J. Alberto Casillas–Trasvina, Ph.D.

albcasillas@ucdavis.edu; jesuscasillasmx@outlook.com
(+52) 612–169–1488
0000–0002–6857–089X

Technische Universität Berlin
Gebäude BH-N, 3. Stock
Ernst-Reuter-Platz 1
10587 Berlin

EXPERTISE

Groundwater modelling, Hydrogeology, Hydrology, Hydrogeochemistry, Geology &Project Management.

SKILLS

Numerical modelling, advanced data analysis and optimization, age tracers, remote sensing, GIS, machine learning, Bayesian inference

CODING

R, Python, LaTeX

EXPERIENCE

09/2024 – present

Lecturer and Researcher in Hydrogeology, in habilitation at the Technische Universität Berlin (TU Berlin).
Berlin, Germany.

Research conducted as part of the SpreeWasser project focuses on developing a large-scale groundwater flow model for the Berlin-Brandenburg region. Teaching duties in the Hydrogeology MSc and Fundamentals of Hydrogeology BSc courses.

09/2022 – 08/2024

(affiliated until September, 2025)

Postdoctoral Research Scholar at the University of California, Davis (UC Davis) and the U.S. Department of Agriculture.
Davis, California, USA.
Integrated Watershed Modeling: Application of a Watershed Model to Assess Groundwater Sustainability Under Changing Climatic and Management Scenarios.

Research performed at the United States Department of Agriculture (USDA) Sustaiable Agricultural Water Systems (SAWS) Unit for the evaluation of the impacts of various climatic conditions and management practices on the sustainable use of groundwater in California's Central Valley.

Affiliated until September, 2025 as an active collaborator for the USDA SAWS unit's long-term agroecosystem research (LTAR) and managed aquifer recharge (MAR) initiatives.

2018 – 2022

Junior Researcher (PhD studies) at the Belgian Nuclear Research Centre (SCK CEN).
Mol, Antwerp, Belgium.

Research performed in collaboration with NIRAS/ONDRAF for the safety and feasibility evaluation of potential host formations for radioactive waste disposal. Collaborator in the H2020 project GeoERA project: VoGERA, *Establishing the European Geological Surveys Research Area to deliver a Geological Service for Europe*.

2017 – 2018

Junior Researcher (MSc studies) at the IHE–Delft Institute for Water Education.
Delft, South Holland, The Netherlands.

Research performed in collaboration with the Universidade Eduardo Mondlane in Maputo, Mozambique, for the numerical modeling and evaluation of saltwater intrusion in the Great Maputo aquifer. In the framework of the SALINPROVE project.

2015 – 2016 **Project Supervisor** at the Mexican National Mining Company "Roca Fosfórica Mexicana (ROFOMEX)".
San Juan de La Costa, Baja California Sur, México.

Part of the Engineering, Projects, and Environmental Control Department. Managed a team comprised of 25 technicians. The projects were mainly focused on civil works, hydraulics, and field campaigns inside/outside of the mining site surveying hydrogeological formations.

2012 – 2015 **Project Coordinator** at CAT Construction and Consultancy.
La Paz, Baja California Sur, México.
Part of the Engineering Department, led contructions teams (100+ workers i.e., site engineers, and technicians for electric, hydraulic, and structural works). Liaised and managed contracts between state government authorities and contractors.

2010 – 2012 **Project Modeler and Designer** at Hydro Consultancy.
La Paz, Baja California Sur, México.

Surface hydrology consultancy support and on-field supervision for civil projects development. Design of hydraulics systems and fieldwork, data collection and interpretation, management of human, finance, material, and equipment.

EDUCATION

2018 – 2022 **Ph.D. in Geology**. Supervised by Drs. Bart Rogiers, Koen Beerten, Laurent Wouters & Prof. Kristine Walraevens.
Assessment of unconventional state variables to constrain groundwater flow models of the Neogene Aquifer in the Campine Basin in Belgium.

Defended on September 2nd, 2022. Link to PhD thesis online.
Laboratory for Applied Geology and Hydrogeology (LTGH), Department of Geology, Faculty of Sciences, Ghent University & Engineered and Geosystems Analysis (EGA), Institute for Environment Health and Safety, Belgian Nuclear Research Centre (SCK CEN).

