

# CV Summary - Prof. Dr. Nicolas Mathevon



University of Saint-Etienne, University of Lyon, Equipe de Neuro-Ethologie Sensorielle ENES  
Centre de Recherche en Neurosciences de Lyon CNRS UMR5292 INSERM UMRS1028  
23 rue Michelon, 42023 Saint-Etienne Cedex 2, France - ORCID 0000-0003-0219-6601  
Tel: 33 (0)4 77 48 50 22 - mathevon@univ-st-etienne.fr  
Born 7 August 1967 (53 years-old); married, three children (25, 22, 19 years old).

## Education

2002 Habilitation à diriger les Recherches, University of Lyon/Saint-Etienne, France  
1996 Ph.D. in Animal Behavior (summa cum laude), University of Orsay-Paris XI, France  
1993 Master degree in Biology and Physiology (ranked 2<sup>nd</sup>), University Lyon I, France  
1991 Teaching Degree (*Agrégation*) in Life and Earth Sciences (ranked 8<sup>th</sup> over 1500), France

## Current positions

2016-present Senior member, Institut universitaire de France (N.B. less than 1% of French university academics have a senior IUF position).  
2011-present Full Professor (*Distinguished*, PR EX2), Neurosciences and Animal Behavior (Bioacoustics), University of Lyon, Saint-Etienne, France  
2002-present Director of the ENES Research Team (CNRS UMR5292 INSERM UMRS1028; <https://www.eneslab.com/> ; Ranked “A+” (highest rank) by the High Council for Evaluation of Research and Higher Education. The ENES Lab is a member of the *Scientific Network of Excellence* LABEX CeLyA (Center of Acoustics, University of Lyon).

## Previous positions

2015-2016 Visiting Full Professor, Hunter College (Dpt of Psychology), City University of New York, New York, USA  
2010-2012 Invited Senior Researcher, Centre National de la Recherche Scientifique (CNRS)  
2008-2009 Miller Visiting Professor, University of California, Berkeley, USA  
2005-2010 Junior member, Institut universitaire de France  
2005-2011 Full Professor, University of Lyon/Saint-Etienne, France  
1999-2005 Associate Professor, University of Lyon/Saint-Etienne, France

## Fellowships and Awards

2004-present Bonus for Outstanding Research (Prime d'Excellence Scientifique PES/PEDR)  
French National Council of Universities (N.B. this award is re-evaluated every four years)  
2005 & 2015 Nominated member of the Institut universitaire de France (IUF)  
2017 *Chevalier des Palmes Académiques* (French Honorary Title for Outstanding Career in Education and Research)  
2011 Nominated “Distinguished Professor” by the French National Council of Universities  
2007 Nominated “First Class Professor” by the French National Council of Universities

## Teaching activities

2017-present in charge of the “Bioacoustic Winter School” (2-weeks intensive graduate course, Univ.Lyon/St-Etienne)  
2011-present in charge of the graduate cursus (master) “Ethology”, Univ.Lyon/St-Etienne  
2005-present Full Professor at University of Lyon/Saint-Etienne, France  
Courses (master level) in Animal Behaviour, Neuro-Ethology  
2000-present Introductory Course in Animal Behaviour, *Agrégation* cursus, Ecole Normale Supérieure de Lyon, France

## Supervision of Graduate (PhD) students and postdoctoral fellows

2002-present 10 Postdocs, 16 PhD, numerous Master students.  
Main professional achievements of supervised students: Senior Researcher, CNRS, France (I. Charrier); Full Professor, Sorbonne University, France (C. Vignal); Junior Researcher, CEREMA, France (C. Curé); Research Manager, University of Bordeaux, France (A. Vergne); Assistant Professor, Portsmouth University, UK (E. Gustaffson); Scientific Manager Animal Experimentation Platform, Université Catholique de Louvain, Belgium (S. Mouterde).

