

# Radu-Daniel VATAVU

## Lista de lucrări

### 10 LUCRĂRI RELEVANTE

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01. Radu-Daniel Vatavu, Ionut-Alexandru Zaiți. (2013). Automatic Recognition of Object Size and Shape via User-Dependent Measurements of the Grasping Hand. *International Journal of Human-Computer Studies* 71(5), 590-607. doi:10.1016/j.ijhcs.2013.01.002 (IF 2012: 1.415, SRI 1.616)
02. Radu-Daniel Vatavu. (2013). The Impact of Motion Dimensionality and Bit Cardinality on the Design of 3D Gesture Recognizers. *International Journal of Human-Computer Studies* 71(4), 387-409. doi:10.1016/j.ijhcs.2012.11.005 (IF 2012: 1.415, SRI 1.616)
03. Radu-Daniel Vatavu. (2013). A Comparative Study of User-Defined Handheld vs. Freehand Gestures for Home Entertainment Environments. *Journal of Ambient Intelligence and Smart Environments* 5(2), 187-211. doi:10.3233/AIS-130200 (IF 2012: 1.298, SRI 0.817)
04. Radu-Daniel Vatavu. (2012). Nomadic Gestures: A Technique for Reusing Gesture Commands for Frequent Ambient Interactions. *Journal of Ambient Intelligence and Smart Environments* 4(2), 79-93. doi:10.3233/AIS-2012-0137 (IF 2012: 1.298, SRI 0.817)
05. Radu-Daniel Vatavu, Lisa Anthony, Jacob O. Wobbrock. 2013. Relative Accuracy Measures for Stroke Gestures. Proceedings of ICMI'13, the 15th ACM International Conference on Multimodal Interaction. New York: ACM Press, 279-286. doi:10.1145/2522848.2522875 [Acc. RATE: 49/133=37%] (ARC B)
06. Radu-Daniel Vatavu, Géry Casiez, Laurent Grisoni. (2013). Small, Medium, or Large?: Estimating the User-Perceived Scale of Stroke Gestures. *Proceedings of CHI'13, the 31st ACM SIGCHI Conference on Human Factors in Computing Systems*. New York: ACM Press, 277-280. doi:10.1145/2470654.2470692 [Acc. RATE: 392/1963=20%] (ARC A)
07. Radu-Daniel Vatavu, Lisa Anthony, Jacob O. Wobbrock. (2012). Gestures as Point Clouds: A \$P Recognizer for User Interface Prototypes. *Proceedings of ICMI'12, the 14th ACM International Conference on Multimodal Interaction*. New York: ACM Press, 273-280. doi:10.1145/2388676.2388732 [Acc. RATE: 15/74=20% (LONG PAPERS)] (ARC B)
08. Radu-Daniel Vatavu. (2012). Small Gestures Go a Long Way: How Many Bits per Gesture Do Recognizers Actually Need? *Proceedings of DIS'12, the 9th ACM International Conference on Designing Interactive Systems*. New York: ACM Press, 328-337. doi:10.1145/2317956.2318006 [Acc. RATE: 90/449=20%] (ARC B)
09. Radu-Daniel Vatavu, Cătălin Marian Chera, Wei-Tek Tsai. (2012). Gesture Profile for Web Services: An Event-driven Architecture to Support Gestural Interfaces for Smart Environments. *Proceedings of Ami'12, the International Joint Conference on Ambient Intelligence*. Lecture Notes in Computer Science vol. 7683. Berlin: Springer, 161-176. doi:10.1007/978-3-642-34898-3\_11 [Acc. RATE: 18/47=38% (LONG PAPERS)] (ARC C)
10. Radu-Daniel Vatavu, Daniel Vogel, Géry Casiez, Laurent Grisoni. (2011). Estimating the Perceived Difficulty of Pen Gestures. *Proceedings of INTERACT'11, the 13th IFIP TC13 Conference on Human-Computer Interaction*. Lecture Notes in Computer Science 6947. Berlin: Springer, 89-106. doi:10.1007/978-3-642-23771-3\_9 [Acc. RATE: 111/402=27%] (ARC A)