2016 – 2018 **Master of Science and Engineering in Hydrology and Resources Management**. Supervised by Drs. Prof. Tibor Stigter, Prof. Yangxiao Zhou, and Prof. Michael McClain.
Assessing saltwater intrusion in the Great Maputo Aquifer under natural conditions and human pressure with numerical models.

Defended in April 2018.
Water resources and Ecosystems (WSE) Department, UNESCO-IHE Delft.

2010 – 2014 **Bachelor's degree in Civil Engineering** with a specialization in Urban Development and Sustainability.
Earth Sciences Department, Instituto Tecnológico de La Paz, Tecnológico Nacional de México.

Additional Training

July, 2021 The 5th Summer School on Flow and Transport in Porous & Fractured Media. *Organized by CNRS, the University of Rennes, the University of Oslo, Njord and PoreLab.*
Cargèse, France.

February, 2019 — Winter School on Principles and Applications of catchment-scale flow and transport modelling in groundwater. *Presented by the INSPIRATION Marie Skłodowska-Curie Innovative Training Network.* Liege, Belgium.

SUMMARY

1 – Peer Reviewing

- **Associate Editor** of the Hydrogeology Journal (2023 – 2027) [Link to website]
- **Menber of the Scientific Committee** for the "Simposio de Aguas Subterráneas de la Asociación Internacional de Hidrogeólogos, Capítulo México". (27- 29, November 2024, Tecnológico de Monterrey, Campus Monterrey). [Link to website]
- Reviewing for:
  - Earth-Science Reviews
  - Journal of Hydrology
  - Hydrogeology Journal
  - Water Resources Research
  - Science of the Total Environment

2 – Publications & Communications

- **10 publications**, among which:
  - 6 first-author articles, 1 co-author article with major contribution, 3 book translations (one in final editorial process).
- **24 communications,** among which:
  - 1 keynote, 8 invited talks, 8 oral presentations at international conferences, 7 poster presentations at international conferences.

3 – Teaching Experience

- **2024**: University: TU Berlin, Germany
  Course: Hydrogeology, MSc
  Role: Lecturer, leading practicals and exercises
- **2024**: University: TU Berlin, Germany
  Course: Fundamentals of Hydrogeology, BSc
  Role: Supporting practicals and exercises
- **2024**: University: Universidad Autonoma de Baja California Sur, Mexico.
  Course: Seminar on 'Introduction to Groundwater Modelling'.
  Role: Guest lecturer, undergraduate and MSc.
- **2023**: University: University of California, Davis.
  Course: Water resources Planning and Management, MSc.
  Role: Invited teaching assistant for several classes, contributing to class discussions.
- **2021 – 2023**: University: Instituto Tecnologico de La Paz, Mexico.
  Course: Hydrology, BSc.
  Role: Guest lecturer.

4 – Grants & Awards

- **Postdoctoral Research Grant** awarded by the U.S. Department of Agriculture (USDA) Agricultural Research Service (ARS) for the exploration and evaluation of Managed Aquifer Recharge (MAR) initiatives in California's Central Valley within the Sustainable Agriculture Water Systems (SAWS) unit.
- **PhD Research grant** awarded by NIRAS/ONDRAF, the Belgian National Agency for Radioactive Waste and enriched Fissile Material, and the SCK CEN Academy.

- **Master's Degree grant** awarded by the Consejo Nacional de Ciencia y Tecnología (CONACYT) de México (Mexican Science Counsil).
- **COSCYT Summer Internship grant** for years **2012** and **2013** (3 months each) to attend the Scientific Research Program at the Tecnológico de Monterrey, and present results on *Natural Bioclimatic Architectural Design* at the Undergraduate Student Scientific Research Congress (both years). Nuevo Vallarta, Mexico.

- **Best presentation award** at the "*MODFLOW and More Conference*". 5-8 June 2022. Princeton University, Princeton, NJ, United States.
- **Best presentation award** at "*The 1st Conferencia Virtual Diáspora Hídrica*" del Instituto Mexicano de Tecnologías del Agua (IMTA) (The Mexican Institute for Water Technologies). 4-7 August 2020. Online, Mexico.
- **Advanced class of 2018** selected participant at the UNESCO-IHE. April-June 2018. UNESCO-IHE Delft, The Netherlands.

