

## Sebastian SOSA

### PhD in Ethology, Primatology & Social Network



Birthdate: Dec 29<sup>th</sup> 1986

Nationality: French-Colombian

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[Website](#)

[Google Scholar](#)

[ResearchGate](#)

Creation and development of research projects

Scientific rigor

Self-education

Teamwork

Programming R

### EDUCATION & INTERNSHIP

- **2010-2014:** Ph.D. Thesis (summa cum laude) in Ethology, Primatology & Social Network, in [Grupo de Conducta Adaptativa e Interaccion](#). Study on the structuration of a group of nonhuman primate *Macaca sylvanus*, with Vicenç Quera and Francesc Salvador, Universidad de Barcelona, Spain.
- **January-June 2010:** Internship at [EthoS](#), Rennes, France. Study on the temperament in cockroaches *Blattella germanica* and *Nauphoeta cinerea*, with Dr. Colette Rivault.
- **2009-2010:** [MA II Human and animal behavior](#), University of Rennes I, France.
- **February-May 2009:** Internship at [LECD](#), Nanterre, France. Study on the influence of anxiety on human voice acoustic parameters, with Dr. Michel Kreutzer and Dr. Frédérique Hallé
- **2008-2009:** [MA I Ethology-Research](#), University of Paris XIII, France.
- **August 2008:** Internship at [CRCA](#), Toulouse, France. Study on the memory in mice, with Dr. Jonathan Ceccom.
- **May-July 2008:** Internship at [CRCA](#), Toulouse, France. Study on spatial cognition in ant *Gigantiops destructor*, with Dr. Guy Beugnon, Dr. Antoine Wystrach and Dr. Ken Cheng. Article published in Journal of Experimental Psychology: Animal Behavior Processes.
- **2007-2008:** [BA Organisms, populations and ecosystems biology](#), University Paul Sabatier, Toulouse, France.

### EDITING AND CONFERENCE ORGANIZATION

- **2017-until now:** Main organizer of the symposium ‘Social Network Analysis in life science’, XXXVIII Sunbelt Conference.
- **2017-until now:** Invited Editor in the journal Primates for the special issue ‘Social networks analysis in primates, a multilevel perspective’.

- **2017:** Reviewer for the journal Royal Society Open Science.
- **2017:** Co-organizer of the symposium ‘Social networks in primates: from individuals’ attributes to network diffusion’, 7<sup>th</sup> European Federation for Primatology Meeting.

## **PUBLICATIONS AS FIRST AUTHOR OR SECOND FIRST AUTHOR**

- Sosa, S., Pelé, M., Debergue, E., Kuntz, C., Keller, B., Robic, F., Siegwalt-Baudin, F., Richer, C., Peng, Z., Ramos, A., Sueur, C. (*in press*). Impact of group management and transfer on individual sociality in Highland cattle (*Bos Taurus*). *Applied Animal Behaviour Science*.
- Borgeaud, C., Sosa, S., Sueur, C., & Bshary, R. (2017). [The influence of demographic variation on social network stability in wild vervet monkeys](#). *Animal Behaviour*, 134, 155-165.
- Liao, Z., Sosa, S., Wu, C., & Zhang, P. (2017). [The influence of age on wild rhesus macaques' affiliative social interactions](#). *American journal of primatology*.
- Sosa S., Zhang P. & Cabanes G. (2017). [Social networks dynamics revealed by temporal analysis: An example in a non-human primate \(\*Macaca sylvanus\*\) in “La Forêt des Singes”](#). *American journal of primatology*, 79(6).
- Borgeaud C., Sosa S., Bshary R., Sueur C. & Van de Waal, E. (2016). [Intergroup variation of social relationships in wild vervet monkeys: a dynamic network approach](#). *Frontiers in Psychology*, 7.
- Sosa S. (2016). [The Influence of Gender, Age, Matriline and Hierarchical Rank on Individual Social Position, Role and Interactional Patterns in \*Macaca sylvanus\* at ‘La Forêt des Singes’: A Multilevel Social Network Approach](#). *Frontiers in psychology*, 7.
- Sosa S. (2015). [Using individual attributes to predict hierarchical position in a \*Macaca sylvanus\* group at ‘La Forêt des Singes’](#). *Rocamadour. Behavioural Processes*, Vol. 111, 109-117.
- Sosa S. (2014). [Structural architecture of social network of a non-human primate \(\*Macaca sylvanus\*\): A study of its topology in 'La Forêt des Singes'](#). *Rocamadour. Folia Primatologica*, Vol. 85, No.3, 154-163.

