

## PERSONAL INFORMATION

Alexander Gegov

## JOB POSITION

Reader in Computational Intelligence

## WORK EXPERIENCE

**Current and past employment**

- since 2009, Reader, University of Portsmouth
- 2000-2009, Senior Lecturer, University of Portsmouth
- 1998-2000, Research Associate, University of Portsmouth
- 1993-1998, Research Fellow, Bulgarian Academy of Science
- 1992-1993, Research Assistant, Bulgarian Academy of Sciences

**Current and past positions**

- since 2021, Guest Lecturer, Technical University of Sofia
- 1997-1998, EU Visiting Researcher, Delft University of Technology
- 1994-1995, EU Visiting Researcher, University of Wuppertal
- 1993-1994, Humboldt Guest Researcher, University of Duisburg-Essen

## EDUCATION AND TRAINING

**Research and educational degrees**

- 1997, DSc in AI, Bulgarian Academy of Sciences
- 1992, PhD in Cybernetics, Bulgarian Academy of Sciences
- 1989, MSc in Robotics, Technical University of Sofia
- 1987, BSc in Automatics, Technical University of Sofia

## ADDITIONAL INFORMATION

**Authored books**

- R.Jafari, S.Razvarz and A.Gegov, Flow Modelling and Control in Pipeline Systems, *Series in Studies in Systems, Decision and Control* (Springer, Heidelberg, 2020)
- H.Liu, A.Gegov and M.Cocea, Rule Based Systems for Big Data, *Series in Studies in Big Data* (Springer, Cham, 2016) 121 pages
- A.Gegov, Fuzzy Networks for Complex Systems, *Series in Studies in Fuzziness and Soft Computing* (Springer, Berlin, 2011) 290 pages
- A.Gegov, Complexity Management in Fuzzy Systems, *Series in Studies in Fuzziness and Soft Computing* (Springer, Berlin, 2007) 351 pages
- A.Gegov, Distributed Fuzzy Control of Multivariable Systems, *Series in Intelligent Technologies* (Springer, Dodrecht, 1996) 185 pages

**Edited books**

- R.Jafari, A.Gegov and S.Razvarz, Artificial Intelligence and Fuzzy Systems – Theory and Applications, *Special Issue of International Journal of Intelligence Science* (Scientific Research Publishing, 2021)
- A.Gegov and R.Jafari, Theory and Applications of Fuzzy Systems and Neural Networks, *Special Issue of Electronics* (Multidisciplinary Digital Publishing Institute, 2021)
- A.Gegov, R.Jafari and S.Razvarz, Fuzzy Systems for Explainable Artificial Intelligence, *Special Issue of Frontiers in Artificial Intelligence* (Frontiers, 2021)
- A.Gegov, R.Jafari and S.Razvarz, Deep Computational Intelligence Systems, *Special Issue of International Journal of Computational Intelligence Systems* (Atlantis Press, 2021)
- R.Jafari, A.Gegov and S.Razvarz, Intelligent Techniques for Fluid Mechanics, *Special Collection of Journal of Advances in Mechanical Engineering* (SAGE Publishing, 2020)
- A.Gegov, Covid-19, *Special Issue Track of IEEE Transactions on Fuzzy Systems* (IEEE Press, 2020)
- A.Gegov, U.Kaymak and J.Sousa, Deep Fuzzy Models, *Special Issue of IEEE Transactions on Fuzzy Systems* (IEEE Press, 2020)
- Z.Ju, L.Yang, C.Yang, A.Gegov and D.Zhou, Advances in Computational Intelligence Systems, *Series in Advances in Intelligent Systems and Computing* (Springer, 2019) 553 pages
- A.Lotfi, H.Bouchachia, A.Gegov, C.Langensiepen and M.McGinnity, Advances in Computational Intelligence Systems, *Series in Advances in Intelligent Systems and Computing* (Springer, 2018) 391 pages
- P.Angelov, A.Gegov, C.Jayne and Q.Shen, Advances in Computational Intelligence Systems, *Series in Advances in Intelligent Systems and Computing* (Springer, 2016) 508 pages
- A.Gegov, Free Search of Real Value or How to Make Computers Think (St Qu, 2008) 164 pages