- **Elected Secretary of the University's Student Council**, Instituto Tecnológico de La Paz (2013 – 2014).
- **Elected President of the American Concrete Institute (ACI) Student's Chapter**, Northwest of Mexico, (2012 – 2014). Research activities on the topic "*Impervious Concrete as nature-based solution (NBS) as potential Managed Aquifer Recharge strategy for arid and water-scarce areas*" focused on real-life applications.
  - Lead a group of +100 ACI student members supporting Civil Engineering and Architectural undergraduate research and social services.
  - **Recipient of ACI's Excellent University Award**, 2014. [link to website]
  - **Recipient of ACI's Outstanding University Award**, 2013.[link to website]
  - **Participated in the ACI Annual Congress and student competitions** held in Washington, DC (October 2014), Reno, NV (March 2014) and Phoenix, AZ (October 2013).
  - **Participated in the 3rd International Concrete** Forum and student competition held in Mexico City, (July 2013).

5 – Outreach

- Testimony for the article "*30 years of doctoring with SCK CEN*" published in the Gluon SCK CEN Magazine. Link to the online version of the article.

6 – Graduate and undergraduate support and supervision

- Postdoctoral Research Scholar: Sakiur Rahman, Ph.D. (UC Riverside) (2023 – *ongoing*): Providing modelling assistance and support guiding the research activities on the development of a computationally efficient watershed model.
- PhD (CICESE, Mexico): Yesica Cabrera Sillas (2024 – *ongoing*): *Impacto ambiental y transporte de lixiviados en un ex - vertedero de residuos sólidos municipales*.
- PhD (TU Berlin): Abdelrahman Ahmed Ali Abdelrahman (2024 – *ongoing*): *Developing an advanced three-dimensional geological and hydrogeological model for the evaluation of saltwater intrusion in the Lower Spree catchment, Berlin*.
- PhD (Ghent University): Luka Tas (2023 – *ongoing*): *Evaluation of ATES systems in the Neogene Aquifer System in Belgium*. In collaboration with the DIAMONDS project for groundwater flow and heat-transport modelling activities.
- PhD (UC Davis): Wenyi Cui (2023 – 2024): In collaboration with the Integrated Watershed Modelling project for HYDRUS-1D modelling for groundwater recharge evaluation activities.

* MSc (TU Berlin): Aron Klein (2024 – *ongoing*): *Development of a reactive transport model for the optimal design of a Reactive Permeable Barrier (PRBs) to minimize nitrate influx into aquifers*.
* MSc (IHE-Delft): Rezwana Binte Delwar (2019): *Isotopic Tracing and Numerical Modelling of Saline Groundwater Discharge into Matola Wetlands, Mozambique*. Supported during the application of ^{14}C correction models, interpretation of age tracers and groundwater modelling activities.
* Undergrad (UC Davis): Elizabeth Armstead (2024 - 6 months) – intern for data processing.
* Several groups of undergraduate student activities at the Instituto Tecnologico Nacional de Mexico, in La Paz, Baja California Sur (2019 – *ongoing*):
  - Deployment of field campaign surveys at the research site module for hydrology and hydrogeology *Rancho El Ciruelito*, where students perform research activities for the evaluation of water discharge in streams and groundwater recharge estimates for the local community.

7 – International Collaboration

» In collaboration with the Department of Water Resources of California for exploration of computationally efficient unsaturated low modelling (2023 – *ongoing*).
Sadeghi, M., **Casillas-Trasvina, A.,** Cui, W., Meles, M., Bradford, S.

» Collaboration with the USGS (United States Geological Survey) and Local Authorities in a project at the *Rancho Ancon* and *Rancho Cacachilas* for the investigation of MAR in arid and water-scarce zones (2021-2024).
For the investigation of MAR to support local groundwater management activities in the city of La Paz, B.C.S., Mexico. Aiming to establish a regional Groundwater Research Institute in collaboration with the USGS, UABCS (State University of BCS), State and Municipal government, and International Foundations. The main focus is Capacity Development in MAR applications.

» Project DIAMONDS with Ghent University (2023 – *ongoing*).
Tas, L., Szwoch, D., Beerten, K., **Casillas-Trasvina, A.,** Hermans, T.
For the investigation of the interferences between different subsurface activities in the Campine basin and the Neogene Aquifer, specifically the interactions between groundwater extraction and shallow geothermal systems, i.e., Aquifer Thermal Energy Storage (ATES).

