

ELENA A. FEDOROVSKAYA, PH.D.

Curriculum Vitae

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Summary

An inventor, scholar, teacher and a leader with over 15 years of experience in leading and carrying out R&D projects in the imaging industry and Academia. Unique background in cognitive science, mathematics and imaging science, with broad multidisciplinary knowledge and practical research experience. Known for formulating novel imaging technology and system concepts, resulting in more than 50 U.S. patents in areas related to digital imaging, display systems and health care markets. International breadth of research and collaboration with the vast network in academia and companies.

Current research and teaching interests focus on imaging, color management and color science, and broadly, cross media studies from cognitive, perceptual, affective and computational standpoints.

Education

MSc Applied Mathematics, Department of Discrete Mathematics, Faculty of Mechanics and Mathematics, Lomonosov Moscow State University, Moscow, Russia

PhD Psychophysiology, Department of Psychophysiology, Faculty of Psychology, Lomonosov Moscow State University, Moscow, Russia

MSc Psychology, Department of Neuropsychology, Faculty of Psychology, Lomonosov Moscow State University, Moscow, Russia

Professional Development and Training

3D systems and technology, SPIE course, 2012

User experience with mobile systems, CHI 2010

Imaging Science and Technology Training Program courses, Eastman Kodak Company

Color Systems Optimization, graduate Color Science course, Rochester Institute of Technology, Rochester, NY

Project management – Kodak Research Labs, Eastman Kodak, Rochester, NY

Leadership Development Course – Kodak Research Labs, Eastman Kodak, Rochester, NY

Academic Appointments

July 2013 – present **Paul and Louise Miller Distinguished Professor**, School of Media Sciences, Rochester Institute of Technology, Rochester, NY

The Paul & Louise Miller Distinguished Professorship was established in 1976 by the Trustees of the Gannett Foundation in honor of Paul and Louise Miller. The purpose of this endowed chair served to provide the newspaper and news media industry with highly qualified young men and women for management positions and to give even greater recognition to the industry as a significant segment of the graphic arts industry through research, teaching and leadership.

- Managed annual endowment budget
- Developed two new courses to reflect the latest technologies and processes involved in news media
- Invited five speakers for the Paul and Louise Miller Lecture Series
- Organized and run Interdisciplinary Forum for Transmedia Publishing in 2016
- Organized two interdisciplinary workshops for students on cross-media and transmedia publishing
- Initiated multidisciplinary research laboratory on transmedia publishing and storytelling
- Completed multiple published research studies and presentations focused in the area of news media and publishing
- Supervised graduate students' theses research on the topics of media publishing, imaging and color management
- Represented United States as an expert on ISO TC130 Graphic communication committee for JWG15 - Development of environmental standards related to e-media
- Obtained several grants issued by Rochester Institute of Technology for research and teaching
- Formed a multidisciplinary team of RIT scholars for NSF – funded proposal (review pending)
- Proposed and led the development of a prototype for transmedia news publishing platform

- July 2014 –present **Affiliated Color Science Faculty member**, Color Science, College of Science, Rochester Institute of Technology, Rochester, NY
- Served on PhD theses committee
 - Recruited and supervised a student’s Master Thesis research on color appearance and color saliency
 - Participate in a new working group on Common color appearance affiliated with the CIE.
- September 2012
-May 2013 **Adjunct Professor**, Department of Psychology, Rochester Institute of Technology, Rochester, NY.
Taught introductory and upper level course

Industry Professional Experience

- 1996 - 2012 **Senior Research Scientist, Project leader**, Kodak Research Labs, Eastman Kodak Company, Rochester, NY.
- Authored and co-authored 51 issued US patents in several imaging disciplines. Several patents were licensed to external companies.
 - Organized teams and led multidisciplinary projects aimed at developing new technologies for digital consumer imaging, medical and display applications.
 - Formulated and led projects on human centered imaging and computing and interaction with image centric multimedia systems.
 - Managed projects’ budgets.
 - Developed models and algorithms for predicting image quality, image value, aesthetic attributes and importance of images based on objective and subjective evaluations.
 - Created novel concepts for usage of images and multimedia collections.
 - Negotiated and developed agreements for joint R&D projects with universities and external companies.
 - Represented Kodak in collaborative projects on Interactive Displays Systems with Rochester Institute of Technology.
 - Served on Kodak Research Scientific Council for four years

Other Professional Experience

Visiting Research Fellow, Nijmegen Institute for Cognition and Information (NICI), Nijmegen, the Netherlands.
Image Perception and Image Quality

Visiting Research Fellow, Department of Applied Psychology, Umeå University, Sweden.
Color Perception and Color Constancy

Senior Research Scientist, Department of Psychophysiology, Lomonosov Moscow State University.
Color Vision, Electrophysiology of Stress

Visiting Research Fellow, Institute for Perception Research, IPO, Eindhoven, the Netherlands.
Color Reproduction and Perceptual Image Quality

Teaching Experience

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| 2016- 2017 | School of Media Sciences, Rochester Institute of Technology, Rochester, NY. Transmedia Publishing and Storytelling, Quantifying Media Experience , undergraduate course for the BS in Media Arts and Sciences Program. |
| 2015 - 2017 | School of Media Sciences, Rochester Institute of Technology, Rochester, NY. Transmedia Publishing and Storytelling, Cross Media Workflow , graduate course for the MS in Print Media Program. |
| 2014 - 2017 | School of Media Sciences, Rochester Institute of Technology, Rochester, NY. Transmedia Publishing and Storytelling, Transmedia Publishing and Storytelling , combined undergraduate and graduate course; Augmented Reality in Publishing , independent study class. |
| 2012 - 2013 | Department of Psychology, Rochester Institute of Technology, Rochester, NY.
Introduction to Psychology, Psychology of Perception. |

Courses taught previously at various times:

Measurement in an Experiment: fundamentals of psychophysics and psychometrics, scales, analysis methods.

