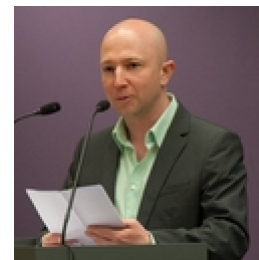


Pr. Dr. André Füzfa  
Namur Institute for Complex Systems  
Department of mathematics



## Employment

### **Namur Institute for Complex Systems**

Namur, Belgium  
21 Apr 2010 → present

### **FNRS Post-doctoral Fellow**

Fonds de la Recherche Scientifique F.R.S.-FNRS  
Brussels, Belgium  
1 Oct 2006 → 30 Sept 2009

### **Post-doctorate**

LUTH, Observatoire de Paris, CNRS UMR 8102, Université Paris Diderot  
Meudon Cedex, France  
1 Jan 2005 → 31 Dec 2006

### **FNRS Research Fellow**

Fonds de la Recherche Scientifique F.R.S.-FNRS  
Brussels, Belgium  
1 Oct 2002 → 30 Sept 2004

### **FRIA Research Fellow**

Fund for Research Training in Industry and Agriculture (FRIA)  
Brussels, Belgium  
1 Oct 2000 → 30 Sept 2002

### **CERN summer student program**

CERN  
Geneva, Switzerland  
30 Jun 1999 → 10 Sept 1999

## Qualifications

Doctor of Science, Instabilités gravitationnelles de champs de Yang-Mills et de champs scalaires dans l'univers primordial, University of Namur  
Award Date: 30 Jun 2004

Master of Mathematical Physics, Université Catholique de Louvain  
Award Date: 30 Sept 2001

Master of Physics, Grade: La plus grande distinction avec les félicitations du Jury, University of Namur  
Award Date: 30 Jun 2000

## Indicateurs bibliométriques

25 articles publiés ; citations : 452 ; h-index: 14 (Source: scopus)

## Prizes

### **Namurois de l'année 2016 (catégorie sciences)**

Fuzfa, A. (Recipient), 2016

### **Prix de vulgarisation scientifique de la Société des Sciences, des Arts et des Lettres du Hainaut**

Fuzfa, A. (Recipient), 2015

### **Prix Wernaers 2013 pour la diffusion des connaissances et la vulgarisation scientifique**

Fuzfa, A. (Recipient), 2013

## **Research output**

### **On the diversity of stationary cosmologies in the first half of the twentieth century**

Fuzfa, A. & Dubois, E.-A., 1 Jan 2019, In: *General Relativity and Gravitation*. 51, 1, 18 p., 11.

### **DEVICES FOR THE DIRECTIONAL EMISSION AND RECEPTION OF GRAVITATIONAL WAVES**

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### **Mimicking Dark Energy with the backreactions of gigaparsec inhomogeneities**

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### **Probing modified gravity with atom-interferometry: A numerical approach**

Schlogel, S., Fuzfa, A. & Clesse, S., 19 May 2016, In: *Physical review D*. 93, 10, 13 p., 104036.

### **Numerical forecasts for lab experiments constraining modified gravity: The chameleon model**

Schlögel, S., Clesse, S. & Füzfa, A., 1 Jan 2018, *14th Marcel Grossman Meeting On Recent Developments in Theoretical and Experimental General Relativity, Astrophysics and Relativistic Field Theories, Proceedings*. Bianchi, M., Jantzen, R. T., Ruffini, R. & Ruffini, R. (eds.). World Scientific Publishing Co Pte Ltd, p. 1259-1264 6 p. (The Fourteenth Marcel Grossmann Meeting).

### **Nonlinear cosmological spherical collapse of quintessence**

Rekier, J., Füzfa, A. & Cordero-Carrión, I., 17 Feb 2016, In: *Physical review D*. 93, 4, 13 p., 043533.

### **How current loops and solenoids curve spacetime**

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### **Fully relativistic non-linear cosmological evolution in spherical symmetry using the BSSN formalism**

Rekier, J., Cordero-Carrión, I. & Fuzfa, A., 16 Jan 2015, In: *Physical Review D - Particles, Fields, Gravitation and Cosmology*. 91, 024025

### **Particlelike solutions in modified gravity: The Higgs monopole**

Schlogel, S., Rinaldi, M., Staelens, F. & Fuzfa, A., 20 Aug 2014, In: *Physical Review D - Particles, Fields, Gravitation and Cosmology*. 90, 4, 19 p., 044056.

### **The Jungle Universe: coupled cosmological models in a Lotka–Volterra framework**

Perez, J., Füzfa, A., Carletti, T., Melot, L. & Guedezounme, S. L., 1 May 2014, In: *General Relativity and Gravitation*. 46, 4, p. 1753 23 p., 46.

### **Are anomalous cosmic flows a challenge for LCDM?**

Bouillot, V., Alimi, J. M., Rasera, Y. & Füzfa, A., 2014, *Springer Proceedings in Physics*. Springer Science and Business Media, LLC, Vol. 145. p. 89-95 7 p.

**Particlelike distributions of the Higgs field nonminimally coupled to gravity**

Füzfa, A., Rinaldi, M. & Schlögel, S., 17 Sept 2013, In: Physical review letters. 111, 121103, 121103.

