

潘如如 教授

一. 个人简介



潘如如，男，1982年4月生，教授，博士，博士生导师，现任纺织科学与工程学院党委委员，副院长，兼任无锡市织物横档分析检测科技公共服务平台主任。

2010年6月毕业于江南大学纺织工程专业，获工学博士学位，同年留校任教，担任纺织服装学院教师。2011年破格晋升为副教授，硕士生导师。2019年5月至今任江南大学纺织科学与工程学院教授，2020年被聘为博士生导师。现为中国纺织工程学会会员，青年工作委员会副主任。

2015.02-2016.02期间在The University of Texas at Austin研修一年。博士学位论文被评为2011年江苏省优秀博士学位论文，并获得2012年全国优秀博士学位论文提名奖，王善元优秀博士学位论文基金。

主要从事纺织品智能分析技术、纺织品颜色测量与分析、纺织CAD等方面的研究和教学工作，致力于纺织图像自动检测与分析系统的研发，先后在《Textile Research Journal》、《Journal of the Textile Institute》、《Color Research and Application》等国内外权威期刊上发表专业学术论文100多篇，其中SCI检索论文50多篇。拥有软件著作权登记6项，获授权发明专利8件。主持并完成国家自然科学基金面上项目和青年基金、江苏省自然科学基金面上项目、江苏省产学研前瞻性研究项目、教育部霍英东基金、国家博士后基金面上项目、江苏省博士后基金、中央专项基金校自主科研基金、江南大学生态纺织教育部重点实验室开放性课题等项目，并作为主要参与人完成国家自然科学基金、江苏省自然科学基金、教育部博士点基金优先支持领域项目、江苏省产学研前瞻性研究项目等。曾获中国纺织工程联合会科技一等奖1项，二等奖1项，中国商业联合会科技进步奖二等奖3次。主持江苏省优秀开放课程《机织工程》，作为章节主讲人参加国家精品资源共享课《机织原理》课程建设，参与教育卓越工程师优秀教材《机织工程》的编写，参加省部级规划教材《织物组织与结构学》教材编写。获国家教学成果二等奖1项，江苏省教学成果特等奖1项，中国纺织工业联合会教学成果特等奖1项，一等奖2项，2019年获荣智权奖教金。

二. 研究生教育

研究生招生方向：数字化纺织技术；纺织品图像技术；现代纺织技术

三. 论文

1. J Wang, K Shi, L Wang, **R Pan**, W Gao. A computer vision system for objective fabric smoothness appearance assessment with an ensemble classifier. *Textile Research Journal*,2020, 90 (3-4), 333-343
2. J Wang, K Shi, L Wang, Z Li, F Sun, **R Pan**, W Gao. Fusing Convolutional Neural Network Features With Hand-Crafted Features for Objective Fabric Smoothness Appearance Assessment. *IEEE Access*,2020, 8, 110678-110692.
3. J Wang, K Shi, L Wang, Z Li, F Sun, **R Pan**, W Gao. Automatic Assessment of Fabric Smoothness Appearance Based on a Compact Convolutional Neural Network With Label Smoothing. *IEEE Access*,2020, 8, 26966-26974
4. J Xiang, T Dong, **R Pan**, W Gao. Clothing Attribute Recognition Based on RCNN Framework Using L-Softmax Loss. *IEEE Access*,2020, 8, 48299-48313.
5. Ning Zhang, **Ruru Pan**, Lei Wang, Yang Wu, Weidong Gao. Pattern design and optimization of yarn-dyed plaid fabric using modified interactive genetic algorithm. *Journal of Textile Institute*, Online: Doi: 00405000.2020.1738617
6. J Wang, J Zhang, L Wang, **R Pan**, J Zhou, W Gao. A computer vision-based system for automatic detection of misarranged color warp yarns in yarn-dyed fabric. Part III: yarn layout proofing. *Journal of Textile Institute*, Online: Doi: 00405000.2020.1738617
7. Ning Zhang, Jun Xiang, Lei Wang, Nian Xiong, Weidong Gao, **Ruru Pan**. Image retrieval of wool fabric. Part II: based on low-level color features. *Textile Research Journal*, 2020,90(7-8):797-808.
8. Jie Zhang, Jingan Wang, **Ruru Pan**. A computer vision-based system for automatic detection of misarranged color warp yarns in yarn-dyed fabric. Part II: warp region segmentation. *Journal of Textile Institute*, 2019,110(9):1359-1367
9. J Wang, K Shi, L Wang, Z Li, **R Pan**, W Gao. Decoloration of multi-color fabric images for fabric appearance smoothness evaluation by supervised image-to-image translation. *IEEE Access*,2019, 7, 181284-181294
10. J Wang, K Shi, L Wang, Z Li, **R Pan**, W Gao. An objective fabric smoothness assessment method based on a multi-scale spatial masking model. *IEEE Access*, 2019,7:73830-73840.
11. Z Li, F Yu, N Zhang, Y Lu, **R Pan**, W Gao. Automatic Construction of Digital Woven Fabric by Using Sequential Yarn Images. *Autex Research Journal*,2019, 19 (2), 147-156
12. J Wang, J Zhou, L Wang, **R Pan**, W Gao. Detection of residual yarn on spinning bobbins based