Experimental Psychology Laboratory. A one semester lab work aligned with the measurement in psychology.

Sensory Systems: functions and mechanisms of vision and hearing.

Psychophysiology: psychophysiological correlates and physiological substrates of perception, cognition, and affect, mechanisms of orienting and learning; theory and applications of psychophysiological assessment.

Neuropsychology: theoretical approaches, brain systems underlying psychological functions and their impairments, neuropsychological assessment.

Color Perception and Color Memory. Elective course.

Publications: Book Chapters, Book Reviews, Technical Reports

1. Joshi, D., Datta, R., **Fedorovskaya, E. A.**, et al. (2014)
On Aesthetics and Emotions in Scene Images: A Computational Perspective, Book Chapter. In “Scene Vision”, K. Kveraga and M. Bar (editors). MIT Press, pp.241-272.
2. Snyder, J., **Fedorovskaya, E. A.** (2011)
Book Review of S. E. Umbaugh, 2011, CRC Press, 977 pp. Digital Image Processing and Analysis: Human and Computer Vision Applications with CVIP tools, Second Edition. Journal of Electronic Imaging, v. 20(3), pp. 039901-3.
3. Homszkaya, E. D. and **Fedorovskaya, E. A.** (2004)
Level-based organization of color functions: neuropsychological investigation, in E. D. Homszkaya (ed.) Neuropsychology Reading Book, Moscow, pp. 307-323, (Russian).
4. Yendrikhovskij, S. N., **Fedorovskaya, E. A.**, Schaefer, L., Prabhu, G., Matraszek, T., and Parks, P. (2000)
Universal Image Classification System: Version 1.1, IPO Report, 1223, Eindhoven.
5. **Fedorovskaya, E. A.**, Blommaert, F.J.J. and Ridder, H. de (1997)
Perceptual quality of color images of natural scenes transformed in CIELUV color space, in R. Eschbach and K. Braun (eds.), Recent Progress in Color Science (pp. 42-45). Springfield: Science for Imaging Science and Technology.
6. **Fedorovskaya, E. A.**, de Ridder, H., Yendrikhovskij, S.N., and Blommaert F.J.J. (1997)
Multidimensional structure of colorfulness: chroma variation in color images of natural scenes, in R. Eschbach and K. Braun (eds.), Recent Progress in Color Science, Springfield, IS&T, USA, pp. 93-96.
7. Ridder, H. de, Blommaert, F. J. J., and **Fedorovskaya, E. A.** (1997)
Naturalness and image quality: Chroma and hue variation in color images of natural scenes, in R. Eschbach and K. Braun (eds.), Recent Progress in Color Science, Springfield, IS&T, USA, pp. 170 – 176.
8. Yendrikhovskij, S. N., de Ridder, H., and **Fedorovskaya E. A.** (1995)
Individual differences in colourfulness judgments of images of natural scenes, IPO Annual Progress Report, 30, pp. 76-83.

9. Homskaya, E. D., **Fedorovskaya, E. A.** (1993)
Hierarchical organization of color functions, Book Chapter in A. A. Mitkin (ed.), Problems of color in psychology, Moscow, Nauka, pp. 151-172, (Russian).
10. Ridder, H. de, **Fedorovskaya, E. A.** and Blommaert, F.J.J. (1993)
Naturalness and image quality: chroma variation in colour images of natural scenes. IPO Annual Progress Report, 28, 89-95.

Publications: Refereed Journal Articles

1. **Fedorovskaya, E.A.**, Hickeson, A., Desai, S., and Cheng, F. (2016)
The RocReadaR – a system for transmedia news publishing using augmented reality. *Journal of Print and Media Science and Technology Research*, 5, 2, pp.131-141.
2. **Fedorovskaya, E.A.** and Yu, L. (2015).
Investigating the Effects of Publishing Approaches Using Print, Electronic and AR Media for Storytelling on User Experience. *Journal of Print and Media Science and Technology Research*, 4, 3, pp. 217-226.
3. Joshi, D., Datta, R., **Fedorovskaya, E.**, Luong, Q.-T., James Z. Wang, J. Z., Li, J., and Luo, J. (2011) Aesthetics and Emotions in Images, *IEEE Signal Processing*, v. 28, n.5, pp. 94-115.
4. **Fedorovskaya, E. A.** and Endrikhovski, S. (2003)
Affective imaging: A concept for image-based therapeutic procedures. *Annual Review of CyberTherapy and Telemedicine*, v. 1, pp. 144-145.
5. Arakelov, G.G., **Fedorovskaya, E. A.**, Sokolov, I.V., and Zhdanova, G.G. (2002)
Slow component of event related potentials in the stress reaction. *Vestnik Moskovskogo Universiteta, Psychologia*, v. 1, pp. 41-52 (Russian).
6. **Fedorovskaya, E. A.** and De Weert, C.M. (2000)
Brightness assimilation or border contrast rivalry? *Investigative ophthalmology & Visual Science*, v. 41, 4, S229, 1203-B578.
7. Jakobsson, T., Bergstrom, S. S., Gustafsson, K. A., **Fedorovskaya E. A.** (1997)
Ambiguities in colour constancy and shape from shading. *Perception*, 26, n. 4, pp. 531-41.
8. **Fedorovskaya, E. A.**, De Ridder, H., Blommaert, F. (1997)
Chroma variations and perceived quality of color images of natural scenes. *Color Research and Application*, 22, pp. 96-110.
9. Yendrikhovskij, S. N., **Fedorovskaya, E. A.**, de Ridder, H., Blommaert, F. J. J. (1997)
Colourfulness judgements of natural scenes. *Acta psychologica*, 77, pp.79-94.