» Project for the coupling the Kineros2, HYDRUS 1D and MODFLOW (2023 – *ongoing*).
Simunek, J., Rahman, S., Ajami, H., Meles, M., Beegum, S., **Casillas-Trasvina, A.**, Bradford, S.
For the creation of an Integrated Watershed Modelling approach using open-source modelling tools which primarily will be implemented in the Central Valley to evaluate their hillslopes as potential areas for the development of a Hillslope-MAR strategy.

8 – Memberships

International Association of Hydrogeologists (IAH) – Since 2018
American Geophysical Union (AGU) – since 2022
European Geosciences Union (EGU) – since 2019
World Youth Parliament for Water – since 2018

9 – Language

Spanish: Native.
English: Full professional proficiency.
French: Basic (A2).

LIST OF PUBLICATIONS AND ORAL COMMUNICATIONS

Publications

Published work

Journal Articles

1. Integrated hydrologic modeling of groundwater flow dynamics and recharge in the San Joaquin Valley.
   Casillas-Trasvina, A., Meles, M., Cui, W., Hatch, T., Bradford, S., & Harter, T. (2025).
   Journal of Hydrology, Available online 22 April 2025, 133377.
   DOI: 10.1016/j.jhydrol.2025.133377
2. Bayesian inference of coupled groundwater flow, and radiogenic helium-4 production and transport, at the catchment scale.
   Casillas-Trasvina, A., Rogiers, B., Beerten, K., Wouters, L., & Walraevens, K. (2024).
   Science of the Total Environment (STOTEN), Volume 954, 176510.
   DOI: 10.1016/j.scitotenv.2024.176510
3. Uncovering the Gaps in Managed Aquifer Recharge for Sustainable Groundwater Management: A Focus on Hillslopes and Mountains.
   Meles, M., Bradford, S., **Casillas-Trasvina, A.,** Chen, L., Osterman, O., Levers, L., Hatch, T., Ajami, H., Kisekka, I. (2024).
   Journal of Hydrology, Volume 639, 131615.
   DOI: 10.1016/j.jhydrol.2024.131615
4. Characterizing groundwater heat-transport in a complex lowland aquifer using paleo-temperature reconstruction, satellite data, temperature-depth profiles, and numerical models.
   Casillas-Trasvina, A., Rogiers, B., Beerten, K., Wouters, L., & Walraevens, K. (2022).
   Hydrology and Earth System Sciences (HESS), Volume 26, issue 21.
   DOI: 10.5194/hess-26-5577-2022
5. Using helium-4, tritium, carbon-14 and other hydrogeochemical evidence to evaluate the groundwater age distribution: The case of the Neogene aquifer, Belgium.
   Casillas-Trasvina, A., Rogiers, B., Pärn, J., Beerten, K., Wouters, L., & Walraevens, K. (2022).
   Journal of Hydrology X (JoH-X), Vol 17.
   DOI: 10.1016/j.hydroa.2022.100132
6. Exploring the hydrological effects of normal faults at the boundary of the Roer Valley Graben in Belgium using a catchment-scale groundwater flow model.
   Casillas-Trasvina, A., Rogiers, B., Beerten, K., Wouters, L., & Walraevens, K. (2021).
   Hydrogeology Journal, 30, 133–149.
   DOI: 10.1007/s10040-021- 02423-y
7. Application of numerical models to assess multi-source saltwater intrusion under natural and pumping conditions in the Great Maputo aquifer Mozambique.
   Casillas-Trasvina, A., Zhou, Y., Stigter, T. Y., Mussáa, F. E. F., & Juízo, D. (2019).
   Hydrogeology Journal, 27, 2973–2992.
   DOI: 10.1007/s10040-019-02053-5.

Books and Book Chapters

- Groundwater Storage in Confined Aquifers.
  Wang, Herbert F. Translated into Spanish by **Casillas-Trasvina, A.** ISBN: 978-1-7770541-7-5.

The Groundwater Project. Guelph, Ontario, Canada, (2023).
Published online on April 16th, 2024 [https://gw-project.org/books/groundwater-storage-in-confined-aquifers].

- Managed Aquifer Recharge: Southern Africa.
  Braune, Eberhard & Israel, Sumaya. Translation team into Spanish Led by **Casillas-Trasvina, A.**. ISBN: 978-1-7770541-7-5.
  The Groundwater Project. Guelph, Ontario, Canada, (2024).
  To be published online.