**Edited journals**

- since 2020, Associate Editor for the WILEY Journal of Intelligent Systems
- since 2018, Associate Editor for the IOS Journal of Knowledge Based Intelligent Systems
- since 2016, Associate Editor for the ATLANTIS Journal of Computational Intelligence Systems

- since 2014, Associate Editor for the IEEE Transactions on Fuzzy Systems
- since 2012, Associate Editor for the IOS Journal of Intelligent and Fuzzy Systems
- since 2010, Associate Editor for the ELSEVIER Journal of Fuzzy Sets and Systems

### Awarded grants

- 2019-2022, Using Artificial Intelligence to Share Control of a Powered Wheelchair between a Wheelchair User and an Intelligent Sensor System, £460,000 for University of Portsmouth, EPSRC
- 2011-2011, Short KTP with Connexionz UK Ltd on Advanced Transport Solutions, £40,000 for University of Portsmouth, Innovate UK
- 2010-2013, KTP with Xyratex Technology Ltd on Super Computer Diagnostics, £110,000 for University of Portsmouth, Innovate UK
- 2001-2003, Using Problem Domain and Artefact Domain Architectural Modelling to Understand System Evolution, £140,000 for University of Portsmouth, EPSRC

### Plenary lectures

- A.Gegov, Recent Developments in Artificial Intelligence, *IEEE International Conference on Data, Knowledge and Control Systems Engineering* (Sofia, Bulgaria, 2021)
- A.Gegov, Introduction to Artificial Intelligence, *NATO International Conference on Initiate, Innovate, Imagine* (Norfolk, USA, 2020)
- A.Gegov, Deep Fuzzy Models: Theory and Applications, *IEEE International Workshop in Advances in Neural Networks and Applications* (Varna, Bulgaria, 2018)
- A.Gegov, Networked Rule Based Systems: Theory and Applications, *IEEE International Summer School on Cybernetics* (Sofia, Bulgaria, 2016)
- A.Gegov, Advances in Fuzzy Systems and Networks, *IEEE International Conference on Intelligent Systems* (Sofia, Bulgaria, 2012)
- A.Gegov, Fuzzy Rule Based Networks: Theory and Applications, *IEEE International Summer School on Cybernetics* (Sofia, Bulgaria, 2012)
- A.Gegov, Rule Based Networks: Theory and Applications, *IEEE International Conference on Intelligent Systems* (London, UK, 2010)
- A.Gegov, Complex Systems Modelling by Rule Based Networks, *WSEAS International Conference on Artificial Intelligence, Knowledge Engineering and Data Bases* (Cambridge, UK, 2009)
- A.Gegov, Mathematical Theory for Fuzzy Networks, *University of East London International Conference on Advances in Computing Technology* (London, UK, 2009)
- A.Gegov and N.Petrov, Introduction to Fuzzy Networks, *ESF International Summer School on Soft Computing and Statistics* (Lisbon, Portugal, 2009)
- A.Gegov, From Fuzzy Systems to Fuzzy Networks, *WSEAS International Conference on Fuzzy Systems*, (Sofia, Bulgaria, 2008)
- A.Gegov, Advanced Modelling of Complex Systems by Fuzzy Networks, *Brunel University International Conference on Applications of Complexity Science* (Uxbridge, UK, 2008)
- A.Gegov, Complexity and Uncertainty, *EPSRC International Summer School in Complexity Science* (Wye, UK, 2007)

### Research tutorials

- A.Gegov and F.Arabikhan, Fuzzy Networks: Analysis and Design, *IEEE World Congress on Computational Intelligence* (Padua, Italy, 2022)