### TEZA DE DOCTORAT

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01. Radu-Daniel Vatavu. (2008). Real-Time Acquisition of Human Gestures for Interacting with Virtual Reality. Universitatea Ștefan cel Mare din Suceava & Université des Sciences et Technologies de Lille / Lille1, Franța. DART Europe E-theses portal: <http://www.dart-europe.eu/full.php?id=183481>

## CĂRȚI / CAPITOLE ÎN CĂRȚI

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01. Radu-Daniel Vatavu. (2013). Ghid practic pentru analiza și proiectarea algoritmilor. Aplicații în C#. MatrixRom, București, ISBN 978-973-755-993-7, 220 pagini
02. Radu-Daniel Vatavu, Ovidiu-Ciprian Ungurean, Ștefan-Gheorghe Pentiu. (2011). Body Gestures for Office Desk Scenarios. In D. England (Ed.), *Whole Body Interaction* (pp. 163-172). Springer Human-Computer Interaction Series. London: Springer-Verlag. doi:10.1007/978-0-85729-433-3\_13
03. Radu-Daniel Vatavu. (2011). The Understanding of Meaningful Events in Gesture-Based Interaction. In J. Zhang, L. Shao, L. Zhang and G.A. Jones (Eds.), *Intelligent Video Event Analysis and Understanding* (pp. 1-19). Springer Studies in Computational Intelligence vol. 332. Berlin: Springer. doi:10.1007/978-3-642-17554-1\_1
04. Radu-Daniel Vatavu. (2010). Creativity in Interactive TV: Personalize, Share, and Invent Interfaces. In A. Marcus, A. Cereijo Roibas, R. Sala (Eds.), *Mobile TV: Customizing Content and Experience* (pp. 121-139), Springer Human-Computer Interaction Series. London: Springer-Verlag. doi:10.1007/978-1-84882-701-1\_12
05. Radu-Daniel Vatavu. (2009). Interfaces that Should Feel Right: Natural Interaction with Multimedia Information. In M. Grgic, K. Delac, M. Ghanbari (Eds.), *Recent Advances in Multimedia Signal Processing and Communications* (pp. 145-170). Springer Studies in Computational Intelligence vol. 231. Berlin: Springer. doi:10.1007/978-3-642-02900-4\_7
06. Ștefan-Gheorghe Pentiu, Radu-Daniel Vatavu. 2009. Algoritmi și metode de programare în Java. Editura Universității Suceava, ISBN 978-973-666-323-9, 294 pagini

