control<br><br>Geotechnical expertise on buildings and houses - Bouygues/SARETEC |

## 13. Other relevant information (e.g., Publications):

Professional Web Site www.nicolastribouillard.fr