10. **Fedorovskaya, E.A.** (1995)
On psychophysiology of image perception. *Vestnik Moskovskogo Universiteta, Psychologia*, n.4, (Russian).
11. Arakelov, G. G., **Fedorovskaya, E. A.**, Svergun, O. U., Zhdanova, G. G. (1994)
Changes in visual evoked potentials and dynamics of hormones during the stress reaction in humans, *Psychological Journal*, v.15, n.1, pp. 87-96, (Russian).
12. **Fedorovskaya, E. A.**, Ridder, H. de & Blommaert, F. J. J. (1994)
Colourfulness of colour images of natural scenes: Multidimensional scaling, *Perception*, 23(Suppl.), 90.
13. **Fedorovskaya, E. A.**, Arakelov, G. G., Zhdanova, G. E. (1994)
Stress induced by threat increases catecholamine content in human saliva, in “*Man, Neuron, Model,*” *Email Communications in Psychophysiology*, n.4.
14. **Fedorovskaya, E. A.** (1993)
Perceptual color space is isomorphic with semantic color space, in “*Man, Neuron, Model,*” *Email Communications in Psychophysiology*, n.1.
15. **Fedorovskaya, E. A.** (1993)
Memory color space is an interface between perceptual and semantic color spaces, in “*Man, Neuron, Model,*” *Email Communications in Psychophysiology*, n.1.
16. Sokolov, E.N., **Fedorovskaya, E. A.** (1989)
Study of color vision in brain damaged patients by multidimensional scaling, *Psychological Journal*, vol. 10, pp. 71-81, (Russian).
17. **Fedorovskaya E. A.** (1984)
A complex procedure for estimation of colour vision in patients with local lesions, *Voprosy Psychologii*, v.5, pp.148-149, (Russian).

Publications: Refereed Conference Proceedings

1. **Fedorovskaya, E.**, Chung, R., Hunter, D., and Urbain, P. (2017)
Exploring the Effect of Gray Balance and Tone Reproduction on Consistent Color Appearance. TAGA, Proceedings of the 69th Annual Technical Conference, p.32.
2. Chung, R., **Fedorovskaya, E.**, Hunter, D., and Urbain, P. (2017)
Predicting Color Image Match. TAGA, Proceedings of the 69th Annual Technical Conference, p.15.
3. Etchebehere, S., and **Fedorovskaya, E.A.** (2017)

On the Role of Color in Visual Saliency. *Human Vision and Electronic Imaging Conference, IS&T Proceedings*. 2017.

4. **Fedorovskaya, E.A.**, Kapistharam, S., and Bu, Yington. (2017)
Gaze Patterns in Art Viewing and their Dependency on Expertise and Image Characteristics. *Human Vision and Electronic Imaging Conference, IS&T Proceedings*. 2017.
5. Chung, R., and **Fedorovskaya, E.A.** (2016)
Selecting a Substrate for Color Proofing. *TAGA Conference Proceedings*, Memphis, TN.
6. Wang Y., Desai, S. and **Fedorovskaya, E.A.** (2015)
RocReadaR – a system for collaborative transmedia publishing. *Advances in Printing and Media Technology*. Vol. XLII(II), pp. 223-230.
7. **Fedorovskaya, E. A.**, and Lawrence, D. (2014)
Identifying image preferences based on demographic attributes. *Human Vision and Electronic Imaging Conference XIX*, SPIE Proceedings, 90104T.
8. **Fedorovskaya, E.A.** and Yu, L. (2014)
Investigating the Effects of Publishing Approaches Using Print, Electronic and AR Media for Storytelling on User Experience. *Advances in Printing and Media Technology*. Vol. XLI(I). pp. 162 - 163.
9. Chu, S. L., **Fedorovskaya, E. A.**, Quek, F., and Snyder, J. (2013)
The effect of familiarity on perceived interestingness of photographs. *Human Vision and Electronic Imaging Conference XVIII*, SPIE Proceedings, 8651, p.551.
10. **Fedorovskaya, E.A.** and deRidder, H. (2013)
Subjective matters: from image quality to image psychology. *Human Vision and Electronic Imaging Conference XVIII*, SPIE Proceedings, 8651, p.681.
11. Neustaedter, C., Judge, T., Kurtz, A., and **Fedorovskaya, E.** (2010)
The Family Window: Connecting Families over Distance with a Domestic Media Space. *Video Proceedings of the Conference on Computer Supported Cooperative Work (CSCW 2010)*, ACM Press.
12. **Fedorovskaya, E. A.**, Hao W., and Neustaedter, C., (2009)
Visual harmony and image statistics: an empirical investigation. *Human Vision and Electronic Imaging conference XIV, SPIE&IST 2009 Conference presentations, Paper 7240-59*.
13. Neustaedter, C., and **Fedorovskaya, E.** (2009)
Avatar Appearances and Representation of Self: Learning from Second Life. *Proceedings of AAAI's Fall Symposium Series on Biologically Inspired Cognitive Architectures (2009)*, AAAI Press, p.98.
14. Neustaedter, C., and **Fedorovskaya, E.** (2009)
Understanding and Improving Flow in Digital Photo Ecosystems. *Proceedings of Graphics Interface (2009)*, ACM Press, pp. 191-198.

