

Anastasia DOIKOU

CURRICULUM VITAE

Anastasia DOIKOU, PhD

Associate Professor

Department of Mathematics

School of Mathematical & Computer Sciences

Heriot-Watt University, Edinburgh

Edinburgh 2016

Anastasja DOIKOU

CONTACT DETAILS

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EDUCATION

1997-1999: PhD in Physics, University of Miami, USA
PhD thesis title: *"Integrable quantum spin chains"*
Supervisors: Professor R. Nepomechie & Professor L. Mezincescu

1995-1997: MSc in Physics, University of Miami, USA

1988-1993: BSc in Physics, National & Kapodistrian University of Athens, Greece

EMPLOYMENT

2013- : Associate Professor (Reader), Department of Mathematics,
Heriot-Watt University, Edinburgh, UK

2008- : Lecturer then Assistant Professor (2012), Department of Engineering Sciences,
University of Patras, Greece

2005-2007: INFN Researcher, Department of Physics, University of Bologna, Italy

2002-2005: EUCLID Network Researcher & CNRS Researcher, LAPTH, Annecy, France

2000-2002: EPSRC Fellow, Department of Mathematics, University of York, UK
"Individual Research Fellowship"

1999-2000: TMR Network Researcher, Department of Mathematics, Durham University UK

1995-1999: Teaching assistant, Department of Physics, University of Miami, USA

TEACHING

- 2016: *"Modern Topics in Quantum Integrable Systems"*, advanced SMSTC (Scottish Mathematical Sciences Training Centre) course, spring semester
- 2016: *"Solitons"*, MSc course, lectures & tutorials, Spring Semester, Heriot-Watt University
- 2015: *"Applied Mathematics I"*, lectures & tutorials, Fall Semester, Heriot-Watt University
- 2015: *"Mathematics for Engineers and Scientists 4"*, lectures & tutorials, Spring Semester, Heriot-Watt University
- 2013, 2014: *"Introductory Mathematics A"*, lectures & tutorials, Fall Semester, Heriot-Watt University
- 2011: Graduate course *"Integrable Systems"*, University of Patras, Department of Physics
- 2012: Series of Lectures (graduate course), *"Special topics in classical and quantum integrability"*, University of Oldenburg, Physics Department, Germany
- 2007 and 2009: Series of Lectures (Graduate course), *"Introduction to quantum integrability"*, University of Bologna, Department of Physics, Italy and University of Patras, Department of Engineering Sciences, Greece
- 2008-2013: *"Physics I" (Classical Mechanics, Thermodynamics)*, lectures, Fall Semester,

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- University of Patras, Department of Engineering
- 2008-2013: "Physics II" (*Electromagnetism, Modern Physics*), lectures, Spring Semester, University of Patras, Department of Engineering Sciences
- 2008-2013: "Physics I", laboratories, Fall Semester, University of Patras, Department of Engineering
- 2008-2013: "Physics II", laboratories, Spring Semester, University of Patras, Department of Engineering Sciences
- 2001, 2002: "Analytical Mechanics" (tutorial), Spring Term, University of York, Mathematics Department, UK, duration: 22-24 hours
- 2001: "Differential Equations" (tutorial), Summer Term, University of York, Mathematics Department, UK
- 1995-1999: "General Physics I, II", laboratories, University of Miami, Physics Department, USA, duration: 90 hours per semester (2 semesters)