Reports

⌘ VoGERA: Vulnerability of Shallow Groundwater Resources to Deep Sub-surface Energy-Related Activities. Deliverable D3.2, Characterization of pathways and groundwater vulnerability assessments due to deep energy related activities for the pilot studies.
Zaadnoordijk, W. (TNO-GSN), Szalkai, Á. (MBFSZ), Slenter, C. (VMM), Beerten, K. (SCK CEN), Bianchi, M. (BGS), **Casillas-Trasvina, A., (SCK CEN, UGent)**, Rogiers, B. (SCK CEN), Kruisselbrink, A. (TNO-GSN), Kivits, T. (TNO-GSN), Broers, HP. (TNO-GSN).
GeoERA project: VoGERA. Coordinated by UKRI, UK. Horizon 2020. Link to project website.

⌘ VoGERA: Vulnerability of Shallow Groundwater Resources to Deep Sub-surface Energy-Related Activities. Deliverable D3.2, Report with associated database of hydraulic properties of prime aquifers and aquitards and fault zones.
Vernes R. (TNO-GSN), Beerten, K. (SCK CEN), Linder, B. (GD NRW), **Casillas-Trasvina, A. (SCK CEN, Gent)**, Kruisselbrink, A. (TNO-GSN), Reindersma, Reinder (TNO-GSN), Rogiers, B. (SCK CEN), Slenter, C. (VMM).
GeoERA project: VoGERA. Coordinated by UKRI, UK. Horizon 2020. Link to project website: VoGERA.

Work in Progress and in-submission

Journal Articles

- Assessing the spatial distribution of groundwater residence time in the increasingly thick vadose zone of the California Central Valley at the catchment scale.
  Casillas-Trasvina, A., Zhou, T., Meles, M., Cui, W., Bradford, S., & Harter, T. (----).
  In preparation for submission (fall-winter 2024).
- Evaluation of managed aquifer recharge strategies to mitigate deepening groundwater table in the California Central Valley using a 3D transient groundwater flow model.
  Casillas-Trasvina, A., Meles, M., Cui, W., Bradford, S., & Harter, T. (----).
  In preparation for submission (spring 2025).
- An innovative multi-model coupling strategy for simulation watershed-scale surface and subsurface flow interactions
  Rahman, ATM., Simunek, J., Bradford, S., Ajami, H., Meles, M., Chen, L., Szymkiewicz, A., Pawlowicz, M., **Casillas-Trasvina, A.**, Beegum, S.
- Multi-model approach for analysis of sustainable groundwater management strategies in California's Central Valley
  Tigabu, T., **Casillas-Trasvina, A.**, Meles, M., Simunek, J., Bradford, S.
- Quantifying Uncertainty in a Coupled Groundwater-Vadose Zone-Landscape Model for the Turlock-Merced Subbasin in the California Central Valley
  Wang, J., Meles, M., Simunek, J., Bradford, S., Harter, T., **Casillas-Trasvina, A.**,
- Geological Modeling in the Lower Spree Catchment: A Comparative Study of Traditional and Deep Learning Approaches

Ali-Abdelrahman, A., **Casillas-Trasvina, A.**, Joodavi, A., Winsemann, J,. Engelhardt, I. (----).
In preparation for submission.

Books and Book Chapters

- Flux Equations for Gas Diffusion in Porous Media.
  McWhorter, David B. Translation team into Spanish Led by Ignacio Puga and **Casillas-Trasvina, A.** ISBN: 978-1-77470-003-7. pp. 20-25.
  The Groundwater Project. Guelph, Ontario, Canada, (Forthcoming, 2023-2024).
  Under review prior publication.

Communications

Invited Talks and Seminars

Keynote

» "Unlocking Urban Resilience: Managed Aquifer Recharge as a Nature-Based Solution in Smart Water Management and Urban Planning Design". Presented during the 50th anniversary of the Instituto Tecnológico within the framework of the Civil Engineering and Architectural Design week and kick-off of the Academic Year at the Tecnológico Nacional de México, La Paz, Baja California Sur, 2023.

Seminars & Invited Talks

» "Towards Sustainable Water Resources Management: SWaRM", invited talk at the Department of Architectural, Geological, Environmental, and Civil Engineering (ArGEnCo) at the University of Liège, Belgium, April, 2024.