15. Neustaedter, C., and **Fedorovskaya, E.** (2009)
Presenting Identity in the Virtual World through Avatar Appearances. *Proceedings of Graphics Interface (2009)*, ACM Press, pp. 183-190.
16. Neustaedter, C., and **Fedorovskaya, E.** (2009)
Capturing and Sharing Memories in a Virtual World. *Proceedings of the ACM Conference on Computer-Human Interaction (2009)*, ACM Press, pp. 1161-1170.
17. **Fedorovskaya, E.**, Neustaedter, C., and Hao, W. (2008)
Image Harmony for Consumer Images. *Proceedings of the IEEE International Conference on Image Processing (ICIP 2008)*, IEEE Press, pp. 121-124.
18. Seung Ho Baek, S.H., Burberry, M., Cuffney, R., Elizur, E., Feller, T., **Fedorovskaya, E.**, Kerr, R., Rowley, L., Spath, T., Tutt, L., and Warner, M. (2007)
Maskless Lithography and Electronic Patterning for Display Application. *Proceedings of Asia Display (2007)*, v. 1.
19. **Fedorovskaya, E. A.** (2003)
Image Quality as a Problem of Computational Vision. *Proceedings of IS&T's PICS Conference (2003)*, pp. 22-28.
20. **Fedorovskaya, E. A.** (2002)
Perceived overall contrast and quality of the tone scale rendering for natural images. *Human Vision and Electronic Imaging VII, Proceedings of the SPIE Conference*, v. 4662, pp. 119-128.
21. **Fedorovskaya, E. A.**, Miller, P., Prabhu, G., Horwitz, C., Matraszek, M., Parks, P., Blazey, R., and Endrikhovski, S. (2001)
Affective imaging: psychological and physiological reactions to individually chosen images. *Proceedings of the SPIE Conference*, 4299, pp. 524-532.
22. **Fedorovskaya, E. A.**, De Ridder, H., Yendrikhovskij, S., and Blommaert, F. (1995)
Multidimensional structure of colorfulness: chroma variation in color images of natural scenes. *Proceedings of the Third Color Imaging Conference: Color Science, Systems and Applications*, Scottsdale, Arizona, pp. 130-133.
23. Ridder, H. de, Blommaert, F.J.J. and **Fedorovskaya, E.A.** (1995)
Naturalness and image quality: chroma and hue variation in color images of natural scenes. *Human Vision, Visual Processing, and Digital Display VI. Proceedings of the SPIE Conference*, San Jose, CA, USA, 2411, pp. 51-61.
24. **Fedorovskaya, E. A.**, Blommaert, F.J.J., De Ridder, H. (1993)
Perceptual quality of color images of natural scenes transformed in the CIELUV color space. *Proceedings of the 1st IS&T/SID Color Imaging Conference: Transforms & Transportability of Color*, Scottsdale, Arizona, pp. 37-40.

Publications: Thesis

Fedorovskaya, E. A. (1985)

Color vision impairments in patients with localized brain lesions. Ph.D. Thesis, *Lomonosov Moscow University Press, Moscow, Russia.*

Issued US Patents

1. Neustaedter, C. G., Gobeyn, K. M., and **Fedorovskaya, E. A.** (December 29, 2015)
Configuring a virtual world user-interface. U.S. 9,223,469.
2. Maier, T. O., Kurtz, A. F., and **Fedorovskaya, E. A.** (September 22, 2015)
Observer metamerism failure reduction method. U.S. 9,140,607.
3. Kurtz, A. F., **Fedorovskaya, E. A.**, and Maier, T. O. (September 15, 2015)
Observer metamerism failure compensation method. U.S. 9,134,178.
4. Border, J. N., Cok, R. S., **Fedorovskaya, E. A.**, Wang, S., and Landry, L. B. (August 18, 2015)
Head-mounted display with environmental state detection. U.S. 9,111,498.
5. Matraszek, T. A., **Fedorovskaya, E. A.**, Endrikhovski, S., and Parulski, K. A. (July 14, 2015)
Method for creating and using affective information in a digital imaging system. U.S. 9,082,046.
6. **Fedorovskaya, E. A.**, and Kane, P. J. (June 16, 2015)
Method for encoding information in illumination patterns. U.S. 9,058,533.
7. **Fedorovskaya, E. A.**, Snyder, J. C., Chu Yew Yee, S. L., and Kurtz, A. F. (April 21, 2015)
Method for presenting high-interest-level image. U.S. 9,014,510.
8. **Fedorovskaya, E. A.**, Snyder, J. C., Kurtz, A. F., Chu Yew Yee, S. L., and Shepter, G. (April 21, 2015)
Modifying digital images to increase interest level. U.S. 9,014,509.
9. Kurtz, A. F., **Fedorovskaya, E. A.**, and Maier, T. O. (January 27, 2015)
Display system providing observer metamerism failure reduction. U.S. 8,941,678.
10. **Fedorovskaya, E. A.**, Snyder, J. C., and Chu Yew Yee, S. L. (November 25, 2014)
Determining an interest level for an image. U.S. 8,897,485.
11. **Fedorovskaya, E. A.**, Snyder, J. C., Chu Yew Yee, S. L., and Kurtz, A. F. (October 28, 2014)
System for presenting high-interest-level images. U.S. 8,873,851.
12. **Fedorovskaya, E. A.**, and Kane, P. J. (September 30, 2014)

- Encoding information in illumination patterns. U.S. 8,844,802.
13. **Fedorovskaya, E. A.**, and Cok, R. S. (September 23, 2014)
Individualizing generic communications. U.S. 8,842,882.
 14. **Fedorovskaya, E. A.**, and Cok, R. S. (September 9, 2014)
Method of identifying motion sickness. U.S. 8,831,278.
 15. Border, J. N., Cok, R. S., **Fedorovskaya, E. A.**, and Wang, S. (July 15, 2014)
Switchable head-mounted display. U.S. 8,780,014.
 16. **Fedorovskaya, E. A.**, Cok, R. S., and Border, J. N. (April 8, 2014)
Head-mounted display control with image-content analysis. U.S. 8,692,845.
 17. Matraszek, T. A., **Fedorovskaya, E. A.**, Endrikhovski, S., and Parulski, K. A. (January 14, 2014)
Method for creating and using affective information in a digital imaging system. U.S. 8,630,496.
 18. Kane, P. J., and **Fedorovskaya, E. A.** (January 14, 2014)
Encoding information in illumination patterns. U.S. 8,630,481.
 19. Cok, R. S., Border, J. N., Wang, S., and **Fedorovskaya, E. A.** (December 31, 2013)
Switchable head-mounted display transition. U.S. 8,619,005.
 20. **Fedorovskaya, E. A.**, and Cok, R. S. (November 26, 2013)
Method of identifying motion sickness. U.S. 8,594,381.
 21. **Fedorovskaya, E. A.**, Boroson, M. L., Levy, D. H., and Agostinelli, J. A. (September 10, 2013)
Process for forming thin film encapsulation layers. U.S. 8,529,990.
 22. **Fedorovskaya, E. A.**, Fyson, J. R., Agostinelli, J. A., and Cok, R. S. (January 29, 2013)
Thin film electronic device fabrication process. U.S. 8,361,544.
 23. Manico, J. A., Fredlund, J. R., **Fedorovskaya, E. A.**, and Beaudet, D. B. (December 11, 2012)
Camera user input based image value index. U.S. 8,330,830.
 24. Matraszek, T. A., **Fedorovskaya, E. A.**, Endrikhovski, S., Parulski, K. A. (May 22, 2012)
Method for creating and using affective information in a digital imaging system. U.S. 8,184,916.
 25. **Fedorovskaya, E. A.**, Neustaedter, C. G. (April 10, 2012)
Method and apparatus for image display control according to viewer factors and responses. U.S. 8,154,615.
 26. **Fedorovskaya, E. A.**, Endrikhovski, S., Fredlund, J. R., Manico, J. A. (March 13, 2012)
Value index from incomplete data. U.S. 8,135,684.
 27. Kurtz, A. F., Border, J. N., Costello, K. M., **Fedorovskaya, E. A.** (November 22, 2011)