SUPERVISION

- 2016- : Supervisor of the PhD student S. Sklaveniti, Heriot-Watt University, Department of Mathematics (supported by a J. Watt Scholarship, HWU)
- 2016: Supervision of MSc projects,
 1. D. Mache, "Hecke algebras versus quantum groups"
 2. C. Matsantonis, "Solving the Bethe ansatz equations in the isotropic Heisenberg model"
- 2016: Supervision of 4th year projects,
 1. C. Adlington & McKinney, "The time independent Schrodinger equation"
 2. C. de Vial, "Spectrum & symmetry of the XXX quantum spin chain"
- 2016- : Co-supervisor of the PhD student I. Stylianidis, (first supervisor Dr. S. Malham), Heriot Watt University, Department of Mathematics
- 2015- : Supervisor of the PhD student I. Findlay, Heriot-Watt University, Department of Mathematics (supported by EPSRC).
- 2015: Internal examiner of the PhD student J. Willetts, "Approaches to form-factors of higher spin Heisenberg chains", supervisor Dr R. Weston, Heriot-Watt University, Department of Mathematics
- 2015: External examiner of the PhD student C. Robertson, "On defects in affine Toda field theory", supervisor Dr P. Bowcock, Durham University, Department of Mathematics
- 2015: Supervision of 4th year projects,
 1. C. Linter, "Finite representations of the sl_2 algebra"
- 2014: External examiner (referee) of the PhD student S. Faldella, "Solution of the XXZ & XYZ quantum spin chains with boundaries via the separation of variables", supervisor Professor N. Kitanine, University of Bourgogne, Department of Mathematics
- 2013- : Co-supervisor of the PhD student J. Yang, (first supervisor Dr R. Weston), Heriot-Watt University, Department of Mathematics
- 2014: Supervision of 4th year projects,
 1. D. Owen, "The quantum harmonic oscillator & its q -deformed analogue"
 2. G. De Micheli, "Braid groups, Hecke algebras & Temperley-Lieb algebras"
- 2014: Member of the 7-member committee (examiner) of the PhD student G. Itsios (graduated 2014), "Integrable structures in string and gauge theories", supervisor Professor V. Papageorgiou, University of Patras, Dept. of Mathematics

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- 2009-2013: Member of the 3-member committee (examiner) of the PhD student E. Charalampides (*graduated 2013*), "*Soliton Solutions of Partial Differential Equations*", supervisor Professor T. Ioannidou, Aristotle University of Thessaloniki, Department of Mathematics, Physics and Computational Sciences
- 2008-2012: Supervisor (with Professor K. Sfetsos) & member of the 3-member committee of the PhD student N. Karaiskos (*graduated 2012*), "*Topics in integrable models and string theory*", University of Patras, Dept. of Engineering Sciences
- 2011: Member of the 7-member committee (examiner) of the PhD student T. Kouloukas, (*graduated 2011*) "*Yang-Baxter Maps, Poisson Structures and Integrability*", supervisor Professor V. Papageorgiou, University of Patras, Department of Mathematics
- 2009: Member of the 7-member committee (examiner) of the PhD student K. Siampos, (*graduated 2009*) "*String theory applications in gravitational problems and gauge theories*", supervisor Professor K. Sfetsos, University of Patras, Department of Eng. Sciences

FELLOWSHIPS/AWARDS

- Awarded the *Karatheodoris* grant, "*Topics in integrable models & string theory*" from University of Patras (value 33,0000 euros) for the appointment of the PhD student N. Karaiskos
- Awarded personal EPSRC postdoctoral Fellowship, (*Individual Research Fellowship*), "*Integrable models with boundaries*", (value 65,000€), 2000-2002
- Awarded the "*Summer Research Award*" from the University of Miami for two consecutive years 1997, 1998
- Awarded the "*Best Teaching Assistant*" title from the University of Miami, for the year 1996-1997
- Awarded *research and teaching Fellowship and Studentship* from the University of Miami for the completion of MSc and PhD, 1995-1999

RESEARCH PROGRAMS/FUNDING

- *Karatheodoris* grant "*Topics in integrable models & string theory*" from University of Patras (value 33,0000 €) for the appointment of the PhD student N. Karaiskos, 2010-2013
- INFN Research Fellowship and funding 2005-2007
- CNRS Research Fellowship and funding 2004-2005
- EC FP5 network EUCLID "*Integrable models and applications: from strings to condensed matter*" 2002-2005, contract no: HPRN-CT-2002-00325.
- EPSRC personal grant (*Individual Research Fellowship*), "*Integrable models with boundaries*", (value 65,000€), 2000-2002
- EC FP4 TMR network "*Integrability non-perturbative effects and symmetry in quantum field theory*" 1999-2000, contract no: FMRX-CT96-0012.

