

Eric VANDENDRIESSCHE

25, rue du plateau, 91360 Epinay-sur-Orge, France
e-mail: eric.vandendriessche@univ-paris-diderot.fr
Tel: + 33 1 57 27 63 21 Mobile: + 33 6 82 29 62 72

Date of birth: 20-03-1963

PRESENT POSITION

Researcher (Chargé de recherché - CR1, Section 38- Anthropology) at the French National Center for scientific Research (CNRS).

Member of the SPHERE UMR 7219 "Sciences, Philosophy, History" research laboratory, CNRS and Paris Diderot University.

Qualified university lecturer: Sections 20- Anthropology, 25- Mathematics, and 72- History and Philosophy of Science (French National Universities Council)

EDUCATION

2010 **DOCTORAT**, Paris Diderot University (Paris 7)

PhD in "Epistemology and history of sciences" entitled *String figures as mathematics?*, passed with distinction.

Supervisor: Karine Chemla, historian of mathematics (CNRS) and Sophie Desrosiers, anthropologist (EHESS). Jury members: Karine Chemla and Sophie Desrosiers, Marc Chemillier (ethnomusicologist, EHESS), Philippe Descola (anthropologist, Collège de France), Patrick Popescu-Pampu (mathematician, Lille 1 Univ.), Ivahn Smadja (philosopher of mathematics, Paris Diderot Univ.), Jean-Jacques Szczeciniarz (philosopher of mathematics, Paris Diderot Univ.), and Dominique Tournès (historian of mathematics, La Réunion Univ.).

2004 **MASTER "Epistemology and history of sciences"**, Paris Diderot University

Thesis on "Ethnomathematics" entitled *String figures: a mathematical activity in some traditional societies of the Arctic and Oceania*.

1992 **AGREGATION in mathematics**

Highest level secondary school teaching qualification, obtained through competitive examination. Secondary school includes the Baccalauréat cycle and, for some students, two years 'prépa' – preparation for the very demanding competitive entrance examinations for the 'grandes écoles' – the leading Science, Engineering or Business schools.

1991 **CAPES in mathematics**

Secondary teaching diploma obtained through a competitive examination, a full year in training education, and a professional report entitled *Teaching mathematics through their history*.

1987 **MAÎTRISE in mathematics**, Paris 7 University

Examination to obtain the fourth-year grade in French University. Equivalent to an M.Sc.

1986 **LICENCE in mathematics**, Paris 7 University

Examination to obtain the third-year grade in French University. Equivalent to a B.Sc.

1984 **UNIVERSITY DIPLOMA OF GENERAL EDUCATION**, Paris 11 University
Mathematics and physics
Examination to obtain the second-year grade.

1982 **BACCALAUREAT**, mathematics and physics

1981 **BACCALAUREAT**, mathematics and biology

LANGUAGES

English (good operational level in spoken and written English – math teaching in English).

Bichlama (Vanuatu Pidgin, South Pacific) (good operational level).

Kilivila (Language of the Trobriand Islanders, Papua New Guinea) (intermediate level).

North Ambrym Language (Vernacular language from Vanuatu) (intermediate level).

RESEARCH

POSITIONS AND RESPONSABILITIES

2011- Present day

Researcher – Member of the SPHERE UMR 7219 "Sciences, Philosophy, History" research laboratory, French National Centre of Scientific Research (CNRS) and Paris Diderot University.
<http://www.sphere.univ-paris-diderot.fr/>

Sept. 2015-Aug. 2016

Researcher – Temporary assignment (on secondment) at the French National Research Institute (CNRS), Section 38- Anthropology.

Sept. 2013-Aug. 2014

Researcher - Temporary assignment (on secondment) at the University Paris Diderot as Research Fellow.

2004-2010

Member as a **Ph.D. Candidate** of the REHSEIS (*Epistemological and Historical Research about Exact Sciences and Scientific Institutions*) scientific research laboratory, today, part of the bigger SPHERE "Science, Philosophy, History" research laboratory.

2012- Present day

Co-organizer of the SPHERE “Field of Science: Uses of Ethnography in History, Philosophy and Anthropology of Science” research field (with historian of science Guillaume Lachenal, Paris Diderot University).

<http://www.sphere.univ-paris-diderot.fr/spip.php?article680>

FUNDED PROJECTS

2016-2020

Principal Investigator of the "Encoding and Transmitting Knowledge with a String: a comparative study of the cultural uses of mathematical practices in string figure-making (Oceania, North & South America)" (ETKnoS) Project, financially supported (435K€) by the French National Research Agency (ANR).

2018-2019

"String figure-making, sand drawing, and mat making: a comparative study of (ethno-)mathematical practices from Vanuatu" Project, financially supported (10K€) by the "Soutien à la mobilité internationale – SMI 2019" InSHS Program, CNRS.