## ARTICOLE ÎN REVISTE

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01. Radu-Daniel Vatavu, Ionut-Alexandru Zaiți. (2013). Automatic Recognition of Object Size and Shape via User-Dependent Measurements of the Grasping Hand. *International Journal of Human-Computer Studies* 71(5), 590-607. doi:10.1016/j.ijhcs.2013.01.002 (IF 2012: 1.415, SRI 1.616)
02. Radu-Daniel Vatavu. (2013). The Impact of Motion Dimensionality and Bit Cardinality on the Design of 3D Gesture Recognizers. *International Journal of Human-Computer Studies* 71(4), 387-409. doi:10.1016/j.ijhcs.2012.11.005 (IF 2012: 1.415, SRI 1.616)
03. Radu-Daniel Vatavu. (2013). A Comparative Study of User-Defined Handheld vs. Freehand Gestures for Home Entertainment Environments. *Journal of Ambient Intelligence and Smart Environments* 5(2), 187-211. doi:10.3233/AIS-130200 (IF 2012: 1.298, SRI 0.817)
04. Bogdan Pogorelc, Artur Lugmayr, Bjorn Stockleben, Radu-Daniel Vatavu, Nina Tahmasebi, Estefania Serral, Emilija Stojmenova, Bojan Imperl, Thomas Risse, Gideon Zenz, Matjaz Gams. (2013). Ambient Bloom: New Business, Content, Design and Models to Increase the Semantic Ambient Media Experience. *Multimedia Tools and Applications*, 66(1), 7-32. doi:10.1007/s11042-012-1228-4 (IF 2012: 1.014, SRI 0.774)
05. Radu-Daniel Vatavu. (2013). On Designing Interactivity Awareness for Ambient Displays. *Multimedia Tools and Applications*, 66(1), 59-80. doi:10.1007/s11042-012-1140-y (IF 2012: 1.014, SRI 0.774)
06. Radu-Daniel Vatavu. (2012). Nomadic Gestures: A Technique for Reusing Gesture Commands for Frequent Ambient Interactions. *Journal of Ambient Intelligence and Smart Environments*, 4(2), 79-93. doi:10.3233/AIS-2012-0137 (IF 2012: 1.298, SRI 0.817)
07. Radu-Daniel Vatavu. (2012). Point & Click Mediated Interactions for Large Home Entertainment Displays. *Multimedia Tools and Applications*, 59(1), 113-128. doi:10.1007/s11042-010-0698-5 (IF 2012: 1.014, SRI 0.774)
08. Bogdan Pogorelc, Radu-Daniel Vatavu, Artur Lugmayr, Bjorn Stockleben, Thomas Risse, Juha Kaario, Estefania Constanza Lomonaco, Matjaz Gams. (2012). Semantic Ambient Media: From Ambient Advertising to Ambient-Assisted Living. *Multimedia Tools and Applications*, 58(2), 399-425. doi:10.1007/s11042-011-0917-8 (IF 2012: 1.014, SRI 0.774)
09. Radu-Daniel Vatavu. (2012). Presence Bubbles: Supporting and Enhancing Human-Human Interaction with Ambient Media. *Multimedia Tools and Applications*, 58(2), 371-383. doi:10.1007/s11042-010-0674-0 (IF 2012: 1.014, SRI 0.774)

10. Cristian Andy Tănase, Radu-Daniel Vatavu, Ștefan-Gheorghe Pentiu, Adrian Graur. (2008). Detecting and Tracking Multiple Users in the Proximity of Interactive Tabletops. *Advances in Electrical and Computer Engineering*, 8(2), 61-64. doi:10.4316/AECE.2008.02011 (IF 2012: 0.552)
11. Radu-Daniel Vatavu, Ștefan-Gheorghe Pentiu, Laurent Grisoni, Christophe Chaillou. (2008). Modeling Shapes for Pattern Recognition: A Simple Low-Cost Spline-based Approach. *Advances in Electrical and Computer Engineering*, 8(1), 67-71. doi:10.4316/AECE.2008.01012 (IF 2012: 0.552)
12. Radu-Daniel Vatavu, Ștefan-Gheorghe Pentiu. (2008). Multi-Level Representation of Gesture as Command for Human-Computer Interaction. *Computing and Informatics*, 27(6), 837-851
13. Adriana Băcilă, Xavier Decoopman, Radu-Daniel Vatavu, G. Mesmacque, M. Vodă, V.A. Șerban. (2007). Computer Simulation of Fatigue Crack Propagation under Random Loading Conditions. *International Journal of Fatigue*, 29(9-11), 1772-1780. doi:10.1016/j.ijfatigue.2007.02.026 (IF 2012: 1.976, SRI 2.137)