- Managing scene transitions for video communication. U.S. 8,063,929.
28. Matraszek, T. A., **Fedorovskaya, E. A.**, Endrikhovski, S., Parulski, K. A. (October 11, 2011)
Method for creating and using affective information in a digital imaging system. U.S. 8,036,467.
 29. Matraszek, T. A., **Fedorovskaya, E. A.**, Endrikhovski, S., Parulski, K. A. (April 26, 2011)
Method for creating and using affective information in a digital imaging system. U.S. 7,933,474.
 30. **Fedorovskaya, E. A.**, Niederbaumer, J. R., Claver, legal representative, Lorrie (March 1, 2011)
Method for automatically determining the acceptability of a digital image. U.S. 7,899,256.
 31. **Fedorovskaya, E. A.**, Niederbaumer, J. R., Claver, legal representative, Lorrie (October 5, 2010)
Method for automatically determining the acceptability of a digital image. U.S. 7,809,197.
 32. Fredlund, J. R., Manico, J.A., **Fedorovskaya, E. A.** (June 22, 2010)
In-camera dud image management. U.S. 7,742,083.
 33. Matraszek, T. A., **Fedorovskaya, E. A.**, Endrikhovski, S., Parulski, K. A. (November 17, 2009)
Method for creating and using affective information in a digital imaging system. U.S. 7,620,270.
 34. Endrikhovski, S., Simon, R. A., **Fedorovskaya, E. A.** (March 17, 2009)
Diagnostic system having gaze tracking. U.S. 7,503,653.
 35. **Fedorovskaya, E. A.**, Endrikhovski, S., Matraszek, T. A., Parulski, K. A., Zacks, C. A., Taxier, K. M., Telek, M. J., Marino, F., Harel, D. (August 26, 2008)
Imaging method and system. U.S. 7,418,116.
 36. Endrikhovski, S., Simon, R. A., **Fedorovskaya, E. A.** (July 8, 2008)
Diagnostic system having gaze tracking. U.S. 7,396,129.
 37. Covannon, E., **Fedorovskaya, E. A.**, Wolcott, D. W., Endrikhovski, S., Marcus, M.A. (June 10, 2008)
Health care kiosk having automated diagnostic eye examination and a fulfillment remedy based thereon. U.S. 7,384,146.
 38. **Fedorovskaya, E. A.**, Endrikhovski, S., Matraszek, T. A., Parulski, K. A., Mir, J. M. (February 5, 2008)
Method for providing affective information in an imaging system. U.S. 7,327,505.
 39. **Fedorovskaya, E. A.**, Endrikhovski, S., Parulski, K. A., Zacks, C. A., Taxier, K. M., Telek, M. J., Marino, F., Harel, D. (January 15, 2008)
Imaging method and system for health monitoring and personal security. U.S. 7,319,780.
 40. Matraszek, T. A., **Fedorovskaya, E. A.**, Endrikhovski, S., Parulski, K. A. (December 11, 2007)
Image format including affective information. U.S. 7,307,636.

41. **Fedorovskaya, E. A.**, Endrikhovski, S., Matraszek, T., Parulski, K. A., Mir, J. M. (September 18, 2007)
Method for using viewing time to determine affective information in an imaging system. U.S. 7,271,809.
42. **Fedorovskaya, E. A.**, Endrikhovski, S., Matraszek, T. A., Parulski, K. A., Zacks, C. A., Taxier, K. M., Telek, M. J., Marino, F., and Harel, D. (June 19, 2007)
Imaging method and system using affective information. U.S. 7,233,684.
43. Miller, M. E., Cerosaletti, C. D., **Fedorovskaya, E. A.**, & Covannon, E. (April 17, 2007)
Camera system with eye monitoring. U.S. 7,206,022.
44. Miller, M. E., Cerosaletti, C. D., **Fedorovskaya, E. A.**, & Covannon, E. (May 16, 2006)
Method and computer program product for determining an area of importance in an image using eye monitoring information. U.S. 7,046,924.
45. Endrikhovski, S., **Fedorovskaya, E. A.**, Matraszek, T. A., Parulski, K. A., Mir, J. M. (February 21, 2006) Method for using facial expression to determine affective information in an imaging system. U.S. 7,003,139.
46. **Fedorovskaya, E. A.**, Miller, M. E., Snyder, P. D. (January 3, 2006)
Image specific perceived overall contrast prediction. U.S. 6,983,083.
47. **Fedorovskaya, E. A.**, Schaefer, L., Prabhu, G. V., Horwitz, C. M., Patton, D. L., Fredlund, J. R., Mir, J. M. (September 28, 2004)
Management of physiological and psychological state of an individual using images therapeutic imaging classification system. U.S. 6,798,898.
48. Surve, S. N., Prabhu, G. V., **Fedorovskaya, E. A.**, Patton, D. L., Fredlund, J. R., Horwitz, C. M., Mir, J. M. (February 18, 2003)
Management of physiological and psychological state of an individual using images portable biosensor device. U.S. 6,520,905.
49. Blazey, R. N., Miller, P., **Fedorovskaya, E. A.**, Prabhu, G. V., Parks, P. A., Patton, D. L., Fredlund, J. R., Horwitz, C. M., Mir, J. M. (October 30, 2001)
Management of physiological and psychological state of an individual using images biometric analyzer. U.S. 6,309,342.
50. Prabhu, G. V., Horwitz, C. M., Miller, P., Blazey, R. N., **Fedorovskaya, E. A.**, Surve, S. N., Patton, D. L., Schaefer, L., Fredlund, J. R., Mir, J. V., Parks, P. A. (October 23, 2001)
Management of physiological and psychological state of an individual using images overall system. U.S. 6,306,077.
51. Blazey, R. N., Miller, P., **Fedorovskaya, E. A.**, Prabhu, G. V., Parks, P. A., Patton, D. L., Fredlund, J. R., Horwitz, C. M., Mir, J. M. (September 25, 2001)