SHORT VISITS

- April 2016, Visiting Professor, Simons Research Center, Stony-Brook, New York, USA
- June 2014, Visiting Professor, University of Cergy, France
- September 2011, Visiting Professor, University of Cergy, France
- July 2011, Visiting Professor, University of Oldenburg, Germany
- June 2008-2010, Visiting Professor, University of Cergy, France
- 2003-2008, frequent invited visitor, University of Cergy, France, collaboration with J. Avan,

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G. Rollet

- 2001-2004, frequent invited visitor, City University London, UK, collaboration with P.P. Martin
- November 2003, invited visitor, University of Tours, France, collaboration with P. Baseilhac
- November 2003, invited visitor, University of Bologna, Italy, collaboration with F. Ravanini
- June 2000, visit within the TMR Network, ENS Lyon, France, J.M. Maillet

RESEARCH INTERESTS

- Quantum algebras: (deformed) Lie algebra, Yangians, twisted Yangians, reflection algebras
- Braid groups, (affine) Hecke algebras, (boundary) Temperley-Lieb algebras, etc.
- Classification of representations of Yang-Baxter and reflection algebras, (semi)dynamical algebras.
- Integrable quantum spin chains (1D statistical systems): algebraic, analytical Bethe ansatz, thermodynamic Bethe ansatz
- Algebraic approach on exact bulk, boundary S -matrices and defects
- Integrable field theories: Hamiltonian formulation, Lax pairs, integrable PDEs
- Monopoles and integrability

CONFERENCES/TALKS

2016

- *Integrable Systems*, 13-14 May, Leeds, UK, [68].
- *Integrable Systems Workshop*. 11-12 March, Glasgow, UK, invited speaker [68].

2015

- *Integrable Systems*, 23-27 June, Prague, Czech Republic, invited speaker [P12]
- *Solitons: Topology, Geometry, and Applications*, 14-18 April 2015, Aristotle University of Thessaloniki, Greece, invited speaker [53], [57].

2014

- *New Trends in Quantum Integrability*, 18-22 August 2014, University of Surrey, UK, invited key speaker [62], [63].
- *Integrable Lattice Models and Quantum Field Theories*, 28 June-2 July 2014, Bad Honnef, Germany, invited key speaker [57].

2012

- *Quantum Integrable Systems and Geometry*, 3-7 September 2012, Olhao, Portugal, invited speaker, I presented [54].
- *Integrable systems and quantum symmetries '12*, 17-23 June 2012, Prague, Czech Republic, invited speaker [55].

2011

- *8th Bologna Workshop on CFT and Integrable Models*, 12-15 July 2011, Bologna, Italy, I presented [51]

2010

- *10th Corfu Summer Institute*, 5-12 September, Corfu, Greece, invited speaker [P8]
- *Classical and Quantum Integrable Models*, (short course, graduate level) 19-23 July, Canterbury, UK invited lecturer, I presented series of lectures based on [44]
- *RAQIS'10-Recent Advances in Quantum Integrable Systems*, 15-18 June, Annecy, France, presented [45]

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2009

- *9th Corfu Summer Institute*, 6-20 September, Corfu, Greece, invited speaker [40]

2007

- *Integrable Models and related mathematical structures*, 7-10 November, Tours, France, invited
- *RAQIS'07 - Recent Advances in Quantum Integrable Systems*, 11-14 September 2007, LAPH, Annecy-le-Vieux, France, invited speaker [P6]

2006

- *4th Annual Meeting of the EUCLID Network*, 11-16 September 2006, Lyon, France, invited speaker [31]
- *7th Bologna Workshop on CFT and Integrable Models*, 5-8 July 2006, Bologna, Italy (co-organizer)

2005

- *3rd Annual EUCLID Network Meeting*, 12-16 September, Santiago de Compostela, Spain, invited speaker [29]
- *RAQIS'05 - Recent Advances in Quantum Integrable Systems*, 6-9 September, Annecy, France, invited speaker [25, 26]
- *XIVth International Colloquium on Integrable systems*, 16-18 June, Prague, Czech Republic, invited speaker [P4]
- *9th UK Meeting on Integrable Systems*, 22-23 April 2005, City University London, UK, invited speaker [24]

2004

- *EUCLID network Midterm-Review*, 29-30 November 2004, York, UK, invited speaker [24]
- *6th Bologna workshop on CFT and Integrable models*, 21-25 September 2004, Bologna, Italy, invited speaker [24]
- *2nd EUCLID Network School: Modern Problems in Theoretical Physics and Integrable Systems* 17-22 May, Montpellier, France, invited