## CONFERINȚE INTERNAȚIONALE

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01. Radu-Daniel Vatavu, Matei Mancaș. (2014). Visual Attention Measures for Multi-Screen TV. *Proceedings of TVX'14, the ACM International Conference on Interactive Experiences for TV and Online Video*. New York: ACM Press [Acc. RATE: 20/80=25%]
02. Radu-Daniel Vatavu, Ionuț-Alexandru Zaiți. (2014). Leap Gestures for TV: Insights from an Elicitation Study. *Proceedings of TVX'14, the ACM International Conference on Interactive Experiences for TV and Online Video*. New York: ACM Press [Acc. RATE: 20/80=25%]
03. Yosra Rekik, Radu-Daniel Vatavu, Laurent Grisoni. (2014). Match-Up & Conquer: A Two-Step Technique for Recognizing Unconstrained Bimanual and Multi-Finger Touch Input. *Proceedings of AVI'14, the 12th International Working Conference on Advanced Visual Interfaces*. New York: ACM Press [Acc. RATE: 47/164=28%] (ARC B)
04. Radu-Daniel Vatavu, Lisa Anthony, Jacob O. Wobbrock. (2013). Relative Accuracy Measures for Stroke Gestures. *Proceedings of ICMI'13, the 15th ACM International Conference on Multimodal Interaction*. New York: ACM Press, 279-286. doi:10.1145/2522848.2522875 [Acc. RATE: 50/133=38%] (ARC B)
05. Radu-Daniel Vatavu, Matei Mancaș. (2013). Interactive TV Potpourris: An Overview of Designing Multi-screen TV Installations for Home Entertainment. *Proceedings of INTETAIN'13, 5th International ICST Conference on Intelligent Technologies for Interactive Entertainment*. Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering vol. 124. Springer International Publishing, 49-54. doi:10.1007/978-3-319-03892-6\_6
06. Radu-Daniel Vatavu. (2013). There's a World outside Your TV: Exploring Interactions beyond the Physical TV Screen. *Proceedings of EuroITV'13, the 11th European Conference on Interactive TV and Video*. New York: ACM Press, 143-152. doi:10.1145/2465958.2465972 [Acc. RATE: 21/58=36%]
07. Ionuț-Alexandru Zaiți, Radu-Daniel Vatavu, Ștefan-Gheorghe Pentiu. (2013). Exploring Hand Posture for Smart Mobile Devices. *Proceedings of SouthCHI'13, the 1st International Conference on Human Factors in Computing and Informatics*. Lecture Notes in Computer Science vol. 7946. Berlin: Springer, 721-731. doi:10.1007/978-3-642-39062-3\_52 [Acc. RATE: 57/169=34%]
08. Lisa Anthony, Radu-Daniel Vatavu, Jacob O. Wobbrock. (2013). Understanding the Consistency of Users' Pen and Finger Stroke Gesture Articulation. *Proceedings of GI'13, the 39th Graphics Interface Conference*. Toronto, Ontario: Canadian Information Processing Society, 87-94. doi:2532129.2532145 [Acc. RATE: 16/42=38% (HCI TRACK)] (ARC B)
09. Radu-Daniel Vatavu, Géry Casiez, Laurent Grisoni. (2013). Small, Medium, or Large?: Estimating the User-Perceived Scale of Stroke Gestures. *Proceedings of CHI'13, the 31st ACM SIGCHI Conference on Human Factors in Computing Systems*. New York: ACM Press, 277-280. doi:10.1145/2470654.2470692 [Acc. RATE: 392/1963=20%] (ARC A)
10. Radu-Daniel Vatavu, Cătălin Marian Chera, Wei-Tek Tsai. (2012). Gesture Profile for Web Services: An Event-driven Architecture to Support Gestural Interfaces for Smart Environments. *Proceedings of AmI'12, the International Joint*

*Conference on Ambient Intelligence*. Lecture Notes in Computer Science vol. 7683. Berlin: Springer, 161-176. doi:10.1007/978-3-642-34898-3\_11 [Acc. RATE: 18/47=38% (LONG PAPERS)] (ARC C)