2012-2016

Coordinator of the "String figures: cultural and cognitive aspect of a mathematical practice" project (2011-2014), financially supported (267K€) by the city of Paris ("Emergences" research program).
<http://www.sphere.univ-paris-diderot.fr/spip.php?rubrique84>

2005 – 2009

Coordinator, with Agathe Keller, of the research program "Anthropology of mathematics", financially supported (80K€) by the French Ministry of Research.
<http://www.rehseis.cnrs.fr/spip.php?rubrique21>

INVITATIONS

Jan., 2015-Aug., 2015

Invited researcher at the Centre for Logic and Philosophy of Science, *Vrije Universiteit Brussel*

Sept., 2014-Dec., 2014

Invited researcher at the Max Planck Institute for History of Science (Berlin).

RESEARCH ACTIVITIES

2019-Present day

Co-organizer of "Des 'arts de penser' les mathématiques" Seminar/Master course at Ecole des Hautes Etudes en Sciences Sociales (EHESS) with Sophie Desrosiers (anthropologist, EHESS), and Marc Chemillier (ethnomusicologist, EHESS).

<http://www.sphere.univ-paris-diderot.fr/spip.php?article1106&lang=en>

2017-2018

Co-organizer of the SPHERE Seminar "Field of Science: Uses of Ethnography in History, Philosophy and Anthropology of Science" with historian of science Guillaume Lachenal and philosopher Marie Gaille, Université Paris Diderot.

2015- 2018

Co-organizer, with Sophie Desrosiers (anthropologist, 'Ecole des Hautes Etudes en Sciences Sociales' – EHESS), Marc Chemillier (ethnomusicologist, EHESS), and Jovanna Cifoletti (historian of mathematics, EHESS), of the "Pratiques, Mathématiques et Artefacts: anthropologie, histoire, ethnomathématique" (Practices, Mathematics and Artefacts: anthropology, history, ethnomathematics) Seminar (EHESS/CNRS), previously entitled "Ethnomathematics" (2012-2014), then "Mathematics either with or without discipline: anthropology, history, ethnomathematics" (2015-2016).

<https://enseignements-2016.ehess.fr/2016/ue/1758/>

2012- 2014

Co-organizer, with Sophie Desrosiers (anthropologist, EHESS), Marc Chemillier (ethnomusicologist, EHESS), of the "Ethnomathematics" seminar (EHESS /CNRS).

<http://www.ehess.fr/fr/enseignement/enseignements/2012/ue/723/>

<http://www.ehess.fr/fr/enseignement/enseignements/2013/ue/1211/>

2004-2010

Responsible for organizing, with Agathe Keller, historian of mathematics (CNRS), of the SPHERE laboratory "Ethnomathematics" seminar.

2006 – Present day

Participation in the monthly laboratory REHSEIS (now SPHERE) "**History and philosophy of mathematics**" seminar.

ORGANIZATION OF SCIENTIFIC MEETINGS

- 2019 **Organizer of the Second International Workshop on “String Figure-Making Practices: Making and Record”**, in collaboration with Robyn McKenzie, The Australian National University & Université Paris Diderot, Canberra, June 19-21, 17 speakers, 30 participants (from Brazil, England, Australia, Papua New Guinea, France).
- 2018 **Organizer of the “Investigating String Figure-Making Practices: Ethnomathematical, Anthropological, and Technical Approaches”** workshop (ANR ETKnoS), Université Paris Diderot, Paris, May 24-26: 8 speakers, 15 participants (from England, Australia, USA, Holland, France).
- 2018 **Coordinator of the Open Panel “Indigenous Mathematical Knowledge and Practices: (Crossed-) Perspectives from Anthropology and Ethnomathematics”**, with Céline Petit and Rik Pinxten (Univ. of Ghent), as part of the 18th International Union of Anthropological and Ethnological Sciences (IUAES) World Congress, Federal University of Santa Catarina (UFSC), Florianópolis, Brazil. July 16-20: 6 speakers, 15 participants (from Brazil, Australia, France).
- 2017 **Organizer of “The Implementation of Local Mathematical Practices into the Mathematics Curriculum”** (ANR ETKnoS) workshop, Université Paris Diderot, Paris, May 26: 6 speakers, 12 participants (from USA, Canada, Belgium, France).
- 2012 **Co-organizer of the “Art of Memory and Mathematical Practices”** workshop with the SPHERE laboratory research group “Ethnomathematics of string figures”, Université Paris Diderot, France, Dec. 3: 6 speakers, 30 participants (from France, Italia and Brazil).
<http://www.sphere.univ-paris-diderot.fr/spip.php?article996>

ETHNOGRAPHICAL MISSIONS

Missions supported by the "Anthropology of mathematics" research program: Ethnographical study on string figures in the Marquesas Islands (Summer 2005), in the Paraguayan Chaco (October-November 2005), in the Trobriand Islands, Papua New Guinea (June-July 2006, June-August 2007). Ethnographical study of sand drawings and string figures in the island of Ambrym, Vanuatu (August 2006).

Missions supported by the "String figures: cultural and cognitive aspect of a mathematical practice" research program: Ethnographical study of string figures and sand drawings in the islands of Malekula, Santo, and Ambrym, Vanuatu (June-July 2012, January-March 2016).

Missions supported by the ANR ETKnoS project: Ethnographical study of string figure-making, sand drawing, and mat-making, in the islands of Ambrym, Malekula, Santo, and Pentecost, Vanuatu (June-August 2017, **July 2018-July 2019**).