- on salient region detection. *The Journal of The Textile Institute*,2019, 110 (6), 838-846
- 13. S Meng, **R Pan**, W Gao, J Zhou, J Wang, W He. Woven Fabric Density Measurement by Using Multi-Scale Convolutional Neural Networks. *IEEE Access*,2019, 7, 75810-75821.
 - 14. N Zhang, **R Pan**, L Wang, S Wang, J Xiang, W Gao. Automatic seam pucker evaluation using support vector machine classifiers. *International Journal of Clothing Science and Technology*, 2019, 31 (1), 2-15.
 - 15. J Xiang, N Zhang, **R Pan**, W Gao. Fabric image retrieval system using hierarchical search based on deep convolutional neural network. *IEEE Access*, 2019, 7, 35405-35417.
 - 16. N Zhang, J Xiang, L Wang, W Gao, **R Pan**. Image retrieval of wool fabric. Part I: Based on low-level texture features, *Textile Research Journal*, 2019, Doi:0040517519829003.
 - 17. Zhongjian Li, Jun Xiang, Lei Wang, Ning Zhang, Jing-an Wang, **Ruru Pan**, Weidong Gao. J Wang, **R Pan**, W Gao. Measuring the Geometrical Parameters of Slub Yarn Using a Computer Vision Based Image Sequencing Technique. *FIBRES & TEXTILES in Eastern Europe*,2019, 27 (3), 26-35
 - 18. Z Li, N Zhang, Y Wu, J Wang, **R Pan**, W Gao. Evaluation of an Intelligent Computer Method for the Automatic Mosaic of Sequential Slub Yarn Images. *Fibres & Textiles in Eastern Europe*. 2018,26(2):38-48.
 - 19. Z Li, N Xiong, J Wang, **R Pan**, W Gao, N Zhang. An intelligent computer method for automatic mosaic of sequential slub yarn images based on image processing. *Textile Research Journal*,2018, 88 (24), 2854-2866.
 - 20. Jie Zhang, **Ruru Pan**, Weidong Gao. A backlighting method for accurate inspection of woven fabric density. *Industria Textila*, 2017,68(1):31-37
 - 21. Jie Zhang, **Ruru Pan**, Jingan Wang, Weidong Gao. A computer vision-based system for automatic detection of misarranged warp yarns in yarn-dyed fabric. Part I: continuous segmentation of warp yarns. *The Journal of the Textile Institute*,2018,109(5):577-584. 329-339.
 - 22. Jie Zhang, **Ruru Pan**, Jingan Wang, Weidong Gao, Yaobin Han. An efficient method for density measurement for high-tightness woven fabrics. *Textile Research Journal* ,2017,87 (3), 329-339.
 - 23. Jie Zhang, **Ruru Pan**, Weidong Gao, Bugao Xu, Wei Li. Automatic detection of layout of color yarns of yarn - dyed fabric. Part 3: double - system-m é lange color fabrics. *Color Research and Application*, 2017,42(2):250-260.
 - 24. Jie Zhang, **Ruru Pan**, Weidong Gao, Bugao Xu, Wei Li. Automatic detection of layout of color yarns of yarn - dyed fabric. Part 2: Region segmentation of double - system - M é lange color fabric, *Color Research and Application*, 2016,41(6):625-635