- A.Gegov and F.Arabikhan, Essentials of Fuzzy Networks, *IEEE Symposium Series in Computational Intelligence* (Orlando, USA, 2021)
- A.Gegov and F.Arabikhan, Basics of Fuzzy Networks, *IEEE International Conference on Systems, Man and Cybernetics* (Melbourne, Australia, 2021)
- A.Gegov, U.Kaymak and J.Sousa, Recent Developments in Artificial Intelligence and Fuzzy Systems, *IEEE International Conference on Fuzzy Systems* (Luxemburg, Luxemburg, 2021)
- A.Gegov and F.Arabikhan, Fundamentals of Fuzzy Networks, *IEEE World Congress on Computational Intelligence* (Glasgow, UK, 2020)
- A.Gegov, F.Arabikhan, D.Sanders and B.Vatchova, Foundations of Fuzzy Networks, *IEEE International Conference on Intelligent Systems* (Varna, Bulgaria, 2020)
- A.Gegov, R.Jafari and S.Razvarz, Recent Advances in Artificial Intelligence: Theory and Applications, *BCS International Conference on Artificial Intelligence* (Cambridge, UK, 2020)
- J.Sousa, U.Kaymak and A.Gegov, Deep Fuzzy Models, *IEEE International Conference on Fuzzy Systems* (New Orleans, USA, 2019)
- A.Gegov and H.Liu, Rule Based Systems and Networks: Deterministic and Fuzzy Approaches, *IEEE International Conference on Intelligent Systems* (Sofia, Bulgaria, 2016)
- A.Gegov, Fuzzy Systems and Networks: Theory and Applications, *IEEE International Conference on Fuzzy Systems* (Istanbul, Turkey, 2015)
- A.Gegov, Advances in Rule Based Systems and Networks, *EPSRC International Seminar on Systems Science and Systems Engineering* (Loughborough, UK, 2015)
- A.Gegov, Fuzzy Rule Base Compression: Theory and Applications, *INNS International Conference on Engineering Applications of Neural Networks* (Sofia, Bulgaria, 2014)
- A.Gegov, Rule Based Network Models for Complex Systems, *INNS International Conference on Neural Networks* (Sofia, Bulgaria, 2013)
- A.Gegov, Advanced Computation Models for Rule Based Networks, *IARIA International Conference on Computation Tools* (Valencia, Spain, 2013)
- A.Gegov, Fuzzy Networks with Modular Rule Bases, *INNS International Conference on Engineering Applications of Neural Networks* (London, UK, 2012)
- A.Gegov, Fuzzy Rule Based Networks, *IEEE International Symposium on Foundations of Computational Intelligence* (Paris, France, 2011)
- A.Gegov, Fuzzy Networks: Theory and Applications, *IEEE World Congress on Computational Intelligence* (Barcelona, Spain, 2010)
- A.Gegov, Fuzzy Rule Base Networks, *IEEE International Conference on Intelligent Systems* (Varna, Bulgaria, 2008)
- A.Gegov, Rule Base Compression on Fuzzy Systems, *IEEE International Conference on Fuzzy Systems* (London, UK, 2007)

Date: 23/03/2022

Dr. Alexander GEGOV

(firma autografa omessa ai sensi dell'art. 3 del D.lgs. n. 39/1993)



INFORMAZIONI PERSONALI Alexander Gegov

INCARICO ATTUALE Docente di Computational Intelligence

ESPERIENZE  
LAVORATIVE

**Incarichi professionali ricoperti**

- ✓ dal 2009, Docente presso l'Università di Portsmouth
- ✓ 2000-2009, Professore associato, Università di Portsmouth
- ✓ 1998-2000, Ricercatore associato, Università di Portsmouth
- ✓ 1993-1998, Ricercatore, Accademia Bulgara delle scienze
- ✓ 1992-1993, Assistente ricercatore, Accademia Bulgara delle scienze

**Posizioni attuali e passate**

- ✓ dal 2021, Docente a contratto presso la Technical University di Sofia
- ✓ 1997-1998, EU Visiting Researcher presso la Delft University of Technology
- ✓ 1994-1995, EU Visiting Researcher, Università di Wuppertal
- ✓ 1993-1994, Humboldt Guest Researcher, presso l'Università di Duisburg-Essen

