Table 1: Results for the datasets Balance, Basketball, Bolts, Coil2000, Fars, House16H, Ionosphere, Magic, Movement Libras, Optdigits, Pollution, Quake y Satimage in the comparison with the multi-objective evolutionary approaches

Algorithm	*#R*	$Av_{Sup}(\sigma)$	$Av_{Conf}(\sigma)$	$Av_{Lift}(\sigma)$	Av_{Conv}	$Av_{CF}(\sigma)$	$Av_{NetConf}(\sigma)$	$Av_{YulesQ}(\sigma)$	$Av_{Amp}(\sigma)$	$Av_{Div}(\sigma)$	$\%Tran(\sigma)$
Balance											
QAR-CIP-NSGAII	**132.20**	0.04 (0.00)	**0.92** (0.00)	**6.37** (0.31)	∞	**0.88** (0.01)	0.68 (0.01)	**0.93** (0.00)	3.97 (0.03)	**0.83** (0.00)	91.72 (1.23)
MOPNAR	96.80	**0.16** (0.01)	0.83 (0.02)	2.02 (0.09)	∞	0.70 (0.02)	0.43 (0.00)	0.81 (0.01)	**2.99** (0.07)	0.64 (0.01)	**100.00** (0.00)
NICGAR	26.40	0.06 (0.02)	**0.92** (0.03)	4.25 (0.44)	∞	0.86 (0.04)	**0.69** (0.03)	0.91 (0.02)	3.81 (0.18)	0.82 (0.02)	89.96 (2.19)
Basketball											
QAR-CIP-NSGAII	**200.60**	0.03 (0.01)	**0.99** (0.01)	**82.09** (2.07)	∞	**0.98** (0.01)	**0.96** (0.01)	**1.00** (0.00)	**2.10** (0.02)	**0.95** (0.01)	96.67 (1.36)
MOPNAR	134.20	**0.13** (0.01)	0.97 (0.01)	58.43 (4.03)	∞	0.94 (0.01)	0.84 (0.02)	0.98 (0.01)	2.27 (0.04)	0.75 (0.02)	**100.00** (0.00)
NICGAR	49.80	0.04 (0.01)	**0.99** (0.01)	9.43 (2.53)	∞	**0.98** (0.02)	0.80 (0.04)	0.99 (0.01)	2.15 (0.09)	**0.95** (0.01)	91.67 (4.04)
Bolts											
QAR-CIP-NSGAII	**174.00**	0.08 (0.01)	**1.00** (0.00)	**30.19** (1.97)	∞	**1.00** (0.00)	**0.99** (0.00)	**1.00** (0.00)	2.10 (0.07)	**0.91** (0.03)	**100.00** (0.00)
MOPNAR	69.00	**0.37** (0.12)	**1.00** (0.00)	15.77 (5.69)	∞	**1.00** (0.01)	0.92 (0.04)	**1.00** (0.00)	2.30 (0.12)	0.54 (0.15)	**100.00** (0.00)
NICGAR	9.80	0.30 (0.04)	0.98 (0.02)	5.51 (1.66)	∞	0.98 (0.02)	0.93 (0.03)	**1.00** (0.00)	**2.00** (0.00)	0.82 (0.02)	**100.00** (0.00)
Coil2000											
QAR-CIP-NSGAII	**58.60**	0.26 (0.11)	**0.93** (0.04)	**127.77** (103.26)	∞	**0.93** (0.04)	0.80 (0.13)	0.86 (0.13)	3.33 (0.63)	0.72 (0.05)	**100.00** (0.00)
MOPNAR	39.20	**0.41** (0.04)	0.92 (0.08)	6.80 (3.63)	∞	0.89 (0.08)	0.71 (0.04)	0.97 (0.01)	3.15 (0.17)	0.55 (0.07)	**100.00** (0.00)
NICGAR	25.40	0.28 (0.03)	**0.93** (0.02)	3.65 (0.51)	∞	0.89 (0.03)	**0.86** (0.03)	**0.98** (0.01)	**2.04** (0.04)	**0.82** (0.03)	99.96 (0.10)
Fars											