25. **Ruru Pan**, Weidong Gao, Wei Li, Bugao Xu, Image analysis for seam-puckering evaluation, *Textile Research Journal*, 2017, 87(20):2513-2523.
26. **Ruru Pan**, Jie Zhang, Zhongjian Li, Weidong Gao, Bugao Xu, Wei Li, Applying Image Analysis for Automatic Density Measurement of High-tightness Woven Fabrics, *Fibres & Textiles in Eastern Europe*, 2016, 116(2):66-72.
27. Jie Zhang, **Ruru Pan** *, Weidong Gao, A backlighting method for accurate inspection of woven fabric density. *Industria Textila*, 2017, 68(1): 31-36.
28. Yinyin Sun, Zhongjian Li, **Ruru Pan** *, Jian Zhou, Weidong Gao, Measurement of long yarn hair based on hairiness segmentation and hairiness tracking. *The Journal of The Textile Institute*, 2016: 1-9.
29. Yinyin Sun, **Ruru Pan**, Jian Zhou, Weidong Gao, Analysis of detectable angles of yarn hairiness in optical measurements. *Textile Research Journal*, 2016, 87(11):1297-1307.
30. Lei Wang, Jianli Liu, **Ruru Pan** *, Weidong Gao, Sequential image for measurement of fabric crease recovery angle, *The Journal of The Textile Institute*. 2016, 107 (7): 825-832.
31. Lei Wang, Jianli Liu, **Ruru Pan** *, Weidong Gao, Inspecting anisotropy in wrinkle recovery angle of woven fabric, *The Journal of The Textile Institute*. 2016, 107 (6): 711-718.
32. Jie Zhang, **Ruru Pan** *, Weidong Gao, Jun Xiang, Weave pattern recognition by measuring fiber orientation with Fourier transform, *The Journal of The Textile Institute*. 2016: 1-9.
33. Jie Zhang, **Ruru Pan** *, Weidong Gao, Formation of digital yarn black board using sequence images, *Textile Research Journal*. 2016, 86 (6): 593-603.
34. Zhongjian Li, **Ruru Pan** *, Jing'an Wang, Ziyu Wang, Bianbian Li, Weidong Gao, Real-time Segmentation of Yarn Images Based on an FCM Algorithm and Intensity Gradient Analysis, *Fibres & Textiles in Eastern Europe*. 2016, 24(4): 45-51.
35. Bo Zhu, Jianli Liu, **Ruru Pan** *, Shanshan Wang, Weidong Gao, Fabric seam detection based on wavelet transform and CIELAB color space: A comparison, Zhu B, Liu J, Pan R, et al. Fabric seam detection based on wavelet transform and CIELAB color space: A comparison. *Optik - International Journal for Light and Electron Optics*, 2015, 126(24): 5650-5655.
36. Zhongjian Li, **Ruru Pan** *, Jie Zhang, Bianbian Li, Weidong Gao, Measuring the unevenness of yarn apparent diameter from yarn sequence images. *Measurement Science & Technology*, 2015, 27(1): 015404.
37. Jian'an Wang, **Ruru Pan** *, Weidong Gao, Hongbo Wang, An automatic scheduling method for weaving enterprises based on genetic algorithm. *The Journal of The Textile Institute*, 2015, 106 (12): 1377-1387
38. Jie Zhang, **Ruru Pan** *, Weidong Gao, Dandan Zhu, Automatic detection of layout of color yarns of yarn - dyed fabric. Part 1: Single - system - m é lange color fabrics. *Color Research*

& Application, 2015, 40 (6): 626-636.