2003

- *1st annual EUCLID network meeting*, 15-20 September, Florence, Italy, invited speaker [16]
- *Recent Advances in the Theory of Quantum Integrable Systems*, International Workshop, 25-28 March 2003, LAPH, Annecy-le-Vieux, France

2001

- *ICMS meeting in Edinburgh*, 2-8 December, Edinburgh, UK, invited speaker [13]
- *5th Bologna workshop on CFT and Integrable models*, 26-29 September, Bologna, Italy, invited speaker [11]
- *Como Conference on Statistical Field Theory (NATO)*, 18-22 June, Como Italy, invited

2000

- *5th informal UK meeting on 2D integrable models and conformal field theory*, 19 May, London, UK, invited speaker [11]
- *4th annual TMR network meeting 2000*, 7-13 September, ENS-Paris, France, invited speaker [P2]
- *TMR Montpellier summer school: Recent advances and applications of CFT*, 21-28 May, Sete, France
- *Workshop on quantum algebras and integrability*, 2-24 April, Montreal, Canada, invited speaker [9]

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- *4th informal UK meeting on 2D integrable models and conformal field theory*, 24-25 March, Edinburgh, UK, invited

1999

- *4th Bologna Workshop on Integrability*, Bologna, Italy, June, I presented [7]

1998

- *Southeastern Section of the American Physical Society*, 11-15 November, Miami, USA, I presented [5]
- *III Trieste Conference on Statistical Field Theory*, June, Trieste Italy

*The references [no] can be found in my list of publications

INVITED SEMINARS

2016

- *Classical integrable defects as quasi Bäcklund transformations*,
 1. National & Kapodistrian University of Athens, Greece, April 2016
 2. Durham University, UK, May 2016
- *Twisted Yangians: algebraic and physical aspects*, University of Newcastle, UK, May 2016

2015

- *A review on classical & quantum integrable impurities*, University of Leeds, UK, May 2015
- *Fundamental aspects of classical & quantum integrability, Colloquium*, University of Kent, Canterbury UK, January 2015

2014

- *Jumps, twists & reflections in integrable field theories*, DAMPT Cambridge University, Cambridge UK, December 2014
- *Algebraic description of quantum and classical integrable defects*,
 1. "North British Mathematical Physics Seminar", Edinburgh UK, March 2014
 2. University of Cergy, France, June 2014
- *Classical and quantum integrable defects*, University of Glasgow, Glasgow UK, March 2014

2013

- *Classical and quantum integrable defects*, Edinburgh Math. Phys. Group (ICMS), Edinburgh, UK, October 2013

2012

- *On Liouville integrable defects*:
 1. City University, London, May 2012,
 2. University of York, May 2012

2011

- *Defects in the discrete NLS model*, University of Cergy, France, September 2011
- *Series of Lectures: Selected Topics on Quantum and Classical Integrability*, University of Oldenburg, Germany, July 2011

2010

- *Systematic derivation of boundary Lax pairs*, University of Thessaloniki, Greece, October 2010

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2009

- *Series of Lectures: Introduction to quantum integrability*, University of Patras, Greece, May 2009

2008

- *An Toda field theories with integrable boundary conditions revisited*, University of Cergy, France, June 2008

2007

- *Series of Lectures: Introduction to quantum integrability*, University of Bologna, Italy, Nov. 2007

2005

- *Physical and algebraic aspects of integrable systems*, University of Thessaloniki, Greece, Oct. 2005
- *Hecke algebras and boundary symmetries*, University of Paris VI, France, March 2005
- *Quantum integrability and Bethe ansatz*, University of Paris XI, Orsay, France, March 2005

2004

- *Boundary symmetries*, University of Cergy, France, October 2004

2003

- *Quantum integrability and algebraic Bethe ansatz:*
 1. University of Cergy, France, June 2003
 2. University of Tours, France, November 2003
 3. University of Bologna, Italy, November 2003
 4. National Technical University of Athens, Greece, December 2003
 5. University of Patras, Greece, December 2003

2002

- *Integrability with non-trivial boundary conditions*, City University-London, UK, November 2002
- *Two dimensional quantum integrable systems*, University of Kent, UK, March 2002

2001

- *Principal chiral model scattering and integrable spin chains*, University of York, UK, May 2001