11. Radu-Daniel Vatavu, Lisa Anthony, Jacob O. Wobbrock. (2012). Gestures as Point Clouds: A \$P Recognizer for User Interface Prototypes. *Proceedings of ICMI'12, the 14th ACM International Conference on Multimodal Interaction*. New York: ACM Press, 273-280. doi:10.1145/2388676.2388732 [Acc. RATE: 15/74=20% (LONG PAPERS)] (ARC B)

#### OUTSTANDING PAPER AWARD

12. Cătălin Marian Chera, Wei-Tek Tsai, Radu-Daniel Vatavu. (2012). Gesture Ontology for Informing Service-Oriented Architectures. *Proceedings of ISIC'12, the IEEE International Symposium on Intelligent Control*. Washington, D.C.: IEEE Computer Society, 1184-1189. doi:10.1109/ISIC.2012.6398257 (ARC B)
13. Radu-Daniel Vatavu. (2012). User-Defined Gestures for Free-Hand TV Control. *Proceedings of EuroITV'2012, the 10th European Conference on Interactive TV and Video*. New York: ACM Press, 45-48. doi:10.1145/2325616.2325626 [Acc. RATE: 31/91=34%]
14. Radu-Daniel Vatavu. (2012). Small Gestures Go a Long Way: How Many Bits per Gesture Do Recognizers Actually Need? *Proceedings of DIS'12, the 9th ACM International Conference on Designing Interactive Systems*. New York: ACM Press, 328-337. doi:10.1145/2317956.2318006 [Acc. RATE: 90/449=20%] (ARC B)
15. Radu-Daniel Vatavu. (2012). 1F: One Accessory Feature Design for Gesture Recognizers. *Proceedings of IUI'12, the 17th International Conference on Intelligent User Interfaces*. New York: ACM Press, 297-300. doi:10.1145/2166966.2167022 [Acc. RATE: 49/212=23%] (ARC A)
16. Radu-Daniel Vatavu. (2011). The Effect of Sampling Rate on the Performance of Template-based Gesture Recognizers. *Proceedings of ICMI'11, the 13th International Conference on Multimodal Interaction*. New York: ACM Press, 271-278. doi:10.1145/2070481.2070531 [Acc. RATE: 47/120=39%] (ARC B)
17. Radu-Daniel Vatavu, Daniel Vogel, Géry Casiez, Laurent Grisoni. (2011). Estimating the Perceived Difficulty of Pen Gestures. *Proceedings of INTERACT'11, the 13th IFIP TC13 Conference on Human-Computer Interaction*. Lecture Notes in Computer Science vol. 6947. Berlin: Springer, 89-106. doi:10.1007/978-3-642-23771-3\_9 [Acc. RATE: 111/402=27%] (ARC A)
18. Radu-Daniel Vatavu. (2011). Reusable Gestures for Interacting with Ambient Displays in Unfamiliar Environments. *Proceedings of ISAmI'11, the 2nd International Symposium on Ambient Intelligence*. Advances in Intelligent and Soft Computing vol. 92. Berlin: Springer, 157-164. doi:10.1007/978-3-642-19937-0\_20
19. Radu-Daniel Vatavu, Laurent Grisoni, Ștefan-Gheorghe Pentiu. (2010). Multiscale Detection of Gesture Patterns in Continuous Motion Trajectories. *Proceedings of GW'09, the 8th International Gesture Workshop*. In S. Kopp, I. Wachsmuth (Eds.), *Gesture in Embodied Communication and Human-Computer Interaction*, Lecture Notes in Computer Science vol. 5934. Berlin: Springer, 85-97. doi:10.1007/978-3-642-12553-9\_8
20. Radu-Daniel Vatavu, Laurent Grisoni, Ștefan-Gheorghe Pentiu. (2009). Gesture Recognition Based on Elastic Deformation Energies. *Proceedings of GW'07, the 7th International Gesture Workshop*. In M.S. Dias, S. Gibet, M.M. Wanderley, R. Bastos (Eds.), *Gesture-Based Human-Computer Interaction and Simulation*. Lecture Notes in Computer Science vol. 5085. Berlin: Springer, 1-12. doi:10.1007/978-3-540-92865-2\_1 [Acc. RATE: 31/53=58%]
21. Radu-Daniel Vatavu, Ștefan-Gheorghe Pentiu. (2008). Interactive Coffee Tables: Interfacing TV within an Intuitive, Fun and Shared Experience. *Proceedings of EuroITV'08, the 6th European Interactive TV Conference*. Lecture Notes in Computer Science vol. 5066. Berlin: Springer, 183-187. doi:10.1007/978-3-540-69478-6\_24 [Acc. RATE: 42/156=27%]
22. Radu-Daniel Vatavu, Ștefan-Gheorghe Pentiu, Christophe Chaillou, Laurent Grisoni, Samuel Degrande. (2006). Visual Recognition of Hand Postures for Interacting with Virtual Environments. *Proceedings of DAS'06, the 8th International Conference on Development and Application Systems*. Suceava, 477-482.