» "Avanzando en la Gestión Sostenible de los Recursos Hídricos: Integrando la Investigación, Modelación Hidrogeológica y las Aplicaciones Prácticas", invited talk at the Geology Department at the Center for Scientific Research and Higher Education at Ensenada (in Spanish: Centro de Investigación Científica y de Educación Superior de Ensenada, CICESE), Mexico, April 2024.

» "Liberando la resiliencia urbana: recarga gestionada de acuíferos como una solución basada en la naturaleza en la gestión inteligente del agua y el diseño de planificación urbana". Invited talk at the Hydrologic Sciences Group, at the Universidad de las Americas, Puebla (UDLAP), Mexico, March 2024.

» "Advancing Sustainable Water Resource Management: Integrating Hydrogeological Research and Practice", invited talk at the Institute of Environment and Ecology (IEE) at the Tsinghua University Shenzhen International Graduate School (SIGS), China, February 2024.

» "Agua subterránea: modelación para aplicaciones a intrusión de agua salina, depósito de residuos radiactivos, y recarga gestionada de acuíferos", presented during the in the Academic Seminar on Water Management and Sciences. Universidad Autónoma de Baja California Sur (UABCS), Mexico. September, 2023.

» "Radiogenic helium-4 and hydraulic head observations towards an implementation with a neural network surrogate", presented during the BELQUA National Committee of the Royal Academies for Science and Arts of Belgium Annual Scientific Workshop. Palace of the Academies, Brussels, Belgium, 2022.

» "Heat-transport modelling of the Neogene Aquifer in the Campine Basin", presented in the Geology Research Seminars, Gent University, Belgium, 2020.

» "Groundwater modelling of Saltwater Intrusion in Mozambique", presented during the annual Earth Sciences Department Seminars, Tecnológico Nacional de México, La Paz, Mexico, 2018.

Conference Participations

Oral

1. Distributed recharge and groundwater flow modeling in an over-exploited aquifer: Coupling HYDRUS-1D and 3D groundwater flow in the California Central Valley.
   Casillas-Trasvina, A., Meles, M., Zhou, T., Cui, W., Bradford, S., & Harter, T.
   The California Water and Environmental Modeling Forum (CWEMF) Annual Meeting, 2024. Folsom, California, The United States. [presented by Meles, M.]
2. Los ciclones tropicales y su relación a las variables del ciclo hidrológico en Baja California Sur (*Tropical cyclones and their relationship to the variables of the Hydrological Cycle in Baja California Sur*).
   Aguilar-Osuna, V., Meza-Trejo, J. & **Casillas-Trasvina, A.**
   XIII National Groundwater Congress. 9-13 October 2023. La Paz, Baja California Sur, México.
3. Joint inversion of multiple state variable data in groundwater numerical modelling: Using $^{4}He_{rad}$ and hydraulic head observations to condition groundwater flow and transport models for the Neogene Aquifer, Belgium.
   Casillas-Trasvina, A., Rogiers, B., Beerten, K., Wouters, L. & Walraevens, K.
   MODFLOW and More Conference. 5-8 June 2022. Princeton, NJ, The United States.
4. Bayesian inference of radiogenic helium-4 and hydraulic head observations: Towards the implementation of a neural network surrogate.
   Casillas-Trasvina, A., Rogiers, B., Beerten, K., Wouters, L. & Walraevens, K.
   The European Geosciences Union's General Assembly. 23-28 May 2022. Vienna, Austria.
5. Towards a hydrogeological joint model inversion: Interpretation and assessment of environmental tracers for their application in numerical groundwater modelling for the Neogene Aquifer, Belgium.
   Casillas-Trasvina, A., Rogiers, B., Beerten, K., Wouters, L. & Walraevens, K.
   The 48th International Association of Hydrogeologist (IAH) Congress. 6-10 September 2021. Brussels, Belgium.
6. Cross-border database of hydraulic conductivities in the Roer Valley Graben aquifer system.
   Vernes, R., Beerten, K., **Casillas-Trasvina, A.,** Kruisselbrink, A., Bernd, L., Reindersma, R., Rogiers, B. & Slenter, C.
   The 48th International Association of Hydrogeologist (IAH) Congress. 6-10 September 2021. Brussels, Belgium.
7. Interpretación de datos fisicoquímicos y la evaluación de su aplicación en modelos numéricos para el acuífero Neógeno, Flanders – Bélgica.
   Casillas-Trasvina, A., Rogiers, B., Beerten, K., Wouters, L. & Walraevens, K.
   The 1st Conferencia Virtual Diaspora Hidrica del Instituto Mexicano de Tecnologias del Agua (IMTA). 4-7 August 2020. Online, Mexico.
8. Towards a holistic approach in characterising the water cycle in the Campine area (NE Belgium) at various temporal and spatial scales.
   Beerten, K., Lu, M., **Casillas-Trasvina, A.,** Rogiers, B., Gedeon, M., Fiengo Perez, F., DiCiacca, A., Leterme, B., Laloy, E. & Jacques, D.
   The 46th International Association of Hydrogeologist (IAH) Congress. 22-27 September 2019. Malaga, Spain.
9. Mitigating groundwater salinity impacts for improved water security in coastal areas under socio-economic and climate change: Monitoring and modelling groundwater salinity in the Great Maputo aquifer, Mozambique.
   Casillas-Trasvina, A., Mussa, F., Stigter, T., Zhou, Y. & Juizo, D.
   The 19th WaterNet/WARFSA/GWP-SA Symposium. 31 October-2 November 2018. Livingstone, Zambia.