PUBLICATIONS

THESIS

- 2010 *String figures as mathematics?*, Ph.D. THESIS, Doctorat in "Epistemology and history of sciences", Paris Diderot University, 587 p.
- 2004 *Les jeux de ficelle : Témoins d'une activité mathématique en Arctique et en Océanie*, MASTER Thesis, Paris Diderot University (Paris 7), 227p.

BOOK

- 2015 *String figures as mathematics? An Anthropological Approach to String Figure-making in Oral Tradition Societies*, Studies in History and Philosophy of Science 36. Cham: Springer, 392p.

BOOK CHAPTERS

- 2020 Lévy-Bruhl's theory on prelogical mentality and its influence on the field of history and philosophy of science: Léon Brunschvicg (1869-1944) / Abel Rey (1873-1940). In K. Chemla & A. Keller (eds.), *Writing Histories of Ancient Mathematics. Reflecting on Past Practices and Opening the Future*, Col. "Why the Sciences of the Ancient World Matter", Dordrecht: Springer. **Accepted for publication.**
- 2017 Des pratiques algorithmiques et géométriques propres à des sociétés autochtones : quels usages pour un enseignement des mathématiques culturellement situé ? In A. Adihou et al. (eds), *La Diversité des mathématiques : dimensions sociopolitiques, culturelles et historiques de la discipline en classe* (pp. 11-27), Actes du colloque du Groupe de didactique des mathématiques du Québec 2016, Ottawa: Université d'Ottawa.

ARTICLES IN PEER-REVIEWED SCIENTIFIC JOURNALS

- 2020 A New Symbolic Writing for Encoding String Figure Procedures. *Bulletin of the International String Figure Association*. **Accepted for publication.**
- 2018 Anthropologie des nombres et ethnomathématique. *L'Homme*, 225, p. 185-198.
- 2017 Jeux de ficelle. Comparaisons et questions de méthodes. In G. Bartholens & F. Jouliau, *Le corps instrument, Techniques et culture*, 62, p. 92-127.
- 2015 "Thomas Storer's Heart Sequence: A Formal Approach to String Figure-Making", *Journal of Mathematics and Culture*, p. 119-159. URL: <http://nasgem.rpi.edu/pl/journal-mathematics-culture-volume-9-number-1>
- "De l'ethnomusicologie à l'ethnomathématique. Entretien avec Marc Chemillier", *ethnographiques.org*, n°29, URL : <http://www.ethnographiques.org/2014/Vandendriessche.Chemillier>
- "Ethnomathématique des jeux de ficelle trobriandais", *ethnographiques.org*, n°29, URL : <http://www.ethnographiques.org/2014/Vandendriessche>

- 2014 "Cultural and cognitive aspects of string figure-making in the Trobriand Islands", *Journal de la société des Océanistes*, 138-139, p. 209-224.
- "W. W. Rouse Ball and the Mathematics of String Figures", *Historia Mathematica*, 41, p. 438-462.
- 2007 "Les jeux de ficelle : une activité mathématique dans certaines sociétés traditionnelles", *Revue d'Histoire des Mathématiques*, Vol. 13, p. 7-84.

ARTICLES IN SCIENTIFIC JOURNALS

- 2016 "Variabilité culturelle de la numération : quelques points d'entrée dans la littérature ethnomathématique". *Statistique et Société*, 4 (1), p. 51-55.
 URL : http://publications-sfds.fr/index.php/stat_soc/article/view/533/505

COLLABORATIVE PEER-REVIEWED PUBLICATIONS

FRANÇOIS, K., MAFRA, J.R.S., FANTINATO, M.C.F. & VANDENDRIESSCHE, E. (2018). Local Mathematics Education: The Implementation of Local Mathematical Practices into the Mathematics Curriculum. *Philosophy of Mathematics Education Journal*, 32.

VANDENDRIESSCHE, E. & PETIT, C. (2017). Des prémices d'une anthropologie des pratiques mathématiques à la constitution d'un nouveau champ disciplinaire: l'ethnomathématique, *Revue d'Histoire des sciences humaines*, 31, p. 189-219.

VANDENDRIESSCHE, E. & FRANÇOIS, K. (2016). Reassembling mathematical practices: A philosophico-anthropological approach, *Revista Latinoamericana de Etnomatemática*, 9 (2), p. 144-167.
 URL: <http://www.revista.etnomatemática.org/index.php/RLE>

VANDENDRIESSCHE, E., MAFRA, J.R.S., FANTINATO, M.C.F. & FRANÇOIS, K. (2017). How Local Are Local People? Beyond Exoticism. In Ana Chronaki (ed.), *Mathematics Education and Life at Times of Crisis, Proceedings of the 9th International Conference of Mathematics Education and Society*, Vol. 2 (pp. 956-967), Volos: University of Thelassy Press.

FRANÇOIS, K, MONTEIRO, C., CARVALHO, L. & VANDENDRIESSCHE, E. (2015). Politics in Ethnomathematics: An Epistemological, Historical and Educational Perspective, *Proceedings of the eighth "Mathematics, Education and Societies" (MES) Conference*, USA, Portland, 21-26 juin, p. 492-504.