QAR-CIP-NSGAII	**109.40**	0.22 (0.02)	0.95 (0.01)	**544.76** (220.80)	∞	0.95 (0.02)	0.75 (0.03)	0.84 (0.04)	3.33 (0.05)	0.78 (0.02)	**100.00** (0.00)
MOPNAR	58.00	**0.34** (0.02)	0.90 (0.05)	8.00 (1.79)	∞	0.89 (0.05)	0.83 (0.05)	**1.00** (0.00)	2.73 (0.12)	0.60 (0.04)	**100.00** (0.00)
NICGAR	12.60	0.31 (0.05)	**0.99** (0.00)	5.67 (0.58)	∞	**0.99** (0.01)	**0.98** (0.02)	**1.00** (0.00)	**2.02** (0.04)	**0.81** (0.04)	**100.00** (0.00)
House16H											
QAR-CIP-NSGAII	**288.20**	0.18 (0.02)	**0.93** (0.00)	**2549.17** (529.64)	∞	**0.91** (0.01)	0.71 (0.03)	0.84 (0.02)	2.98 (0.17)	0.76 (0.01)	99.81 (0.35)
MOPNAR	135.40	**0.31** (0.07)	0.92 (0.05)	9.65 (3.06)	∞	0.89 (0.05)	0.75 (0.03)	**0.99** (0.00)	2.79 (0.21)	0.49 (0.14)	**99.98** (0.02)
NICGAR	6.00	0.24 (0.04)	0.92 (0.00)	3.67 (0.71)	15.00	0.88 (0.01)	**0.83** (0.01)	0.98 (0.00)	**2.00** (0.00)	**0.86** (0.02)	82.18 (13.91)
Ionosphere											
QAR-CIP-NSGAII	**125.20**	0.10 (0.02)	**0.96** (0.01)	**143.56** (22.61)	∞	**0.94** (0.01)	**0.90** (0.02)	**0.99** (0.00)	2.67 (0.17)	0.87 (0.05)	87.70 (4.00)
MOPNAR	91.20	**0.32** (0.04)	0.94 (0.02)	12.59 (3.57)	∞	0.89 (0.02)	0.72 (0.04)	0.98 (0.01)	2.98 (0.06)	0.63 (0.05)	99.72 (0.64)
NICGAR	24.80	0.20 (0.02)	0.85 (0.01)	3.77 (0.59)	∞	0.78 (0.02)	0.74 (0.02)	0.96 (0.00)	**2.01** (0.02)	**0.88** (0.01)	**99.83** (0.15)
Letter											
QAR-CIP-NSGAII	**105.20**	0.09 (0.01)	0.89 (0.01)	**371.41** (84.60)	∞	**0.87** (0.01)	0.71 (0.03)	0.84 (0.05)	3.50 (0.17)	0.79 (0.04)	97.94 (1.87)
MOPNAR	75.60	**0.28** (0.03)	**0.91** (0.03)	7.63 (1.25)	∞	**0.87** (0.04)	0.64 (0.06)	**0.98** (0.01)	3.33 (0.23)	0.39 (0.04)	**99.94** (0.10)
NICGAR	18.80	0.15 (0.02)	0.89 (0.02)	5.94 (1.31)	∞	0.84 (0.03)	**0.76** (0.04)	0.96 (0.01)	**2.01** (0.02)	**0.87** (0.01)	98.17 (1.62)
Magic											
QAR-CIP-NSGAII	**210.80**	0.22 (0.04)	**0.95** (0.01)	**4464.87** (614.11)	∞	**0.93** (0.00)	0.56 (0.04)	0.71 (0.05)	2.35 (0.05)	0.74 (0.03)	99.95 (0.03)
MOPNAR	115.20	**0.37** (0.05)	0.91 (0.04)	8.72 (1.44)	∞	0.89 (0.03)	0.70 (0.03)	**0.99** (0.01)	2.58 (0.11)	0.52 (0.05)	**99.98** (0.03)
NICGAR	6.60	0.26 (0.01)	0.94 (0.01)	3.00 (0.06)	15.30	0.91 (0.02)	**0.85** (0.01)	**0.99** (0.01)	**2.00** (0.00)	**0.85** (0.01)	94.87 (4.93)
Movement Libras											