01. Radu-Daniel Vatavu. (2013). Designing Gestural Interfaces for the Interactive TV. *Proceedings of EuroITV'2013, the 11th European Conference on Interactive TV and Video*. New York: ACM Press, 167-168. doi:10.1145/2465958.2465981
02. Radu-Daniel Vatavu. (2012). Designing Gestural Interfaces for Future Home Entertainment Environments. *Adjunct Proceedings of EuroITV'2012, the 10th European Conference on Interactive TV and Video*. Berlin, Fraunhofer Institute for Open Communication Systems, 136-137
03. Radu-Daniel Vatavu, Ionuț-Alexandru Zaiți. (2011). An Investigation of Extrinsic-Oriented Ambient Exploration for Gaming Applications. In R. Wichert, K. Van Laerhoven, J. Gelissen (Eds.), *Constructing Ambient Intelligence* (pp. 245-248). Springer Communications in Computer and Information Science vol. 277. Berlin: Springer-Verlag. doi:10.1007/978-3-642-31479-7\_42
04. Radu-Daniel Vatavu. (2010). Understanding Challenges in Designing Interactions for the Age of Ambient Media. *Proceedings of SAME'10, the 3rd Workshop on Semantic Ambient Media Experience, in conjunction with AmI'2010*. Tampere: Tampere University of Technology, 8-13
05. Radu-Daniel Vatavu. (2009). Enhancing Human-Human Interactions through Emotional Responsive Ambient Media. *Proceedings of SAME'2009, the 2nd Workshop on Semantic Ambient Media Experience, in conjunction with AmI'2009*.
06. Radu-Daniel Vatavu, Ovidiu Ciprian Ungurean, Ștefan-Gheorghe Pentiu. (2009). Gestures for your Workplace: Investigating Body Interaction for Everyday Desk Scenarios. *WBI'2009, the 3rd Workshop on Whole Body Interaction*
07. Ovidiu Ciprian Ungurean, Ștefan-Gheorghe Pentiu, Radu-Daniel Vatavu. (2009). Use Your Head: An Interface for Computer Games using Head Gestures. *Proceedings of GW'2009, the 8th International Gesture Workshop*.
08. Radu-Daniel Vatavu, Ștefan-Gheorghe Pentiu, Tudor Ioan Cerlincă. (2007). Bringing Context into Play: Supporting Game Interaction through Real-Time Context Acquisition. *Proceedings of WMISI'07, the Workshop on Multimodal Interfaces in Semantic Interaction at ICMI'2007*, 3-8. New York: ACM Press. doi:10.1145/1330572.1330573
09. Radu-Daniel Vatavu, Ștefan-Gheorghe Pentiu. (2005). A Graphical User Interface with Real-Time Information Feedback for a Video Camera Controlled Arm Robot. *Proceedings of IWCIT'2005, the International Workshop of Control and Information Technologies*, 49-54. Ostrava: Technical University of Ostrava.