Poster

1. Spatial Distribution of Groundwater Recharge Residence Time in the Thickening Vadose Zone of California's Central Valley at the Sub-basin Scale
   Casillas-Trasvina, A., Zhou, T., Meles, M., Cui, W., Bradford, S., & Harter, T.
   The American Geophysical Union (AGU) General Meeting. 11-15 December 2023. San Francisco, CA, The United States.

2. Aquifer Recharge & Flow Dynamics: Insights from coupling HYDRUS-1D with MODFLOW - Distributed Recharge and Groundwater Flow Systems in an Intensively Exploited Aquifer of California's Central Valley.
   Casillas-Trasvina, Meles, M., A., Cui, W., Bradford, S., & Harter, T.
   The 3rd International Conference Towards Sustainable Groundwater in Agriculture: Linking Science and Policy by Water Education Foundation. 17-20 June, 2024, Burlingame, CA, The United States.

3. Assessment of spatially distributed recharge and groundwater flow systems in an intensively exploited aquifer using HYDRUS-1D and a 3D groundwater flow model in the Central Valley, California.
   Casillas-Trasvina, A., Cui, W., Meles, M., Bradford, S., & Harter, T.
   The American Geophysical Union (AGU) General Meeting. 11-15 December 2023. San Francisco, CA, The United States.

4. An integrated modeling approach towards the evaluation of MAR strategies in the Central Valley, California.
   Casillas-Trasvina, A., Meles, M., Bradford, S. & Harter, T.
   The National Groundwater Association (NGWA) Managed Aquifer Recharge Conference. 24-25 April 2023. San Antonio, TX, The United States.

5. Groundwater flow systems analysis using age tracers (3H/3He, 4He and 14C) in a lowland catchment: The case of the Neogene aquifer, Belgium.
   Casillas-Trasvina, A., Rogiers, B., Beerten, K., Pärn, J., Wouters, L. & Walraevens, K.
   The 47th International Association of Hydrogeologist (IAH) Congress. 22-27 August 2021. Online, Brazil.

6. The influence of faults on groundwater flow and solute transport: the Rauw Fault in the Neogene aquifer, Belgium.
   Casillas-Trasvina, A., Rogiers, B., Beerten, K., Pärn, J., Wouters, L. & Walraevens, K.
   The European Geosciences Union's (EGU) General Assembly. 4-8 May 2020. Online, Austria. doi: 10.5194/egusphere-egu2020-8713.

7. Using groundwater heat data as additional state variable observation to decrease groundwater model uncertainties: An application to the Neogene aquifer, Belgium.
   Casillas-Trasvina, A., Rogiers, B., Beerten, K., Pärn, J., Wouters, L. & Walraevens, K.
   The 46th International Association of Hydrogeologist (IAH) Congress. 22-27 September 2019. Malaga, Spain.

8. Assessing the use of different state variable observations to decrease groundwater flow models uncertainties: An application to the Neogene aquifer, Belgium.
   Casillas-Trasvina, A., Rogiers, B., Beerten, K., Pärn, J., Wouters, L. & Walraevens, K.
   The 10th International Association of Hydrological Sciences (IAHS) Groundwater Quality Conference. 9-13 September 2019. Liege, Belgium.