Management of physiological and psychological state of an individual using images personal image profiler. U.S. 6,293,904.

Other Publications and Manuscripts

Eastman Kodak Company Technical Reports - 13

Contributed Presentations and Talks

1. **Fedorovskaya, E.A.**, Kapisthalam, S., and Bu, Yington. (February 2, 2017)
Gaze Patterns in Art Viewing and their Dependency on Expertise and Image Characteristics. *Human Vision and Electronic Imaging Conference, IS&T, 2017. Oral Presentation.*
2. Etchebehere, S., and **Fedorovskaya, E.A.** (January 30, 2017)
On the Role of Color in Visual Saliency. *Human Vision and Electronic Imaging Conference, IS&T, 2017. Oral Presentation.*
3. **Fedorovskaya, E. A.** (December 2, 2016)
RocReadaR – transmedia publishing platform using Augmented Reality. *VR/AR Inaugural Symposium, RIT, NY. Poster Presentation.*
4. **Fedorovskaya, E.A.** and Robert Chung (November 28, 2016)
The Effect of Gray Balance and Tone Reproduction on Consistent Color Appearance. *CIE DR 8-13 workshop.*
5. Etchebehere, S., and **Fedorovskaya, E.A.** (October 20, 2016)
Psychophysical study of visual saliency of different hues. *OSA Fall Vision Meeting, Poster Presentation, Rochester, NY.*
6. **Fedorovskaya, E.A.** (October 12, 2016)
On Media Integration and Media Appreciation: Work in progress. *CIAS Brown Bag Faculty Lecture Series.*
7. Hickerson, A., and **Fedorovskaya, E.A.** (June 2016)
An Experiment in Transmedia Publishing and News Engagement. *66th International Communication Association Annual Conference, June 2016, Fukuoka, Japan. Conference presentation.*
8. Chung, R., and **Fedorovskaya, E.A.** (March 2016)
Selecting a Substrate for Color Proofing. *68th TAGA Conference, Memphis, TN, 2016. Conference presentation.*
9. **Fedorovskaya, E. A.** (March 2016)

Seeing a Human in a Sea of Media. *Culture Analytics Beyond Text: Image, Music, Video, Interactivity and Performance Workshop*, March 21 - 24, 2016, Institute for Pure and Applied Mathematics, University of California Los Angeles (UCLA). *Invited lecture*.

10. **Fedorovskaya, E.A.**, Cheng, F., and Yingdong, B. (November 2015)
RocReadaR project. *Rochester Women Ultimate Women's Expo 2015*, November 19, 2015. *Project demonstration*.
11. Chung, R., and **Fedorovskaya, E.A.** (October 2015)
Paper substrate characterization for color proofing. *CGATS/USTAG meeting*, Chicago, October 20, 2015. *Meeting presentation*.
12. Wang, Y., Desai, S., and **Fedorovskaya, E.A.** (September 2015)
RocReadaR – a system for collaborative transmedia publishing. *42nd International LARIGAI Conference*, Helsinki, Finland. *Conference presentation*.
13. **Fedorovskaya, E.A.** (April 2015)
E-books usage and sales statistics in US for environmental impact assessment of electronic books. *JWG15, ISO TC130 meeting*, April 2015, Bologna. *Invited meeting presentation*.
14. **Fedorovskaya, E.A.** (January 2015)
The Effects of Publishing Approaches Using Print, Electronic and Augmented Reality Media on User Experience. *CLAS 2015 Research Exhibition*. *Poster presentation*.
15. **Fedorovskaya, E. A.** (October 2014)
Transmedia Publishing. *CMIC summit 2014*. *Invited talk*.
16. **Fedorovskaya, E.A.**, and Yu, L. (September 2014)
Investigating the Effects of Publishing Approaches Using Print, Electronic and AR Media for Storytelling on User Experience. *41st International LARIGAI Conference*, Swansea, UK. *Conference presentation*.
17. **Fedorovskaya, E. A.**, and Lawrence, D. (February 2014)
Identifying image preferences based on demographic attributes. *Human Vision and Electronic Imaging Conference XIX*. *Conference presentation*.
18. **Fedorovskaya, E.A.** (October 2013)
The future of printing: Technology convergence with the user at the center. *CMIC summit 2013*, October, 9, 2013. *Invited talk*.
19. **Fedorovskaya, E.A.** and deRidder, H. (February 2013)
Subjective matters: from image quality to image psychology, *Human Vision and Electronic Imaging Conference XVIII, IS&T/ SPIE Electronic Imaging Conference*. *Invited talk*.
20. Chu, S. L., **Fedorovskaya, E. A.**, Quek, F., and Snyder, J. (February 2013)
The effect of familiarity on perceived interestingness of photographs, *Human Vision and Electronic Imaging Conference XVIII, IS&T/ SPIE Electronic Imaging Conference*. *Poster presentation*.