ISTRUZIONE E FORMAZIONE

**Titoli accademici**

- ✓ 1997, Post dottorato in AI, Accademia Bulgara delle scienze
- ✓ 1992, PhD in Cibernetica, Accademia Bulgara delle scienze
- ✓ 1989, Laurea Magistrale in Robotica, Technical University di Sofia
- ✓ 1987, Laurea in Automatics, Technical University di Sofia



## ULTERIORI INFORMAZIONI

**Autore dei seguenti testi:**

- R.Jafari, S.Razvarz and A.Gegov, Flow Modelling and Control in Pipeline Systems, *Series in Studies in Systems, Decision and Control* (Springer, Heidelberg, 2020)
- H.Liu, A.Gegov and M.Cocea, Rule Based Systems for Big Data, *Series in Studies in Big Data* (Springer, Cham, 2016) 121 pages
- A.Gegov, Fuzzy Networks for Complex Systems, *Series in Studies in Fuzziness and Soft Computing* (Springer, Berlin, 2011) 290 pages
- A.Gegov, Complexity Management in Fuzzy Systems, *Series in Studies in Fuzziness and Soft Computing* (Springer, Berlin, 2007) 351 pages
- A.Gegov, Distributed Fuzzy Control of Multivariable Systems, *Series in Intelligent Technologies* (Springer, Dodrecht, 1996) 185 pages

**Curatore delle seguenti pubblicazioni:**

- R.Jafari, A.Gegov and S.Razvarz, Artificial Intelligence and Fuzzy Systems – Theory and Applications, *Special Issue of International Journal of Intelligence Science* (Scientific Research Publishing, 2021)
- A.Gegov and R.Jafari, Theory and Applications of Fuzzy Systems and Neural Networks, *Special Issue of Electronics* (Multidisciplinary Digital Publishing Institute, 2021)
- A.Gegov, R.Jafari and S.Razvarz, Fuzzy Systems for Explainable Artificial Intelligence, *Special Issue of Frontiers in Artificial Intelligence* (Frontiers, 2021)
- A.Gegov, R.Jafari and S.Razvarz, Deep Computational Intelligence Systems, *Special Issue of International Journal of Computational Intelligence Systems* (Atlantis Press, 2021)
- R.Jafari, A.Gegov and S.Razvarz, Intelligent Techniques for Fluid Mechanics, *Special Collection of Journal of Advances in Mechanical Engineering* (SAGE Publishing, 2020)
- A.Gegov, Covid-19, *Special Issue Track of IEEE Transactions on Fuzzy Systems* (IEEE Press, 2020)
- A.Gegov, U.Kaymak and J.Sousa, Deep Fuzzy Models, *Special Issue of IEEE Transactions on Fuzzy Systems* (IEEE Press, 2020)
- Z.Ju, L.Yang, C.Yang, A.Gegov and D.Zhou, Advances in Computational Intelligence Systems, *Series in Advances in Intelligent Systems and Computing* (Springer, 2019) 553 pages
- A.Lotfi, H.Bouchachia, A.Gegov, C.Langensiepen and M.McGinnity, Advances in Computational Intelligence Systems, *Series in Advances in Intelligent Systems and Computing* (Springer, 2018) 391 pages
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- A.Gegov, Free Search of Real Value or How to Make Computers Think (St Qu, 2008) 164 pages

**Curatore delle seguenti riviste:**

- dal 2020, Associate Editor del WILEY Journal of Intelligent Systems
- dal 2018, Associate Editor del IOS Journal of Knowledge Based Intelligent Systems
- dal 2016, Associate Editor del ATLANTIS Journal of Computational Intelligence Systems

- dal 2014, Associate Editor del IEEE Transactions on Fuzzy Systems
- dal 2012, Associate Editor del IOS Journal of Intelligent and Fuzzy Systems
- dal 2010, Associate Editor for the ELSEVIER Journal of Fuzzy Sets and Systems