39. **Ruru Pan**, Bo Zhu, Zhongjian Li, Jihong Liu, Weidong Gao, A simulation method of plain fabric texture for image analysis. *Textila Industria*, 2015, 66 (1): 28.
40. **Ruru Pan**, Weidong Gao, Jihong Liu, Jie Gou, Jie Zhang, Dandan Zhu. Measuring thread densities of woven fabric using the Fourier transform. *Fibres and Textiles in Eastern Europe*, 2015, 109(1):35-40.
41. Lei Wang, Jianli Liu, **Ruru Pan** *, Weidong Gao, Exploring the relationship between bending property and crease recovery of woven fabrics. *The Journal of The Textile Institute*, 2015, 106 (11): 1173-1179.
42. Dandan Zhu, **Ruru Pan** *, Weidong Gao, Jie Zhang, Yarn-Dyed Fabric Defect Detection Based On Autocorrelation Function And GLCM. *Autex Research Journal*, 2015, 15 (3): 226-232.
43. Jie Zhang, **Ruru Pan** *, Weidong Gao, Dandan Zhu, Automatic inspection of yarn-dyed fabric density by mathematical statistics of sub-images. *The Journal of The Textile Institute*, 2015, 106 (8): 823-834.
44. Bo Zhu, Jihong Liu, **Ruru Pan** *, Weidong Gao, Jiangli Liu, Seam detection of inhomogeneously textured fabrics based on wavelet transform. *Textile Research Journal* 2015, 85 (13): 1381-1393.
45. Lei Wang, Jianli Liu, **Ruru Pan** *, Weidong Gao, Resilience of crease recovery of woven fabrics in repeated tests. *Textile Research Journal*, 2015, 85 (9): 960-968.
46. Jie Zhang, **Ruru Pan** *, Weidong Gao, Dandan Zhu, Automatic recognition of the color effect of yarn-dyed fabric by the smallest repeat unit recognition algorithm. *Textile Research Journal*, 2015, 85 (4): 432-446.
47. Jie Zhang, **Ruru Pan** *, Weidong Gao, Automatic inspection of density in yarn-dyed fabrics by utilizing fabric light transmittance and Fourier analysis. *Applied optics*, 2015, 54 (4): 966-972.
48. **Pan RR**, Liu JH, Gao WD, Wang HB. Automatic detection of the layout of color yarns with logical analysis. *Fibers and Polymers*, 13(5), 664-669, 2012.
49. **Pan RR**, Liu JH, Gao WD. Measuring linear density of threads in single-system-mélange color fabrics with FCM algorithm. *Color Research and Application*, 2013, 38(6):456-462.
50. Liu JH, Jiang HX, **Pan RR**, Gao WD, Xu M. Evaluation of yarn evenness in fabric based on image processing. *Textile Research Journal*, 82(10), 1026-1037, 2012.
51. Jiang HX, Wang HF, Liu JH, **Pan RR**. Development of image pattern for textile based on FFT. *International Journal of Clothing Science and Technology*, 25(5), 295-307, 2012.
52. **Pan RR**, Gao WD, Liu JH, Wang HB. Genetic algorithm-based detection of the layout of color yarns. *Journal of the Textile Institute*, 102(2), 172-179, 2011.

53. **Pan RR**, Gao WD, Liu JH, Wang HB. Automatic recognition of woven fabric pattern based on image processing and BP neural network. *Journal of the Textile Institute*, 102(1), 19-30, 2011.
54. **Pan RR**, Gao WD, Liu JH, Wang HB. Recognition the parameters of slub-yarn based on image analysis. *Journal of Engineered Fibers and Fabrics*, 6(1), 25-30, 2011.
55. **Pan RR**, Gao WD, Liu JH, Wang HB, Qian XX. Automatic inspection of double- system-mélange yarn-dyed fabric density with color-gradient image. *Fibers and Polymers*, 12(1):127-131, 2011.
56. Gao WD, Liu JH, **Pan RR**, Wang SY. Construction of pilling grade evaluation system based on image processing. *Industria Textila*, 62(4):192-197, 2011.
57. Zhang XY, **Pan RR**, Liu JH, Gao WD, Xu WB. Design Gabor filters in the frequency domain for unsupervised fabric defect detection. *Industria Textila*, 62(4), 177-182, 2011.
58. **Pan RR**, Gao WD, Liu JH, Wang HB. Automatic detection of the layout of color yarns for yarn-dyed fabric via a FCM algorithm. *Textile Research Journal*, 80(12), 1222-1231, 2010.
59. **Pan RR**, Gao WD, Liu JH, Wang HB, Zhang XT. Automatic detection of structure parameters of yarn-dyed fabric. *Textile Research Journal*, 80(17), 1819-1832, 2010.
60. **Pan RR**, Gao WD, Liu JH, Wang HB. Automatic recognition of woven fabric patterns based on pattern database. *Fibers and Polymers*, 11(2), 303-308, 2010.
61. **Pan RR**, Gao WD, Liu JH, Wang HB. Automatic inspection of woven fabric density of solid colour fabric density by the Hough transform. *Fibers & Textiles in Eastern Europe*, 18(4):46-51, 2010.
62. 张戈, 周建, 王蕾, 潘如如, 高卫东. 用分光光度计法测量纤维颜色的影响因素. *纺织学报*, 2020, 41 (4): 72-77.
63. 孟朔, 潘如如, 高卫东, 王静安, 周利军. 采用主目标进化遗传算法的织造排程研究. *纺织学报*, 2019, 40 (8): 169-174.
64. 吴义伦, 李忠健, 潘如如, 高卫东, 张宁. 应用色纺纱图像的纬编针织物外观模拟. *纺织学报*, 2019, 40(6):112-117.
65. 周建, 潘如如, 高卫东. 机器视觉在纺织中的应用现状与发展趋势. *棉纺织技术*, 2019, 47(2):15-17.
66. 潘如如, 李忠健, 唐佩君, 姜川. 应用纱线序列图像的色纺机织物仿真. *棉纺织技术*, 2019, 471(1):16-20.
67. 吴义伦, 潘如如, 高卫东. 云纹纱纬编针织物外观模拟. *丝绸*, 2019, 56(2):37-41.
68. 喻飞, 王静安, 潘如如, 周建, 高卫东. 数码纱的外观效果仿真方法. *纺织学报*, 2018, 39(7):148-152.
69. 吴洋, 向军, 张宁, 潘如如, 高卫东. 结合交互评价的格子型色织物纹样优选. *纺织学报*, 2018, 39(9):50-56.