21. **Fedorovskaya, E.A.** (January 2012)
Color Imaging and Aesthetics: is there a Cheshire Cat? *Color Imaging XVII: Displaying, Processing, Hardcopy and Applications. IS&T/ SPIE Electronic Imaging Conference. Invited talk.*
22. Neustaedter, C., Judge, T., Kurtz, A., and **Fedorovskaya, E.** (February 2010)
The Family Window: Connecting Families over Distance with a Domestic Media Space. *Computer Supported Cooperative Work (CSCW 2010). Conference video presentation.*
23. **Fedorovskaya, E. A.**, Hao W., and Neustaedter, C. (Janury 2009)
Visual harmony and image statistics: an empirical investigation. *Human Vision and Electronic Imaging conference XIV, SPIE&IST 2009. Conference poster presentation.*
24. Neustaedter, C., and **Fedorovskaya, E.** (November 2009)
Avatar Appearances and Representation of Self: Learning from Second Life. *AAAI's Fall Symposium Series on Biologically Inspired Cognitive Architectures (2009), Conference presentation.*
25. Neustaedter, C., and **Fedorovskaya, E.** (May 2009)
Understanding and Improving Flow in Digital Photo Ecosystems. *Graphics Interface (2009), Conference presentation.*
26. Neustaedter, C., and **Fedorovskaya, E.** (May 2009)
Presenting Identity in the Virtual World through Avatar Appearances. *Graphics Interface (2009), Conference presentation.*
27. Neustaedter, C., and **Fedorovskaya, E.** (April 2009)
Capturing and Sharing Memories in a Virtual World. *ACM Conference on Computer-Human Interaction (2009), Conference presentation.*
28. **Fedorovskaya, E.**, Neustaedter, C., and Hao, W. (October 2008)
Image Harmony for Consumer Images. *IEEE International Conference on Image Processing (ICIP 2008), Conference presentation.*
29. Seung Ho Baek, S.H., Burberry, M., Cuffney, R., Elizur, E., Feller, T., **Fedorovskaya, E.**, Kerr, R., Rowley, L., Spath, T., Tutt, L., and Warner, M. (March 2007)
Maskless Lithography and Electronic Patterning for Display Application. *Asia Display (2007), Conference presentation.*
30. **Fedorovskaya, E. A.** (May 2004)
Image Quality as a Problem of Computational Vision. Center for Visual Science, University of Rochester, *CVS Colloquium Series, Invited talk.*
31. **Fedorovskaya, E.**, and Endrikhovski, S. (April 2004)
Experimental Study of the Effect of Images on Emotional State. *Thought Leaders' Workshop, Center for Future Health University of Rochester. Invited talk.*

32. **Fedorovskaya, E. A.** (May 2003)
Image Quality as a Problem of Computational Vision. *IS&T's PICS Conference (2003)*, Conference presentation.
33. **Fedorovskaya, E. A.** (April 2003)
Predicting Perceived Image Quality: A Computational Vision Approach. *IEEE Rochester Section Joint Chapters Meeting (JCM) 2003*, Invited talk.
34. **Fedorovskaya, E.** and Endrikhovski, S. (January 2003)
Affective imaging: A concept for image-based therapeutic procedures. *CyberTherapy 2003: Using Advanced Technologies in the Behavioral, Social, and Neurosciences*, San Diego, CA, Conference presentation.
35. **Fedorovskaya, E. A.** (January 2002)
Perceived overall contrast and quality of the tone scale rendering for natural images. *Human Vision and Electronic Imaging VII (2002)*, Conference presentation.
36. **Fedorovskaya, E. A.**, Miller, P., Prabhu, G., Horwitz, C., Matraszek, M., Parks, P., Blazey, R., and Endrikhovski, S. (January 2001)
Affective imaging: psychological and physiological reactions to individually chosen image. *Human Vision and Electronic Imaging VI (2001)*, Conference presentation.
37. **Fedorovskaya, E. A.** and De Weert, C.M. (May 2000)
Brightness assimilation or border contrast rivalry? *ARVO Annual meeting (2000)*, Conference poster presentation.
38. **Fedorovskaya, E. A.** (June 1997)
Color vision deficiencies in the context of the Sokolov-Izmailov's spherical model of color vision. *Nijmegen Institute for Cognition and Information (NICI) Colloquium*, Catholic University of Nijmegen, the Netherlands, Invited talk.
39. **Fedorovskaya, E. A.**, De Ridder, H., Yendrikhovskij, S., and Blommaert, F. (November 1995)
Multidimensional structure of colorfulness: chroma variation in color images of natural scenes. *The Third Color Imaging Conference: Color Science, Systems and Applications*, Conference poster presentation.
40. Ridder, H. de, Blommaert, F.J.J. and **Fedorovskaya, E.A.** (January 1995)
Naturalness and image quality: chroma and hue variation in color images of natural scenes. *Human Vision, Visual Processing, and Digital Display XI*, Conference presentation.
41. **Fedorovskaya, E. A.**, Ridder, H. de & Blommaert, F. J. J. (August 1994)
Colourfulness of colour images of natural scenes: Multidimensional scaling. *European Conference on Visual Perception ECVP 1994*, Conference poster presentation.
42. **Fedorovskaya, E. A.**, Ridder, H. de & Blommaert, F. J. J. (August 1993)
Perceptual image quality and colourfulness of colour images of natural scenes. *European Conference on Visual Perception ECVP 1993*, Conference poster presentation.