PETIT, C. et VANDENDRIESSCHE, E. (2015). Introduction : ethnologie et (ethno)mathématique(s), de quelques expressions d'une rencontre, *ethnographiques.org*, n°29. En ligne, URL : <http://www.ethnographiques.org/2014/Petit,Vandendriessche>

FILMOGRAPHY

- 2015 *Kaninikula, Mathematics in the Trobriand Islands*, Scientific documentary, 29 min, Production CNRS, diffusion CNRS Images.

English version of the documentary *Kaninikula, mathématiques aux îles Trobriand* (2012)
URL: <http://videotheque.cnrs.fr/doc=4149?langue=FR>

2012 *Kaninikula, mathématiques aux îles Trobriand*, Scientific documentary, 29 min, Production CNRS, diffusion CNRS Images.
URL: <http://videotheque.cnrs.fr/doc=4149?langue=EN>

Showing of the film, followed by a debate with the public: Scientific film Festival of La Reunion Island (April 13, 2012), Paris Diderot University (May 24, 2012), Workshops *Salon des jeux et de la culture mathématiques*, Pierre and Marie Curie University (June 2, 2012), *Fête de la science* (October 11, 2012), Workshop *Pratiques ludiques* (EHESS, June 19, 2013), Workshop *Approche des conséquences théoriques, cliniques et thérapeutiques du nœud borroméen* (Theoretical, clinical, therapeutic approaches of the Borromean knot), organized by the International Lacanian Association (August 31, 2013). Oceanists Society, Musée du quai Branly (6 février 2014), Alliance Française of Vanuatu (Feb. 4, 2016), "Didactics of Mathematics Group from Quebec" Conference, Ottawa (June 1, 2016), Sciences en lumière, Nancy (March 3, 2020).

In competition at the French *Festival du film de chercheurs* (Researcher Film Festival, June 11, 2014).

http://www.filmdechercheur.eu/spip.php?page=film2014&id_donnee=103&id_suteur=129&id_article=365&lang=fr

COMMUNICATIONS

INTERNATIONAL CONFERENCES

2019 *(Ethno)-mathematics in oral tradition societies: the case of sand drawings and string figures from Vanuatu* – Lecture given at the “School of Mathematics and Statistics”, University of Canterbury, Christchurch, New Zealand, June 4.

Etnomatematik blong sandroin, string figa, mo mat praktis blong Vanuatu : wan risej ripot (Ethnomathematics of sand drawings, string figures, and mat making; a research report) – Lecture given at the Cultural Centre of Vanuatu, Port Vila, July 17.

2018 *Geometric and algorithmic practices in oral tradition societies: the case of sand drawings and string figures from Vanuatu* – Lecture given as part of the Open Panel “Indigenous Mathematical Knowledge and Practices: (Crossed-) Perspectives from Anthropology and Ethnomathematics”, 18th International Union of Anthropological and Ethnological Sciences (IUAES) World Congress, Federal University of Santa Catarina (UFSC), Florianópolis, Brazil. July 16-20.

Modelling tools for investigating the (ethno-)mathematical aspects of string figure making practices – Lecture given as part of the international “Investigating String Figure-Making Practices: Ethnomathematical, Anthropological, and Technical Approaches” workshop (ANR ETKnoS), Université Paris Diderot, Paris, May 24-26.

Overview of the research methodology used for the ETKnoS project – Lecture given (with Agnès Henri) as part of the international “Investigating String Figure-Making Practices: Ethnomathematical, Anthropological, and Technical Approaches” workshop (ANR ETKnoS), Université Paris Diderot, Paris, May 24-26.

2017 ***How Local Are Local People? Beyond Exoticism*** – Lecture given (with Maria Cecilia Fantinato et Karen François) as part of the 9th International Conference of Mathematics Education and Society (MES 9), Greece, Volos, 7–12 avril 2017

Yup’ik String Figures – Lecture given (with Céline Petit) as part of the international “The Implementation of Local Mathematical Practices into the Mathematics Curriculum” (ANR ETKnoS) workshop, Université Paris Diderot, Paris, May 26. URL: <http://www.sphere.univ-paris-diderot.fr/spip.php?article1946&lang=en>

2016 ***Lévy-Bruhl’s theory on ‘prelogical mentality’ and its influence on the field of history and philosophy of science*** – Lecture given in English, as part of the international “Writing histories of ancient mathematics – Reflecting on past practices and opening the future, 18th – 21st centuries”, Paris, Conference organized by the ERC “Mathematical Sciences in Ancient World” (SAW) project, October 24-28

Pratiques mathématiques dans un contexte de tradition orale et leurs usages pour une éducation mathématique culturellement située (Mathematical practices in an oral tradition context and their value for a culturally-related mathematics education) – **Plenary Lecture** given at the opening of the "Didactics of Mathematics Group from Quebec" Conference, Ottawa, May 30 – June 1.

2015 ***String figures as mathematics: a study in ethnomathematics*** – Association for the Philosophy of Mathematical Practice (APMP) International Conference, Paris, November 4.