70. 陆奕辰,王蕾,潘如如,高卫东.毛羽指标研究及毛羽H值预测.东华大学学报, 2018.
71. 陈丽芬,曹秀明,潘如如,韩晨晨.毛精纺高支竹节纱及其面料的开发.毛纺科技, 2018,46(8):15-18.
72. 辛春莉,王子玉,周建,潘如如,高卫东.数码相机在染色织物色差测量中的应用.纺织学报, 2018,39(8):77-82.
73. 陆奕辰,王蕾,唐千惠,潘如如,高卫东.应用图像处理的纱线黑板毛羽量检测与评价.纺织学报, 2018, 39(8):144-149.
74. 卫国,潘如如,唐佩君,李沛瀛,郭明瑞.饰纱喂入位置对云纹纱表面饰纤分布的影响.棉纺织技术, 2018,46(8):28-31.
75. 向军,张杰,潘如如,韩要宾,张继东,高卫东.采用纹理平滑的印花织物图案轮廓提取.纺织学报, 2017,38(11):162-167.
76. 韩要宾, 张杰,潘如如,周建,高卫东,郭明瑞,薛元,杨瑞华.纤维尺度下数码纱仿真方法.纺织学报,2018,38(11):150-155.
77. 周建,王静安,潘如如,高卫东.应用频域分析与距离匹配函数的织物纹理周期测量.东华大学学报,2017,43(3):629-633.
78. 王晓予,向军,潘如如,梁惠娥,高卫东.服饰刺绣图案的自动提取与色块分割, 2017,38(9):120-126.
79. 韩要宾, 张杰, 高卫东, 潘如如, 张宁.基于生产实践的喷气织机主喷嘴气压优选.纺织学报, 38(1):126-131.
80. 孙银银,张宁,吴洋,潘如如,高卫东.纱线毛羽骨架及长度的跟踪测量. 2017,38(8):32-38.
81. 张宁,李忠健,潘如如,高卫东,韩要宾.采用色纺纱图像的真实感色织物模拟. 纺织学报, 2017,38(5):37-42.
82. 张宁, 潘如如, 高卫东.采用图像处理的织物缝纫平整度自动评估.纺织学报, 2017, 38(4):145-150.
83. 沈利利, 李忠健, 潘如如, 卢雨正, 高卫东, 唐佩君.色纺纱线中纤维混色比例的图像检测, 纺织学报, 2016,37(3):138-143.
84. 吴洋, 张晗, 潘如如, 王鸿博, 高卫东.基于流行色研究的色织物纹样配色设计. 服装学报, 2017,22(2):129-134.
85. 王蕾,刘建立,潘如如,高卫东.机织物折皱回复各向异性的研究.纺织学报, 2016,37(2):50-54.
86. 李忠健,潘如如,高卫东,应用纱线序列图像的电子织物构建.纺织学报, 2016,37(3):35-40.
87. 厉征鑫,周建,潘如如,刘建立,高卫东.应用单演小波分析的织物疵点检测. 纺织学报, 37(9):59-64.
88. 李变变, 李忠健, 潘如如, 张杰, 高卫东. 纱线条干均匀性序列图像测量方法,纺织学报, 2016,37(11):26-31.