2000

- *Algebraic Bethe ansatz method*, Cambridge University, UK, November 2000
- *Solving the Bethe ansatz equations*, University of York, UK, February 2000

1999

- *Integrable quantum spin chains*, University of Durham, UK, October 1999

1998

- *Integrable quantum spin chains:*
 1. National & Kapodistrian University of Athens, Greece, January 1998
 2. University of Miami, USA, May 1998

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REFEREE

- Nuclear Physics B
- Journal of Statistical Mechanics
- Journal of High Energy Physics
- Journal of Physics A
- Journal of Physics Cond. Mat.
- Journal of Mathematical Physics
- Physics Letters A
- Annales Henri Poincare
- Symmetry Integrability and Geometry: Methods and Applications (SIGMA)
- Philosophical Transactions of the Royal Society A (Mathematical, Physical & Engin. Sciences)

REFEREE FOR FUNDING COUNCILS

- EPSRC (Engineering and Physical Sciences Research Council)
- German Research Foundation (Deutsche Forschungsgemeinschaft). Member of the review & interview panel.

CONFERENCE ORGANIZATION

- Member of the organizing committee of two international conferences:
 1. EUCLID Spring School, Berlin, 6-11 April, 2006
 2. 7th Bologna Workshop on CFT and Integrable Models: 3-8 July 2006

ADMINISTRATION DUTIES

- Member of the general assembly of the faculty of the Dept. of Engineering Sciences of U. of Patras, 2008-2013.
- Member of the committee of the internal evaluation of the Dept. of Engineering Sciences. U. of Patras, 2010-2012
- Member of the committee receiving office supplies at the Dept. of Engineering Sciences. U. of Patras, since 2011-2013.
- Member of the "Athena Swan" self-assessment team at MACS, Heriot-Watt University, 2014-2015
- Member of various selection/interview panels at MACS, Heriot-Watt University since 2014
- In charge of PhD Admissions, Mathematics Department, Heriot-Watt University since 2016

PUBLICATIONS SUMMARY

- Number of Publications in Refereed Journals: **67** (in **26** articles the sole author)
- Number of Conference Proceedings: **11**
- All my preprints may be found in: http://arxiv.org/find/grp_physics/1/au:+doikou/0/1/0/all/0
- Citation profile available at: <http://scholar.google.co.uk/citations?user=X3wy5wYAAAAJ&hl=en>

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REFERENCES

- **J. Avan**, Directeur de Recherche CNRS, Universite de Cergy Pontoise (St Martin II), LPTM2 avenue Adolphe Chauvin 95032 Cergy-Pontoise, France, *tel. no: +33 13425 7503, fax no: +33 13425 7500, e-mail: avan@u-cergy.fr*
- **E. Corrigan**, Professor, University of York, Department of Mathematics, York YO10 5DD, UK, *tel. no: +44 1904 433074, e-mail: ec9@york.ac.uk*
- **F. Ravanini**, Assoc. Professor, University of Bologna, Physics Department, Bologna 40126, Italy, *tel. no: +39 051 2091045, fax no: +39 051 244101, e-mail: ravanini@bo.infn.it*

LIST OF PUBLICATIONS

REFEREED JOURNAL ARTICLES

- [71] *Grassmannian flows & applications to non-linear partial differential equations*,
M. Beck, A. Doikou, S.J.A. Malham, I. Stylianidis, to appear
- [70] *Darboux matrices, dressing & impurities in multi-component integrable models*,
P.M. Adamopoulou, A. Doikou, G. Papamikos, to appear
- [69] *Space & time discontinuities in Liouville theory and its discrete analogue*,
A. Doikou, I. Findlay,
arXiv:1608.04237, under review
- [68] *Classical integrable defects as quasi Bäcklund transformations*
A. Doikou,
arXiv:1603.04688, Nucl. Phys. B911 (2016) 212-230.
- [67] *Lagrangian and Hamiltonian structures in an integrable hierarchy and space-time duality*
J. Avan, V. Caudrelier, A. Doikou, A. Kundu,
arXiv:1510.01173, Nucl. Phys. B902 (2016) 415-439
- [66] *A classical variant of the vertex algebra & the auxiliary linear problem*,
A. Doikou,
arXiv:1506.08282, under review
- [65] *The $sl(n)$ twisted Yangian: bulk-boundary scattering & defects*
J. Avan, A. Doikou, N. Karaiskos,
arXiv:1412.6480, J. Stat. Mech. (2015) P05024 (15pp).
- [64] *Scattering matrices in the $sl(3)$ twisted Yangian*
J. Avan, A. Doikou, N. Karaiskos,
arXiv:1410.5991, J. Stat. Mech. (2015) P02007 (14pp).
- [63] *Jumps and twists in affine Toda field theories*,
A. Doikou,
arXiv:1407.7777, Nucl. Phys. B893 (2015) 107-121.
- [62] *Lax pair formulation in the simultaneous presence of boundaries and defects*,
A. Doikou,
arXiv:1404.7329, J. Phys. A 48 (2015) 065203 (15pp).
- [61] *Classical impurities associated to high rank algebras*,
A. Doikou,
arXiv:1312.4786, Nucl. Phys. B884 (2014) 142-156.