Sand drawings from Vanuatu: Algorithmic Practices in Oral Tradition Societies – Invitation (Invited speaker), Conference "Computing in Europe" – "History and Philosophy of Computing" Session , Bucarest, June 29 – July 3.

Politics in Ethnomathematics: An Epistemological, Historical and Educational Perspective – Lecture given in English with Karen François, as part of the international conference "Mathematics, Education and Society", Portland, USA, June 21-26

Reassembling mathematical practices: A philosophico-anthropological approach – Lecture given in English with Karen François, as part of the international conference "Culture of Mathematics IV", New Delhi, India, March 22-25.

2008 ***On some questions raised by ethnomathematics for the history of mathematics in Europe as much as in Asia*** – Lecture given in English with Agathe Keller as part of the workshop *Actors' and observers' categories in East and West, changing typologies of science in practice and scholarship* organized by the Needham Research Institute, Cambridge, Dec.5.

SEMINARS AND NATIONAL CONFERENCES

2019 ***Activités géométriques et algorithmiques dans des sociétés de tradition orale : le cas des dessins sur le sable du Nord de l’île d’Ambrym*** (Vanuatu) – Lecture given as part of the

“Sciences Humaines et Sociales –SHS” Seminar, Institut de Recherche pour le Développement (IRD), Nouméa, April 11.

- 2018 *Ethnomathématique des dessins sur le sable du Nord Ambrym (Vanuatu)* – Lecture given as part of the “Practices, Arifacts and Mathematics: ethnomathematics, Anthropology, History” Seminar, Ecole des Hautes Etudes en Sciences Sociales (EHESS), June 6.

Initiation aux « jeux de ficelle » : aperçu de la dimension algorithmique de cette pratique. – Workshop organized (with Céline Petit) as part of the “Practices, Arifacts and Mathematics: ethnomathematics, Anthropology, History” Seminar, Ecole des Hautes Etudes en Sciences Sociales (EHESS), February 7.

Les jeux de ficelle : aspects anthropologiques et mathématiques (ANR ETKnoS) – Lecture given (with Céline Petit) as part of the “Practices, Arifacts and Mathematics: ethnomathematics, Anthropology, History” Seminar, Ecole des Hautes Etudes en Sciences Sociales (EHESS), March 7. URL: <http://www.sphere.univ-paris-diderot.fr/spip.php?article1105>

- 2017 *Modélisation des savoir-faire (ethno-)mathématiques : le cas des jeux de ficelle* – Lecture given as part of the « Savoir-faire mathématiques » Conference, “Philosophies et Rationalités” laboratory, Clermont Ferrand University, September 14-15. URL: <http://phier.uca.fr/article186.html>

Elaborer/encoder/transmettre différentes formes de savoir dans la réalisation de figures de ficelle – Lecture given as part of the “Pratiques, artefacts et mathématiques. Ethnomathématique, anthropologie, histoire” Seminar, EHESS, May 17. URL: <https://enseignements-2016.ehess.fr/2016/ue/1758/>

Etude mathématique des jeux de ficelle : contribution de quelques mathématiciens du 20^e siècle – Lecture given as part of the “Histoire des jeux et de leurs théories mathématiques”, Lille 1 University, May 15. URL:

<https://stl.univ-lille.fr/lagenda/agenda/seminaire-histoire-des-jeux-et-de-leurs-theories-mathematiques-6/>

Introduction à l’ethmathématique – Lecture given (with Céline Petit) as part of the “Pratiques, artefacts et mathématiques. Ethnomathématique, anthropologie, histoire” Seminar, EHESS, March 3. URL: <https://enseignements-2016.ehess.fr/2016/ue/1758/>

Ethmathématique(s) – Lecture given as part of the “Doctorants en histoire des sciences”. Ethnomathématique, anthropologie, histoire” Seminar, EHESS, January 31.

- 2016 *Qu’est-ce que les numérations utilisées dans les sociétés dites ‘primitives’ ont de ‘concret’?* – Lecture given in English as part of the “Une approche critique de l’opposition entre ‘nombres concrets’ et ‘nombres abstraits’ : points de vue anthropologique, historique, et didactique” Workshop, organized by the SPHERE “History and Philosophy of Mathematics” Seminar, November 14.

<http://www.sphere.univ-paris-diderot.fr/spip.php?article797#14-11-2016>

Programmer les dessins sur le sable de Vanuatu avec Logo : nouvelle perspective d’une recherche ethnomathématique (programming sand drawings from Vanuatu : novel perspective in ethnomathematics) – Lecture given with Alban Da Silva as part of the “Code

source" (Source code), "History of science and Philosophy" laboratory (Archives Poincaré, Nancy Univ.), Paris, May 25.

Readings of "Primitive Culture", Edward Tylor (1871): 'The science of Culture' and 'The art of counting' – Lecture given as part of the SPHERE "Critical reflections on the usages of the Concepts of 'Practice' and 'Culture' in History and Philosophy of Science" Seminar, Paris, May 4.

<http://www.sphere.univ-paris-diderot.fr/spip.php?article1120>

Estimating quantities of yams in the Trobriand Islands – Lecture given in English as part of the "Mathematical work on measurement units" Workshop, organized by the ERC "Mathematical Sciences in Ancient World" (SAW) project and the SPHERE "History and Philosophy of Mathematics" Seminar, Paris, April 4.