## Organization of Scientific Meetings

2018 Co-Chairman “International BioAcoustics Congress IBAC2018”, Brighton, UK  
2016 Co-Chairman “IBAC2016”, Haridwar, India  
2012 Organizer, Congress of the French Society for the Study of Animal Behavior, Saint-Etienne, mai 2012, 135 participants  
2011 Co-organizer, XXIII<sup>e</sup> International BioAcoustic Congress  
La Rochelle, septembre 2011, 174 participants  
2010 Co-organizer, Annual Conference of the Institut universitaire de France  
Saint-Etienne, mars 2010, 120 participants  
2010-2012 Co-organizer, “The differences between the sexes: a cross-disciplinary approach”  
Interdisciplinary workshop, Saint-Etienne (3 \* 2 days; 60 participants).

## Institutional responsibilities

2017-present Member of the Executive Committee of the Labex CeLyA  
2008-present Member of the Scientific Council, University of Lyon/Saint-Etienne, France  
2012-2018 Member of the French National Council of Universities (CNU 69, Neurosciences), France  
2010-2012 Member of the Advisory Board, Institut universitaire de France (IUF), France  
2006-2011 Member of the “Agrégation” Evaluation Committee, France.

## Reviewing activities

Referee for international journals: Animal Behaviour, Behaviour, Behavioural Processes, BMC Evolutionary Biology, Journal of the Acoustical Society of America, Journal of Experimental Biology, Journal of Field Ornithology, Marine Mammals Science...

In charge of 4-6 grant reviews/year for each of the following organisms: Agence Nationale de la Recherche (ANR, France), High Council for Evaluation of Research and Higher Education (Hceres, France), Biotechnology and Biological Sciences Research Council (BBSRC, UK), Israel Science Foundation, University of Cyprus, etc

Numerous participations to PhD and Habilitation evaluation boards

## Scientific Societies

2017-present **President (elected) of the International BioAcoustics Society IBAC**

Member of the IUCN-SSC Crocodile Specialist Group, Animal Behavior Society (ABS), French Society of Acoustics (SFA), French Society for the Study of Animal Behaviour (SFECA).

## Research interests

**Function and Evolution of Acoustic Communication in Animals and Humans.**

**Major collaborations:** Dr. I Charrier, acoustic communication in marine mammals, CNRS, France; Dr. N Grimault, crocodylian bioacoustics, CNRS; Dr. F Jouen, human baby cries, EPHE, France; Dr. F Levréro, human baby cries, Univ Lyon/Saint-Etienne, France; Prof. H Patural, long-term monitoring of cries in neonates, Univ Lyon/Saint-Etienne; Dr. R Peyron, brain activation induced by human baby's cries, Univ Lyon/Saint-Etienne; Prof D Reby, Human non-verbal acoustic communication, Univ. Lyon/Saint-Etienne; Dr. C Reichmuth, acoustic communication in the elephant seal, Univ Calif, Santa Cruz, USA; Prof F Theunissen, information coding in acoustic signals, Univ Calif, Berkeley, USA.

## Grants (PI)

2020-2024 The baby's cry: an integrative approach. **Agence Nationale de la Recherche, € 366,345.**

2016-2021 The social and environmental fabric of acoustic communication. **Institut universitaire de France, € 75,000.**

2019-2020 Between air and water: The acoustic world of crocodiles. **National Geographic Society, \$ 24,750.**

2019-2020 Sound localization in crocodylians. **Université de Saint-Etienne, € 9,000,**

2017-2018 The baby's cry: Acoustic characteristics, physiological correlates in babies and brain perception in adult listeners. **Foundation of the University of Saint-Etienne, € 20,000.**

2014-2015 Mother-young acoustic communication in crocodylians. **National Geographic Society, \$ 20,900.**

2012-2013; 2017 The Human baby's cry. **Université de Saint-Etienne, € 25,400, € 15,000.**

2011-2015 Acoustic partnership: vocal communication at the cornerstone of monogamy in birds. **Agence Nationale de la Recherche, € 500,000.**

2010-2012 Auditory scene analysis in the songbird. **France-Berkeley Fund, \$10,000.**

2008-2009 Visiting Miller Professorship, University of California, Berkeley. **Miller Institute, \$39,000.**

2007-2010 Birds' voices: multi-levels integration of neuronal signals during vocal recognition in a songbird communication network.