89. 常丽霞, 高卫东, 潘如如, 刘建立.灰色GM(1,1)模型在国际春夏女装流行色色相预测中的应用.纺织学报, 2015,36(4):128-133.
90. 张江涛, 潘如如, 高卫东. 图像式氨纶整经断纱检测系统.2013,41(7):62-64.
91. 朱丹丹, 潘如如*, 高卫东, 基于傅里叶特征谱和相关系数的织物疵点检测,计算机工程与应用, 2014, 50(19):182-186,198.
92. 常丽霞, 潘如如, 高卫东,Fashion Color Forecasting by Applying an Improved Back Propagation Neural Network. Journal of Donghua(English Edition), 2013,30(1):58-62.
93. 孙银银, 潘如如, 高卫东*, 基于图像处理的纱线毛羽检测, 纺织学报, 2013, 34(6): 112-115.
94. 王蕾, 刘建立, 潘如如, 高卫东*, 基于视频序列的织物折皱回复角动态测量, 纺织学报, 2013, 34(2):55-60.
95. 朱博, 潘如如, 刘基宏, 高卫东*, 轧光工序中织物接缝线的图像检测, 纺织学报, 2013, 34(8):147- 150.
96. 迟开龙, 潘如如, 刘基宏, 高卫东.基于数字图像处理的纱线条干均匀度检测初探. 纺织学报, 2012, 33 (12), 19-24.
97. 厉征鑫,刘基宏,高卫东,潘如如,柴志雷.基于二维经验模态分解算法的织物疵点自动检测.纺织学报, 2011, 32(7):49-53.
98. 姬建正, 刘建立, 高卫东, 潘如如, 刘基宏.基于数字图像处理的纱线线密度测量, 纺织学报, 2011,32(10):42-46.
99. 常丽霞,高卫东,卢雨正,潘如如流行色春夏定案特征分析与探讨.纺织学报,2010,31(3):98-103.
100. 潘如如, 高卫东, 刘基宏, 王鸿博 (2010). 机织物组织自动识别技术. 纺织学报, 31(6): 43-47.
101. 潘如如, 高卫东, 刘基宏, 王鸿博 (2010). 基于Hough 变换的机织物组织点自动定位. 纺织学报, 31(3):59-63.
102. 周圆圆, 潘如如, 高卫东, 刘基宏 (2010). 基于标准样照与图像分析的织物起毛起球评等方法. 纺织学报, 31(10):29-33.
103. 潘如如, 高卫东, 钱欣欣, 张晓婷 (2010). 基于互相关的印花织物疵点检测.纺织学报, 31(12):134- 138.
104. 潘如如, 高卫东, 钱欣欣, 张晓婷 (2010). 基于意匠图的机织物组织自动分析. 纺织学报, 31(11): 30-34.
105. 刘基宏, 潘如如, 卢雨正, 王鸿博, 高卫东.环锭竹节纱参数可视化的理论和实践.纺织学报,2009, 30(8):25-29.
106. 刘基宏, 潘如如, 王鸿博, 高卫东. 管纱追溯管理系统的研发. 棉纺织技术, 2010,38(9):551-553.

107. 李玉红, 潘如如, 高卫东, 刘基宏, 柴志雷 (2010). 基于数字图像处理的拼毛比例分析. 纺织学报, 31(11):20-24.
108. 潘如如, 高卫东 (2009). 高精度机织物图像倾斜的自动纠正. 纺织学报, 30 (10):58- 61.
109. 潘如如, 高卫东 (2008). 基于图像处理的机织物密度的高精度识别. 纺织学报, 29(11): 128-131.
110. 潘如如, 高卫东, 张星烨(2008). 机织物图像的高精度纠偏及效果验证. 纺织学报, 29(4):51-53, 57.
111. 潘如如, 高卫东, 张星烨 (2008). 基于动态聚类的织物疵点识别算法. 纺织学报, 29(10):122-126.

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