- 2015 ***Modéliser les jeux de ficelle : une recherche en ethnomathématique*** (Modelling string figure-making : a research in ethnomathematics) – Session "Mathématiques et jeux : histoires croisées" (Mathematics and Games : connected history), "History of Mathematics" Seminar from the Henri Poincaré Institute, Paris, December 18.

Des prémices d'une anthropologie des pratiques mathématiques à la constitution d'un nouveau champ disciplinaire : l'ethnomathématique (From the premises of an anthropology of mathematical practices to a novel disciplinary field : ethnomathematics) – Lecture given with Céline Petit, "Histoire des sciences humaines et sociales" (History of Humanities and Social sciences) Conference, ENS Ulm, Paris, November 6.

"Pratiques mathématiques dans un contexte de tradition orale : le cas des jeux de ficelle et des dessins sur le sable de Vanuatu" (Mathematical practices in an oral tradition context: the case of string figure-making and sand drawings), Centre de Recherche et de Documentation sur l'Océanie (CREDO), February 13.

Pratiques mathématiques dans un contexte de tradition orale : le cas des jeux de ficelle et des dessins sur le sable de Vanuatu (Mathematical practices in an oral tradition context: the case of string figure-making and sand drawings) – Centre de Recherche et de Documentation sur l'Océanie (CREDO), February 13.

- 2014 ***Sand drawings and string figures from Vanuatu: comparative study of mathematical practices*** – "Art of Judgement" Seminar, Max Planck Institute for History of Science, Berlin, September 29.

Ethnomathématiques des jeux de ficelle trobriandais (Ethnomathematics of Trobriander string figures) – seminar André Revuz didactic laboratory (LDAR, Univ. Paris 7), February 14.

- 2013 ***Paroles et algorithmes dans les jeux de ficelle trobriandais*** (Words and algorithms within Trobriander string figures) – Lecture given as part of the Symposium "e-Toile Pacifique", organized by the "Centre de recherche et de documentation sur l'Océanie" (CREDO, Research and Documentation Centre on Oceania), Paris, October 3.

Ethnomathematics seminar (EHESS, Lab. SPHERE) – 3 sessions:

- *L'ethnomathématique, de sa préhistoire aux travaux fondateurs* (Ethnomathematics, since its prehistory to the seminal works), March 20.

- *Qu'est-ce qu'une activité à caractère géométrique ?* (How is an activity recognized as geometrical?), March 27.

- *Des savoirs autochtones pour enseigner les mathématiques* (Indigenous knowledge for teaching mathematics), April 17.

Activités à caractère mathématique dans des sociétés de tradition orale : le cas des jeux de ficelle (Mathematical activities in an oral traditional context: the case of string figure-making) – Lecture given as part of the "Atelier d'histoire des sciences" of the Pierre et Marie Curie University, April 8.

2012 *Les jeux de ficelle : des algorithmes pour mémoriser et exprimer certains savoirs ? Quelques éléments de comparaison sur trois aires culturelles* (String figure-making: algorithms for memorizing and expressing knowledge: a comparative study of three cultural areas) – Lecture given with anthropologists Céline Petit and Ana Guevara as part of the workshop *Arts de mémoire et pratiques à caractère mathématique* (Art of memory and mathematical practices), organized by the SPHERE laboratory research group "Ethnomathematics of string figures", Paris Diderot University / CNRS, December 3.

Ethnomathématiques des jeux de ficelle (Ethnomathematics of string figures) – "History and Epistemology" seminar of the Institute of Research in Mathematical Education (IREM), March 31.

Les jeux de ficelle : un art de mémoire ? (String figures: Art of Memory?) – Seminar "Anthropology of Memory" coordinated by Carlo Severi, *Ecoles des Hautes Etudes en Sciences Sociales* (EHESS), January 25.

2011 *Les "opérations élémentaires" des algorithmes de jeux de ficelle* (The elementary operations in the string figure algorithms) – Lecture given as part of the "Elementary operations, Fundamental operations" workshop during the "History and Philosophy of mathematics" seminar, SPHERE, November 14.

2009 *Les figures de ficelle : un objet ethnomathématique* (String Figures: an ethnomathematical object) – Lecture given as part of the *Histoire des sciences* workshop organized by the *Ecole Centrale*, Lyon, June 4.

2008 *Etude mathématique des jeux de ficelle* (Mathematical study of string figures) – "*Les textiles comme source. Étude de cas*" (Textile as sources: case study) seminar, EHESS, February 7.

Corpus de terrain et études mathématiques des jeux de ficelle (Fieldwork and mathematical study of string figures) – Lecture given as part of the workshop entitled *Ethnomathematics in the field* co-organized as part of the REHSEIS "Ethnomathematics" seminar and the "History of Mathematics" seminar at the Henri Poincaré Institute (IHP), May 10.

2007 **An ethnomathematical approach for string figure algorithms** – Lecture given in English at the University of Papua New Guinea (UPNG, Port Moresby), August 24.