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- [60] *A note on gl_n type-I integrable defects*
A. Doikou,
arXiv:1308.1790, J. Stat. Mech. (2014) P02002, (11pp).
- [59] *Type-I integrable quantum impurities in the Heisenberg model*
A. Doikou,
arXiv:1307.2752, Nucl. Phys. B877 (2013) 885–899.
- [58] *Transmission matrices in gl_n & $U_q(gl_n)$ quantum spin chains,*
A. Doikou,
arXiv:1304.5901, JHEP 08 (2013) 103, (19pp).
- [57] *Transmission amplitudes from Bethe ansatz equations,*
A. Doikou, N. Karaiskos,
arXiv:1212.0195, JHEP 02 (2013) 142, (24pp).
- [56] *Sigma models in the presence of dynamical point-like defects,*
A. Doikou, N. Karaiskos,
arXiv:1207.5503, Nucl. Phys. B867 [FS] (2013) 872-886.
- [55] *The sine-Gordon model with integrable defects revisited,*
J. Avan, A. Doikou,
arXiv:1205.1661, JHEP 11 (2012) 008, (20pp).
- [54] *Solutions of the generic non-compact Weyl equation,*
A. Doikou, T. Ioannidou,
arXiv:1201.6135, JHEP 04 (2012) 141, (10pp).
- [53] *Liouville integrable defects: the non-linear Schrodinger paradigm,*
J. Avan, A. Doikou,
arXiv:1110.4728, JHEP 01 (2012) 040, (19pp).
- [52] *Selected Topics in Classical Integrability,*
A. Doikou,
arXiv:1110.4235, Int. J. Mod. Phys. A27 (2012) 1230003, (34 pp).
- [51] *Defects in the discrete Non-Linear Schroedinger model,*
A. Doikou,
arXiv:1106.1602, Nucl. Phys. B854 (2012) 153-165.
- [50] *Generalized Landau-Lifshitz models on the interval,*
A. Doikou, N. Karaiskos,
arXiv:1105.5042, Nucl. Phys. B853 (2011) 436-460.

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- [49] *BPS Monopoles and Open Spin Chains*,
A. Doikou, T. Ioannidou,
arXiv:1010.5076, J. Math. Phys. 52 (2011) 093508, (10 pp).
- [48] *The non-compact Weyl equation*,
A. Doikou, T. Ioannidou,
arXiv:1012.5643, JHEP 04 (2011) 072, (9pp).
- [47] *Weyl Equation and (Non)-Commutative $SU(n + 1)$ BPS Monopoles*,
A. Doikou, T. Ioannidou,
arXiv:1005.5345, JHEP 08 (2010) 105, (13pp).
- [46] *Systematic classical continuum limits of integrable spin chains and emerging novel dualities*,
J. Avan, A. Doikou, K. Sfetsos,
arXiv:1005.4605, Nucl. Phys. B840 [FS] (2010) 469-490.
- [45] *Junction type representations of the Temperley-Lieb algebra and associated symmetries*,
A. Doikou, N. Karaiskos,
arXiv:1005.4338, SIGMA (Symmetry, Integrability and Geometry: Methods and Applications) 6 (2010) 089, (19pp).
- [44] *Introduction to Quantum Integrability*,
A. Doikou, S. Evangelisti, G. Feverati, N. Karaiskos,
arXiv:0912.3350, Int. J. Mod. Phys. A25 (2010) 3307-3351.
- [43] *On boundary super-symmetries*,
A. Doikou,
arXiv:0910.1203, J. Math. Phys. 51 (2010) 043509, (16pp).
- [42] *New reflection matrices for the $U_q(\mathfrak{gl}(m|n))$ case*,
A. Doikou, N. Karaiskos,
arXiv:0907.3408, J. Stat. Mech. (2009) L09004, (11pp).
- [41] *Boundary Lax pairs from non-ultra local Poisson algebras*,
J. Avan, A. Doikou,
arXiv:0905.4134, J. Math. Phys. 50:113512 (2009), (10pp).
- [40] *Contracted and expanded integrable structures*,
A. Doikou, K. Sfetsos,
arXiv:0904.3437, J. Phys. A 42 (2009) 475204, (17pp).
- [39] *Murphy elements from the double-row transfer matrix*,
A. Doikou,
arXiv:0812.0898, J. Stat. Mech. (2009) L03003, (11pp).

