

Publications by Irina A. Kogan

PEER REVIEWED PUBLICATIONS

1. Hubert, E., Kogan, I. A. Smooth and algebraic invariants of a group action. Local and global constructions. *Foundations of Computational Math. J.* Volume 7, Number 4 (2007) pp. 345-383.
2. Hubert, E., Kogan, I. A. Rational invariants of a group action. Construction and rewriting. *J. of Symb. Comp.* 42 (2007) pp. 203-217.
3. Feng, S., Kogan, I. A., Krim, H. Integral invariants for curves in 3D: Inductive construction. *IS&T/SPIE joint symposium, Visual Communication and Image Processing conference (VCIP), San Jose, CA* (2007) 11 pp.
4. Feng, S., Krim, H., Kogan, I. A. 3D Face recognition using Euclidean integral invariant signature. *Proceedings of the IEEE/SP 14th Workshop on Statistical Signal Processing (SSP)* (2007) pp. 156-160.
5. Aouda, D., Feng, S., Krim, H., Kogan, I. A. 3D mixed invariant and its application in object classification. *International Conference on Acoustics, Speech, and Signal Processing (ICASSP)* (2007) pp. 461-464.
6. Hollebrands, K., Smith, R., Iwancio, K., Kogan, I. A. The affects of a dynamic program for geometry on college students understandings of properties of quadrilaterals in the Poincare Disk model. *Proceedings of the 9th International Conference on Mathematics Education in a Global Community* (2007) pp. 613-618.
7. Hollebrands, K., Smith, R., Iwancio, K., Kogan, I. A. College geometry students uses of technology in the process of constructing arguments. *Proceedings of the 29th Annual Conference of the North American Chapter of the International Group for the Psychology of Mathematics Education. (T. Lamberg, Ed.)* (2007) 7pp. (electronic)
8. Baloch, S., Krim, H., Kogan, I. A., Zenkov, D. V. Rotation invariant topology coding of 2D and 3D objects using Morse theory. *Proc. of of IEEE International Conference ob Image Processing (ICIP)* (2005) pp. 796-799.
9. Baloch, S., Krim, H., Kogan, I. A., Zenkov, D. V. 3D object representation with topo-geometric shape models. *Proc. of European Signal Processing Conference (EUSIPCO)* (2005) 4pp. (electronic).
10. Kogan, I. A., Olver, P. Invariant Euler-Lagrange equations and the invariant variational bicomplex, *Acta Appl. Math.* 76 (2003) 137-193.
11. Kogan, I. A. Two algorithms for a moving frame construction, *Canad. J. Math.*, 55 no 2 (2003) pp. 266-291.
12. Kogan, I. A., Moreno Maza, M. Computation of canonical forms for ternary cubics. *Proc. of International Symposium on Symbolic and Algebraic Computation (ISSAC)* (2002) pp.151-160.
13. Kogan, I. A., Olver, P. The invariant variational bicomplex, *Contemp. Math., AMS* 285 (2001) 131-144.

14. Kogan, I. A. Inductive construction of moving frames, *Contemp. Math.*, *AMS 285* (2001) pp. 157–170.
15. Kogan, I. A., Olver, P. Symmetries of polynomials, *J. of Symb. Comp.*, *29* (2000) pp. 485–514 (published under name: Berchenko, Irina).

ELECTRONIC PREPRINTS

1. Jenssen, H. K., and Kogan, I. A. *Construction of Conservative Systems* (2008) 10 pp. (submitted) <http://www4.ncsu.edu/~iakogan/papersPDF/JenssenKogan-hyp.pdf>
2. Feng, S., Kogan, I. A. and Krim, H., *Classification of curves in 2D and 3D via affine integral signatures*. (2008) 30 pp. (submitted) <http://arxiv.org/abs/0806.1984v1>
3. Hubert, E., and Kogan, I. A. *Rational, replacement, and local invariants of a group action*. (2005) 37pp. (This preprint gave rise to two journal publications listed above) <http://arxiv.org/abs/math.GM/0506574>

PH.D. THESIS: *Inductive Approach to Cartan's Moving Frame Method with Applications to Classical Invariant Theory*, University of Minnesota, 2000, advisor Peter Olver.