La constitution de chapitres de récréations mathématiques chez Rouse Ball – Lecture given as part of the workshop entitled "Mathematical Recreations" organized as part of the "History and philosophy of mathematics" seminar at REHSEIS, February 12.

- 2006 *Jeux de ficelle sur le terrain* (String figures in the field) – REHSEIS "Ethnomathematics" seminar. In collaboration with Céline Petit, Ph.D. Candidate in Ethnology, Paris X – Nanterre University, June 7.
- 2005 *Les jeux de ficelle* – REHSEIS "Ethnomathematics" seminar, May 26.

SCIENCE OUTREACH ACTIVITIES

ARTICLES

"String Games: Indicators of Mathematical Activity", *Bulletin of the International String Figure Association*, Vol.15, 2008, p. 52-69.

"Les jeux de ficelle : témoins d'une activité mathématique", *CultureMATH - ENS Ulm Paris*, 2007.
Online URL :
<http://culturemath.ens.fr/content/les-jeux-de-ficelle-temoins-dune-activite-mathematique-2081>

In collaboration with Keller Agathe, historian of mathematics (CNRS),
"Apprendre l'anglais en découvrant les mathématiques de l'Inde ancienne. Compte-rendu d'une expérience pédagogique", *CultureMATH - ENS Ulm Paris*, 2007. Online URL :
<http://culturemath.ens.fr/content/apprendre-langlais-en-decouvrant-les-mathematiques-dinde-ancienne-2108>

"Les jeux de ficelle", Special issue of the revue *Pour la Science*, April 2005.

LECTURES AND WORKSHOPS

2019 *Jeux de ficelle et Tressages de Mélanésie : ethnomathématique et cognition humaine* – Public Lecture given as part of the "Haizebegi" Festival, Salle Antoine d'Abbadie, Place Sokoburu, Hendaye, October 12. URL:
<https://www.fetedelascience.fr/pid35201/fiche-evenement.html?identifiant=59459781>

Un aperçu de l'ethnomathématique : des prémices à la constitution d'un nouveau champ disciplinaire – Lecture given as part of the "Les ethnomathématiques à l'école" workshop, Teacher Continuing Education "Langues et cultures océaniques", ESPE, University of New Caledonia, April 12.

Ethnomathématiques des jeux de ficelle de Nouvelle-Calédonie – Workshop organized as part of the "Les ethnomathématiques à l'école" one-day workshop, Teacher Continuing Education "Langues et cultures océaniques", ESPE, University of New Caledonia, April 12.

Pāngarau ā-Iwi Whai (Ethnomathematics of Maori String Figures) –Lecture given as part of the *Pāngarau ā-Iwi* (Ethnomathematics Wānanga) workshop, University of Canterbury & *Ngati Wheke* Maori Community, June 6.

2017 *Mathématiques dans des sociétés orales : Le cas des jeux de ficelle et des dessins sur le sable mélanésien* – Public Lecture given as part of the "Researchers/Teachers Meetings", La maison des sciences, Châtenay-Malabry, June 6.

- 2015 ***String Figures as Mathematics? An Anthropological Approach to String Figure-making in Oral Tradition Societies (Springer, 2015)*** – Presentation of my book and discussions with the students of the "History and philosophy of science" (LOPHISS-SPH) MASTER, Paris Diderot University, as part of the "Entretiens Histoire et Philosophie des Sciences (HPS)", Paris, December 4.
- String Figures as Mathematics? An Anthropological Approach to String Figure-making in Oral Tradition Societies (Springer, 2015)*** – Presentation of my book as part of the session "Mesures, motifs, figures. Dialogue entre mathématique et ethnologie" (Measures, motives, patterns. Dialogue between mathematics and ethnology), conducted by Dominique Casajus, Rentrée littéraire de la MAE, Paris Ouest Nanterre University, November 18. URL : <http://www.mae.u-paris10.fr/rentree-litteraire-de-la-mae-17-20-novembre-2015/>
- 2013 ***De l'eau dans l'histoire des sciences*** (Water in the History of Science) – Program of six interdisciplinary workshops and two lectures (that I coordinated) for elementary and secondary school pupils, *Fête de la science*, Paris Diderot University, October 10-13. <http://www.sphere.univ-paris-diderot.fr/spip.php?article472>
- 2012 ***Histoire des sciences sans frontières*** (History of Science without Frontiers) – Program of six interdisciplinary workshops (that I coordinated) for elementary and secondary school pupils, *Fête de la science*, Paris Diderot University, October 10-13. <http://www.sphere.univ-paris-diderot.fr/spip.php?article1200>
- Les jeux de ficelle : faire des maths autrement ?*** (String figure-making : doing math in a different way) – In collaboration with Ana Guevara and Céline Petit, anthropologists. Workshop for primary school pupils as part of the *Ateliers de mathématiques sans frontières* science awareness program, *Fête de la science*, Paris Diderot University, October 11.
- 2011 ***Histoire des sciences sous toutes ses facettes*** (History of Science's multiple facets) – Program of seven interdisciplinary workshops (that I coordinated) for elementary and secondary school pupils, *Fête de la science*, Paris Diderot University, October 13. <http://www.sphere.univ-paris-diderot.fr/spip.php?article1206>
- Les jeux de ficelle, une activité mathématique ?*** (String figure-making : a mathematical activity?) – Lecture given at the J-B Corot high-school, Savigny sur Orge (France). Audience: six high-school classes, math teachers and inspectors in mathematics, March 18.
- 2009 ***Jeux de ficelle et anthropologie*** (String figures and anthropology) – In collaboration with Sylvie Teveny, ethnologist of the *Inuksuk - Espace culturel inuit* association - Workshop organized as part of the *Ateliers de mathématiques d'ici et d'ailleurs* (Mathematics Here and Elsewhere Workshop) science awareness program (that I coordinated), *Fête de la science*, University Paris Diderot, November 19 - 20.
- 2008 ***Formaliser les figures de ficelle*** (Formalization of String Figures) – Workshop for high-school science classes, Paris Diderot University, *Fête de la science*, November 20.
- 2007 ***Kaninikula : une activité mathématique des îles Trobriand*** (Kaninikula : a mathematical practice in the Trobriand Islands)– Lecture given in collaboration with the *Inuksuk – Espace culturel inuit* association, as part of the *Partage et dissémination de la culture scientifique*