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- [38] *Boundary Lax pairs for the $A^{(1)}$, Toda field theories*,
J. Avan, A. Doikou,
arXiv:0809.2734, Nucl. Phys. B 821 (2009) 481-505.
- [37] *$A^{(1)}$, affine Toda field theories with integrable boundary conditions revisited*,
A. Doikou,
arXiv:0803.0943, JHEP05 (2008) 091, (26pp).
- [36] *Non-diagonal reflection for the non-critical XXZ model*,
A. Doikou,
arXiv:0712.2918, J. Phys. A41 (2008) 194007, (6pp).
- [35] *Generic boundary scattering in the open XXZ chain*,
A. Doikou,
arXiv:0711.0716, Phys. Lett. A372 (2008) 4144-4150.
- [34] *Integrable boundary conditions and modified Lax equations*,
J. Avan, A. Doikou,
arXiv:0710.1538, Nucl. Phys. B800 (2008) 591-612.
- [33] *The generalized non-linear Schroedinger model on the interval*,
A. Doikou, D. Fioravanti, F. Ravanini,
arXiv:0706.1515, Nucl. Phys. B790 (2008) 465-492.
- [32] *A note on the boundary spin s XXZ chain*,
A. Doikou,
hep-th/0612268, Phys. Lett. A 366 (2007) 556-562.
- [31] *(Quantum) twisted Yangians: symmetry, Baxterisation and centralizers*,
N. Crampe, A. Doikou,
math-ph/0611030, J. Math. Phys. Vol. 48, 023511 (2007), (18pp).
- [30] *Asymmetric twin representation: the transfer matrix symmetry*,
A. Doikou,
math-ph/0606040, SIGMA (Symmetry, Integrability and Geometry: Methods and Applications) 3 (2007) 009, (19pp).
- [29] *The open XXZ and associated models at q root of unity*,
A. Doikou,
hep-th/0603112, J. Stat. Mech. (2006) P09010, (32pp).
- [28] *Spectrum and Bethe ansatz equations for the $U_q(\mathfrak{gl}(N))$ closed and open spin chains in any representation*,
D. Arnaudon, N. Crampe, A. Doikou, L. Frappat, E. Ragoucy,
math-ph/0512037, Annales Henri Poincare 7 (2006) 1217-1268.

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- [27] *On quantum group symmetry and Bethe ansatz for the asymmetric twin spin chain with integrable boundary*
A. Doikou, P.P. Martin,
hep-th/0503019, J. Stat. Mech. (2006) P06004, (43pp).
- [26] *Analytical Bethe ansatz for open spin chains with soliton non-preserving boundary conditions*,
D. Arnaudon, N. Crampe, A. Doikou, L. Frappat, E. Ragoucy,
math-ph/0503014, Int. J. Mod. Phys. 21 No. 7 (2006) 1537.
- [25] *Analytical Bethe ansatz for closed and open $gl(N)$ spin chains in any representation*,
D. Arnaudon, N. Crampe, A. Doikou, L. Frappat, E. Ragoucy,
math-ph/0411021, J. Stat. Mech. (2005) P02007, (28pp).
- [24] *From affine Hecke algebras to boundary symmetries*,
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