## **PUBLICATIONS AS CO-AUTHOR**

- Puga-Gonzalez, I.; Ostner, J.; Schülke, O.; Sosa, S.; Thierry, B.; Sueur, C. (*in press*). Mechanisms of reciprocity and diversity in social networks: a modelling and comparative approach. *Behavioral Ecology*.
- Balasubramaniam, K. N., Beisner, B. A., Berman, C. M., De Marco, A., Duboscq, J., Koirala, S., ... & Ogawa, H. (2018). [The influence of phylogeny, social style, and sociodemographic factors on macaque social network structure](#). *American journal of primatology*, 80(1).

- Boucherie, P. H., Sosa, S., Pasquaretta, C., & Dufour, V. (2016). [A longitudinal network analysis of social dynamics in rooks \*Corvus frugilegus\*: repeated group modifications do not affect social network in captive rooks](#). *Current zoology*, 63(4), 379-388.
- Wystrach A., Cheng K., Sosa, S. & Beugnon G. (2011). [Geometry, features, and panoramic views: ants in rectangular arenas](#). *Journal of Experimental Psychology: Animal Behavior Processes*, Vol. 37, No. 4, 420-435.

## **ABSTRACTS CONGRESSES**

- Puga-Gonzalez, I., Sosa, S., & Sueur, C. (2017). [Understanding resilience in animal networks: the case of the macaque's social style](#). *6<sup>th</sup> International Conference on Complex Networks & Their Applications*.
- Sosa, S., Beisner, B., Balasubramaniam, K., Sueur, C., Zhang, P., & McCowan, B. (2017). [A Mathematical Model to Predict Hierarchical Rank in \*Macaca mulatta\* and \*M. sylvanus\*](#). In *Folia Primatologica* (Vol. 88, No. 2, pp. 99-99). *7<sup>th</sup> European Federation for Primatology Meeting*.
- Puga-Gonzalez, I., Ostner, J., Schuelke, O., Sosa, S., Thierry, B., & Sueur, C. (2017). [Proximate Mechanisms Underlying Primates' Complex Social Networks: A Modelling and Comparative Approach](#). In *Folia Primatologica* (Vol. 88, No. 2, pp. 99-99). *7<sup>th</sup> European Federation for Primatology Meeting*.

## **BOOK CHAPTERS**

- Sosa S. (2018) [Social Network Analysis](#). In: Vonk J., Shackelford T. (eds) *Encyclopedia of Animal Cognition and Behavior*. Springer, Cham.
- Perony N., Sueur C., Sosa S. (2015). [De l'utilité de l'analyse des réseaux sociaux dans l'étude du comportement animal](#). Editions Matériologiques.
- Guillaume J., Charbonneau D., Sosa S., Pasquaretta C. (2015). [L'étude de l'émergence, de l'organisation et de l'évolution des structures de réseau par l'analyse de réseaux dynamiques](#). Editions Matériologiques.
- Duboscq, J., Bret, C., & Sosa, S. (2015). *Primates non humains*. Editions Matériologiques.

## **CONGRESSES**

- Sosa S. (2017). [A multilevel statistical toolkit to study animal social networks: Animal Network Toolkit \(ANT\) R package](#). *Göttinger freilandtage*.
- Sosa, S., Beisner, B., Balasubramaniam, K., Sueur, C., Zhang, P., & McCowan, B. (2017). [A Mathematical Model to Predict Hierarchical Rank in \*Macaca mulatta\* and \*M. sylvanus\*](#). *7th European Federation for Primatology Meeting*.

- **Sosa Sebastian** (2017). *How Social Network Analysis allows a multilevel approach to study animal societies*. China Primatology and Anthropology Young Scholar Forum, Guangzhou, China.
- **Sosa Sebastian** (2017). *Resilience in animal social networks: insights from an individual-based model of primate social behaviour*. Sunbelt, Beijing, China.
- **Sosa Sebastian** (2016). *How Social Network Analysis allows a multilevel approach to study animal societies*. Complex Networks, Marseille, France.
- **Sosa Sebastian** (2018). *How social network analysis allows a multilevel approach to study animal societies*. European Conference on Social Network, Science Po, Paris, France.
- **Sosa S.** (2015). [Social Network Analysis, a multilevel tool to study animal societies for a holistic understanding: From the individual to the global emerging structure](#). *Göttinger freiländertage*.

### Scholarship and grants

GDR Financement colloque (2018). 1000 euros for attending XXXVIII Sunbelt Conference.

### STATISTICAL SOFTWARES

• R • SPSS • Minitab • STATISTICA • SAS • SIENA • Ucinet • Excel

### LANGUAGES

French, Spanish, English

### INTERESTS

- **Creative arts:** [Photography](#) (landscapes, wildlife photography, astrophotography, submarine photography).  
Circus arts
- **Sport:** Swimming  
Capoeira  
Yoga