43. **Fedorovskaya, E. A.**, Blommaert, F.J.J., and De Ridder, H. (November 1993)
Perceptual quality of color images of natural scenes transformed in the CIELUV color space.
The 1st IS&T/SID Color Imaging Conference: Transforms & Transportability of Color, Conference poster presentation.

Awards and Recognition

The Frank J. Romano Endowed Prize for Publishing Entrepreneurship, CIAS, RIT, 2017
– jointly with Meredith Davenport

NSF Icorps Award for Transmedia Publishing System, Principal Investigator, \$50,000, NSF, 2017.

The Frank J. Romano Endowed Prize for Publishing Entrepreneurship, CIAS, 2016

Innovation Council Provost’s Grant for Interdisciplinary teaching, \$3000, RIT, 2016

ICorps NSF cohort grant, \$3000, Rochester Institute of Technology, 2015

Boot camp seed funding grant, \$5000, Rochester Institute of Technology, 2014

Distinguished Inventor, Eastman Kodak Research Laboratories, 2010

Research Scientific Council Membership, member-at-large, Eastman Kodak Company, 2000-2004

Team Achievement Award, Eastman Kodak Research Laboratories, 2003

Recognition for Project Contribution, System Concept Center, Eastman Kodak Company, 1999

Research Scholarship from Swedish Institute, Umeå University, Sweden, 1995

Research Fellowship, Institute for Perception Research (IPO) the Netherlands, 1992

Media Coverage

Video interview to Frank Romano, November 2017. Whattheythink.com

Rochester Woman magazine, November 2015 “Merging print and digital technologies”. Andrea Hickerson – Cover story.

Greensheet Biz Newsletter: Print Industry Insight 19 Nov. 2013 V46, No. 21 “A practical approach to integrated print.” Katherine O’Brien, American Printer. Interview.

Professional Leadership Roles

2015-present **Advisory Board member**, America East

2015-present **Scientific Advisory Board member**, Journal of Print and Media
Technology Research

2016	Co-Chair , Special Session “Art, Aesthetics and Perception,” Human Vision and Electronic Imaging XV, IS&T (2016)
2015	Co-Chair , Special Session “Art, Aesthetics and Perception,” Human Vision and Electronic Imaging XV, IS&T (2015)
2011	Chair , Session “Attention and Gaze in Constructing the Visual World,” Human Vision and Electronic Imaging XVI, SPIE/IS&T (2011)
2010	Co-Chair , Session “Art, Aesthetics and Perception,” Human Vision and Electronic Imaging XV, SPIE/IS&T (2010)
2008	Co-Chair , Session “Art, Aesthetics and Perception,” Human Vision and Electronic Imaging XIII, SPIE/IS&T (2008)
2000-2004	Member-at Large , Research Scientific Council, Eastman Kodak Company
2001	Chair , Session “Emotions and Electronic Imaging,” Human Vision and Electronic Imaging VI, SPIE/IS&T (2001)

Projects Leadership Roles

2015-2016	RIT GCCIS Senior project sponsor for the software engineering team
2008-2009	Kodak CEIS/RIT Alliance Project Manager , Eastman Kodak Company
2006-2007	Project Leader , Medical Science and Technology, Eastman Kodak Company
1996	Project Team Representative , INTAS-94-4064, International collaborative research project, Department of Psychophysiology, Lomonosov Moscow State University

Professional Activities: Program Committees

2016-2017	ACM TVX –ACM International Conference on Interactive Experiences for Television and Online Video Organizing Committee. Work in Progress Chair.
2000-present	Human Vision and Electronic Imaging Conference (HVEI) Committee
2009- 2010	BICA – Biologically Inspired Cognitive Architectures Symposium Committee

Professional Activities: Review Committees

2015-present	Journal of Print and Media Technology Research
2000-present	Human Vision and Electronic Imaging Conference
2015	ACM Transactions on Applied Perception, Journal

2012	Biologically Inspired Cognitive Architectures (BICA) Journal
2010-2011	Biologically Inspired Cognitive Architectures (BICA) Conference
2010-2011	Pattern Recognition Letters
2011	SIGGRAPH
2011	Journal of Optical Engineering
2010	IEEE Western New York Workshop
2010	ACM Conference on Computer-Human Interaction (CHI)
2009	IEEE letters
2008-2011	Color Research and Application
2008	Journal of Optical Society of America

RIT University Service

2015-present	RIT's Innovation Council for the Simone Center for Student Innovation and Entrepreneurship
2014-2015	Search Committee member for School of Media Sciences Administrative Chair
2014	Partners in Pluralism partner
2013-2014	Cross Media Innovation Center Advisory Board member
2014	School of Media Sciences Graduate and Undergraduate Curriculum Committee member
2014	School of Media Sciences Marketing and Recruitment Committee member
2013- present	School of Media Sciences Graduate thesis and research advisor

Supervising and Mentoring

2015- 2016	Software Engineering Senior Project Sponsor , Golisano College of Computing and Information Sciences, RIT
2015	PhD Thesis Committee , Color Science, RIT
2013-present	Multiple Undergraduate and Graduate Research projects
2013-present	MS Theses Advisor , School of Media Sciences, RIT
2015	MS Thesis Committee , School of Psychology, RIT
2013	MS Thesis Committee , Human Computer Interaction, Virginia Tech
2007 -2008	Senior/Capstone Project Co-Mentor , Software Engineering, RIT and Electrical and Computer Engineering, University of Rochester
1999- 2011	Internships Mentor , Kodak Research Labs

Organizational Memberships

June 2014- present The International Association of Research Organizations for the
Information, Media and Graphic Arts Industries (IARIGAI)

Jan 2013 - present Newspaper Association of America

June 2012- present Association for American Advancement of Science (AAAS)

Dec 2000- present The Society for Imaging Science and Technology (IS&T)

July 2012- present SPIE - the international society for optics and photonics

Jan 2011- 2013 Special Interest Group on Computer-Human Interaction (SIGCHI)

 Association for Computing Machinery (ACM)