### Fondi di ricerca ottenuti

- 2019-2022, Using Artificial Intelligence to Share Control of a Powered Wheelchair between a Wheelchair User and an Intelligent Sensor System, £460,000 per l'Università di Portsmouth, EPSRC
- 2011-2011, Short KTP with Connexionz UK Ltd on Advanced Transport Solutions, £40,000 per l'Università di Portsmouth, Innovate UK
- 2010-2013, KTP with Xyratex Technology Ltd on Super Computer Diagnostics, £110,000 per l'Università di Portsmouth, Innovate UK
- 2001-2003, Using Problem Domain and Artefact Domain Architectural Modelling to Understand System Evolution, £140,000 per l'Università di Portsmouth, EPSRC

### Conferenze

- A.Gegov, Recent Developments in Artificial Intelligence, *IEEE International Conference on Data, Knowledge and Control Systems Engineering* (Sofia, Bulgaria, 2021)
- A.Gegov, Introduction to Artificial Intelligence, *NATO International Conference on Initiate, Innovate, Imagine* (Norfolk, USA, 2020)
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- A.Gegov, Rule Based Networks: Theory and Applications, *IEEE International Conference on Intelligent Systems* (London, UK, 2010)
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- A.Gegov, Complexity and Uncertainty, *EPSRC International Summer School in Complexity Science* (Wye, UK, 2007)

### Seminari di ricerca

- A.Gegov and F.Arabikhan, Fuzzy Networks: Analysis and Design, *IEEE World Congress on Computational Intelligence* (Padova, Italia, 2022)



- A.Gegov and F.Arabikhan, Essentials of Fuzzy Networks, *IEEE Symposium Series in Computational Intelligence* (Orlando, USA, 2021)
- A.Gegov and F.Arabikhan, Basics of Fuzzy Networks, *IEEE International Conference on Systems, Man and Cybernetics* (Melbourne, Australia, 2021)
- A.Gegov, U.Kaymak and J.Sousa, Recent Developments in Artificial Intelligence and Fuzzy Systems, *IEEE International Conference on Fuzzy Systems* (Lussemburgo, Lussemburgo, 2021)
- A.Gegov and F.Arabikhan, Fundamentals of Fuzzy Networks, *IEEE World Congress on Computational Intelligence* (Glasgow, UK, 2020)
- A.Gegov, F.Arabikhan, D.Sanders and B.Vatchova, Foundations of Fuzzy Networks, *IEEE International Conference on Intelligent Systems* (Varna, Bulgaria, 2020)
- A.Gegov, R.Jafari and S.Razvarz, Recent Advances in Artificial Intelligence: Theory and Applications, *BCS International Conference on Artificial Intelligence* (Cambridge, UK, 2020)
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- A.Gegov, Fuzzy Systems and Networks: Theory and Applications, *IEEE International Conference on Fuzzy Systems* (Istanbul, Turchia, 2015)
- A.Gegov, Advances in Rule Based Systems and Networks, *EPSRC International Seminar on Systems Science and Systems Engineering* (Loughborough, UK, 2015)
- A.Gegov, Fuzzy Rule Base Compression: Theory and Applications, *INNS International Conference on Engineering Applications of Neural Networks* (Sofia, Bulgaria, 2014)
- A.Gegov, Rule Based Network Models for Complex Systems, *INNS International Conference on Neural Networks* (Sofia, Bulgaria, 2013)
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- A.Gegov, Fuzzy Networks with Modular Rule Bases, *INNS International Conference on Engineering Applications of Neural Networks* (London, UK, 2012)
- A.Gegov, Fuzzy Rule Based Networks, *IEEE International Symposium on Foundations of Computational Intelligence* (Parigi, Francia, 2011)
- A.Gegov, Fuzzy Networks: Theory and Applications, *IEEE World Congress on Computational Intelligence* (Barcellona, Spagna, 2010)
- A.Gegov, Fuzzy Rule Base Networks, *IEEE International Conference on Intelligent Systems* (Varna, Bulgaria, 2008)
- A.Gegov, Rule Base Compression on Fuzzy Systems, *IEEE International Conference on Fuzzy Systems* (Londra, UK, 2007)

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