**Agence Nationale de la Recherche, €234,000.**

2006-2010 Evolution of animal communication. **Institut universitaire de France, € 75,000.**

2005-2006 Vocal recognition in songbirds. **Région Rhône-Alpes, €40,000.**

2002-2004 Vocal recognition in songbirds: ethological and biophotonical approach. **CNRS, €60,000.**

## Representative publications (on a total of 56 papers since 2010; 95 in total; h-index = 35)

1. Charrier I, Mathevon N, Jouventin P., 2001. Mother's voice recognition by seal pups. **Nature**, 412:873.
2. Vignal C, Mathevon N, Mottin S, 2004. Audience drives male songbird response to partner's voice. **Nature**, 430:448-451.
3. Vergne A, Mathevon N, 2008. Crocodile egg sounds signal hatching time. **Current Biology**, 18:R513-R514.
4. Gustafsson E, Levréro F, Reby D, Mathevon N, 2013. Fathers are just as good as mothers at recognizing the cries of their baby. **Nature Communications**, 4:1698.
5. Mouterde S, Theunissen F, Elie JE, Mathevon N, 2014. Learning to cope with degraded sounds: Female zebra finches can improve their expertise at discriminating between male voices at long distance. **Journal of Experimental Biology**, 217:3169-3177.
6. Ben-Aderet T, Gallego-Abenza M, Reby D, Mathevon N, 2017. Dog-directed speech: why do we use it and do dogs pay attention to it? **Proceedings of the Royal Society B**, 284 :20162429.
7. Mouterde S, Elie J, Mathevon N, Theunissen F, 2017. Single neurons in the avian auditory cortex encode individual identity and propagation distance in naturally degraded communication calls. **The Journal of Neuroscience**, 37:3491-3510.
8. Mathevon N, Casey C, Reichmuth C, Charrier I, 2017. Northern elephant seals memorize the rhythm and timbre of their rivals' voices. **Current Biology**, 27:2352-2356.
9. Koutseff A, Reby D, Martin O, Levréro F, Patural H, Mathevon N, 2018. The acoustic space of pain: Cries as indicators of distress recovering dynamics in preverbal infants. **Bioacoustics**, 27:313-325.
10. Marin-Cudraz T, Muffat-Joly B, Novoa C, Aubry P, Desmet JF, Mahamoud-Issa M, Nicolè F, Van Niekerk MH, Mathevon N, Sèbe F, 2019. Acoustic monitoring of rock ptarmigan: A multi-year comparison with point-count protocol. **Ecological Indicators**, 101:710-719.
11. Bouchet H, Plat A, Levréro F, Reby D, Patural H, Mathevon N, 2020. Baby cry recognition is independent of motherhood but improved by experience and exposure. **Proceedings of the Royal Society B**, 287:20192499.
12. Gallego-Abenza M, Mathevon N, Wheatcroft, 2020. Experience modulates an insect's response to anthropogenic noise. **Behavioral Ecology**, 31:90-96.
13. García M, Theunissen F, Sèbe F, Clavel J, Ravignani A, Marin-Cudraz T, Fuchs J, Mathevon N, 2020. Evolution of communication signals and information during species radiation. **Nature Communications**, 11:4970.
14. Book: Aubin T, Mathevon N (Eds), 2020. Coding strategies in Vertebrate acoustic communication. Springer.

**Conferences** Invited conferences: Columbia univ, NY; Brooklyn College, NY; Queens' College, NY; Univ Calif, Berkeley; National Geographic Society, Washington; Max Planck Institute for Ornithology... Numerous oral communications in international conferences; numerous posters.

**Public outreach** Numerous articles in popular journals (The New York Times, Le Monde, etc); Participation to movies; Numerous conferences for the general public in France and abroad; Numerous conferences in high schools; Interviews -radio, TV. Book: Mathevon N, 2021. Les animaux parlent (Animal talks). 450 pp. Humensis. (English version in prep).