et technique Ile de France Region program. Audience: 200 students of the J-B Corot high school, Savigny sur Orge, December 11.

Les jeux de ficelle : une perspective ethnomathématique (String figures : an ethnomathematical perspective) – Lecture given with Céline Petit, anthropologist, *Fête de la science*, Paris Diderot University. Audience: 2 high-school classes and the general public. Lecture extended by an ethnographical photographic exhibition, October 12.

2006 ***Les jeux de ficelle, une activité mathématique*** – with Céline Petit, anthropologist. Lecture – Slide show – Picture exhibition – workshops. Program entitled *Vulgarisation d'une recherche d'ethnomathématique* (Popularization of an ethnomathematical research), organized in collaboration with the *Inuksuk - Espace culturel inuit* association and supported by the Ile-de-France Region as part of the *Promotion de la culture scientifique, technique et citoyenne en Ile-de-France* program, May 19 - 20, November 3.

PROFESSIONAL EXPERIENCE RELATED TO TEACHING

2019 ***Atelier d'ethnomathématiques*** (Ethnomathematics workshop) – Workshop organized with George Tauenearu, Training Course for mathematics teachers, Institut de Formation des Enseignants de Vanuatu, Port Vila, December 9-13.

2017 ***Approche renouvelée en ethnomathématique*** – Course given as part of the Master in History and Philosophy of Science (*LOPHISS-SPH*), Course “Sociology of Science”, Paris Diderot University, February 10.

2008 – 2013: EDITOR of the Online CultureMATH journal

.....
CultureMATH is an online journal published by the *Ecole Normale Supérieure* of Paris (Mathematics and Applications Department) and the French Ministry of Education.

CultureMATH offers high-level scientific articles and video documents that deal with mathematics, history or philosophy of mathematics, and are written or made by specialists. This journal is dedicated to permanent secondary school mathematics teachers in continuing education. It aims to make bridges between secondary education and the world of research in mathematics, helping teachers to bring recent research into the classroom. This position gave me the opportunity to acquire a significant knowledge of editorial work, as well as to study several topics that are closely linked to mathematics and their history.

<http://www.math.ens.fr/culturemath/>

2012

.....
Courses in Ethnomathematics – given to Ph.D. students and Teachers at La Reunion University and secondary school teachers, La Reunion University, April 17-18.

This course was an introduction to ethnomathematics. It started with the analysis of various 19th and early 20th centuries precursor works, in the fields of anthropology, philosophy and mathematics, that dealt with the issue of the existence of mathematical thinking in small-scale societies of oral tradition. The course evolved into an introduction to the seminal works published by the first ethnomathematicians in the 1970s and 1980s. Finally, it focused on more recent works in ethnomathematics carried out either in an ethnographical or an educational perspective.

1985 – 2008: MATH TEACHER

1992 – **Recruited by the French National Ministry of Education** as a “Agrégé” tenured mathematics teacher after having obtained the French ‘Agrégation’ in mathematics.

1995 – 2008

High school mathematics teacher - Lycée J.B. Corot, Savigny sur Orge, France

12 years teaching math to science specialization classes, 8 years to economics and social sciences specialization classes, 5 years to service sector specialization classes, 10 years to literature specialization classes, 4 years to electrotechnology and mechanics specialization classes and mathematics specialization classes.

Authorization to teach mathematics in English to high-school “European specialization classes” (2000), i.e. classes in which a significant part of the courses are not given in French but in another language.

Teaching in Scientific specialization classes’ "travaux personnels encadrés" (TPE, "tutored personal work") (1998-2008)

1985 – 1995

High school mathematics teacher - Lycées C. Ader, Marie Laurencin, J.P. Timbaud, Collège A. Maurois (91), Collège de Luganville (Esperitu Santo, **Vanuatu**, South Pacific), Lycée Saint Charles (91).

OTHER ACTIVITIES

Classical and jazz Guitar: Third level Jazz Academic Studies (2000-2005), Lily Boulanger Music School, Paris 10^e.

Swimming