**Radioscience simulations in general relativity and in alternative theories of gravity**

Hees, A., Lamine, B., Reynaud, S., Jaekel, M.-T., Le Poncin-Lafitte, C., Lainey, V., Füzfa, A., Courty, J.-M., Dehant, V. & Wolf, P., 7 Dec 2012, In: Classical and Quantum Gravity . 29, 23, p. 5027

**Fab Four: When John and George play gravitation and cosmology**

Bruneton, J.-P., Rinaldi, M., Kanfon, A., Hees, A., Schlögel, S. & Fuzfa, A., 4 Nov 2012, In: Advances in Astronomy. 2012, 430694

**Combined cosmological and solar system constraints on chameleon mechanism**

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**Imprints of dark energy on cosmic structure formation-II. Non-universality of the halo mass function**

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Hees, A., Wolf, P., Lamine, B., Reynaud, S., Jaekel, M.-T., Le Poncin-Lafitte, C., Lainey, V., Fuzfa, A. & Dehant, V., 2011, *Proceedings of the XLVIth Rencontres de Moriond and GPhys Colloquium 2011: Gravitational Waves and Experimental Gravity*. Vol. 1105. p. 259 4 p.

**Dark matter and dark energy from gravitational symmetry breaking**

Füzfa, A. & Alimi, J.-M., 1 Jan 2010, *AIP Conference Proceedings*. Vol. 1241. p. 854-865 12 p.

**Imprints of dark energy on cosmic structure formation - I. Realistic quintessence models and the non-linear matter power spectrum**

Alimi, J.-M., Füzfa, A., Rasera, Y., Courtin, J., Corasaniti, P.-S. & Boucher, V., 1 Jan 2010, In: Monthly Notices of the Royal Astronomy Society. 401, 2, p. 775-790 16 p.

**Imprints of dark energy on structure formation: No universality in mass functions?**

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**Invisible universe: Toward a new cosmological paradigm**

Alimi, J.-M. & Füzfa, A., 1 Jan 2010, *AIP Conference Proceedings*. Vol. 1241.

**The abnormally weighting energy hypothesis: The origin of the cosmic acceleration**

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**Invisible Universe: Proceedings of the Conference**

Alimi, J.-M. & Füzfa, A., 2010, American institute of physics.

**An introduction to Non-Universal Tensor-Scalar Gravitation: "Geometry, Topology, QFT and Cosmology", Eds. Hermann, Paris, 2008**

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### **The Abnormally Weighting Energy Hypothesis: the Missing Link between Dark Matter and Dark Energy**

Fuzfa, A., 2008, In: Journal of Cosmology and Astroparticle Physics. 0809:014, 24 p., 0809:014.

### **Toward a Unified Description of Dark Energy and Dark Matter from the Abnormally Weighting Energy Hypothesis**

Fuzfa, A. & -M. Alimi, J., 19 Feb 2007, In: Physical Review D - Particles, Fields, Gravitation and Cosmology. 75, 17 p., 123007.

### **An Awesome Hypothesis for Dark Energy: The Abnormally Weighting Energy**

Fuzfa, A. & Alimi, J.-M., 15 Feb 2007, *Proceedings of the Eleventh Marcel Grossmann Meeting on general relativity: On Recent Developments in Theoretical and Experimental General Relativity, Gravitation and Relativistic Field Theories*. Kleinert, H., Jantzen, R. T. & Ruffini, R. (eds.). World Scientific publishing, p. 1785-1787

### **Some impacts of quintessence models on cosmic structure formation**

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### **Is Dark Energy Abnormally Weighting? Proceedings of the SF2A 2006 Conference, held in Paris, France, June 2006, astro-ph/0609099**

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### **Le mystère de l'énergie noire: "Du Big Bang aux planètes", cours en ligne de l'Observatoire de Paris, <http://media4.obspm.fr/public/IUFM/chapitre3/chapitre3.html>**

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### **Le modèle standard du Big Bang. Vers une théorie exhaustive de l'Univers ? Ciel et Terre, Vol. 120 n°5, 2004.**

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### **Quintessence and ghost: influence of the assumptions: Gravitation & Cosmology 11 (2005), 105-110.**

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### **Gravitational instability of Yang-Mills cosmologies**

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### **"Evolution of Density Fluctuations in a Universe Dominated by $su(2)$ -Valued Yang-Mills Fields"**

Lambert, D. & Fuzfa, A., 2003, *Astronomy, Cosmology and Fundamental Physics (Proceedings of the ESO/CERN/ESA Symposium Held in Garching, Germany, 4-7 March 2002): Proceedings of the ESO/CERN/ESA Symposium Held in Garching, Germany, 4-7 March 2002*. Shaver, P. A., DiLella, L. & Giménez, A. (eds.). Berlin: Springer Science and Business Media, Vol. 1. p. 446-448 3 p.

### **Some examples of exponentially harmonic maps**

D Kanfon, A., Füzfa, A. & Lambert, D., 15 May 2002, In: Journal of physics A: Mathematical and general. 35, p. 7629-7639 11 p.

**The Lemaitre-Schwarzschild Problem Revisited**

Fuzfa, A., Gerard, J.-M. & Lambert, D., 2002, In: General Relativity and Gravitation. 34, p. 1411-1422

**"A Toy Model for a Cosmologically Active Body": (numéro spécial en hommage au Professeur Jacques Demaret, Ulg).**

Moussiaux, A., Lambert, D. & Fuzfa, A., 2001, In: Revue des Questions Scientifiques. 172, p. 393-407

**About the Use of a Neural Network in the Analysis of  $e^+ e^- \rightarrow Z^0 Z^0 \rightarrow q\bar{q}n$ : CERN: DELPHI 2000-026 PHYS851**

Fuzfa, A. & Jacobsson, R., 2000, CERN.