QAR-CIP-NSGAII	57.80	0.05 (0.01)	0.96 (0.02)	**154.26** (26.59)	∞	0.96 (0.02)	0.94 (0.02)	**1.00** (0.00)	2.37 (0.15)	**0.90** (0.03)	55.28 (14.04)
MOPNAR	**84.20**	0.26 (0.08)	**0.98** (0.01)	24.01 (17.48)	∞	**0.97** (0.01)	0.91 (0.02)	**1.00** (0.00)	2.62 (0.16)	0.62 (0.10)	99.34 (1.20)
NICGAR	27.80	**0.27** (0.01)	**0.98** (0.00)	3.64 (0.05)	∞	**0.97** (0.01)	**0.95** (0.01)	**1.00** (0.00)	**2.00** (0.00)	0.86 (0.00)	**100.00** (0.00)
Optdigits											
QAR-CIP-NSGAII	**94.60**	0.19 (0.03)	**0.87** (0.03)	**40.21** (21.97)	∞	**0.84** (0.04)	0.58 (0.05)	0.85 (0.02)	3.46 (0.21)	0.69 (0.04)	**100.00** (0.00)
MOPNAR	77.00	0.26 (0.07)	0.85 (0.05)	7.09 (2.53)	∞	0.81 (0.05)	0.60 (0.05)	**0.97** (0.01)	3.45 (0.40)	0.59 (0.02)	**100.00** (0.00)
NICGAR	28.80	**0.28** (0.02)	**0.87** (0.02)	3.24 (0.40)	∞	0.75 (0.05)	**0.71** (0.01)	0.95 (0.01)	**2.05** (0.04)	**0.82** (0.02)	**100.00** (0.00)
Penbased											
QAR-CIP-NSGAII	**108.40**	0.07 (0.01)	0.89 (0.03)	**243.31** (157.03)	∞	0.87 (0.03)	0.68 (0.08)	0.82 (0.08)	3.23 (0.26)	0.85 (0.02)	95.58 (2.79)
MOPNAR	107.20	**0.30** (0.07)	**0.92** (0.01)	6.82 (1.69)	∞	**0.89** (0.02)	**0.73** (0.02)	**0.99** (0.00)	2.99 (0.14)	0.59 (0.01)	**99.98** (0.03)
NICGAR	15.00	0.18 (0.02)	0.89 (0.01)	3.64 (0.77)	∞	0.83 (0.02)	**0.73** (0.03)	0.95 (0.01)	**2.06** (0.10)	**0.88** (0.02)	98.64 (0.92)
Pollution											
QAR-CIP-NSGAII	**249.40**	0.05 (0.01)	**1.00** (0.01)	**51.75** (0.80)	∞	**0.99** (0.00)	**0.97** (0.01)	**1.00** (0.00)	2.09 (0.02)	**0.95** (0.00)	**100.00** (0.00)
MOPNAR	79.40	**0.19** (0.03)	0.99 (0.01)	38.06 (3.84)	∞	0.98 (0.01)	0.90 (0.03)	**1.00** (0.00)	2.25 (0.07)	0.65 (0.11)	98.00 (2.74)
NICGAR	57.80	0.08 (0.01)	0.98 (0.01)	8.35 (1.33)	∞	0.97 (0.01)	0.84 (0.02)	**1.00** (0.00)	**2.07** (0.05)	0.93 (0.01)	**100.00** (0.00)
Quake											
QAR-CIP-NSGAII	**137.20**	0.08 (0.01)	**0.93** (0.01)	**450.67** (46.72)	∞	**0.89** (0.01)	0.62 (0.03)	0.77 (0.02)	2.32 (0.06)	**0.83** (0.02)	71.60 (2.25)
MOPNAR	49.20	**0.32** (0.05)	0.91 (0.04)	8.70 (2.47)	∞	0.86 (0.05)	0.57 (0.03)	**0.95** (0.02)	2.32 (0.09)	0.52 (0.04)	**100.00** (0.00)
NICGAR	3.60	0.28 (0.05)	0.90 (0.01)	2.51 (0.80)	11.40	0.81 (0.02)	**0.72** (0.02)	**0.95** (0.01)	**2.00** (0.00)	0.75 (0.03)	83.15 (1.70)
Satimage											
QAR-CIP-NSGAII	**299.80**	0.29 (0.02)	0.93 (0.01)	**34.04** (34.62)	∞	0.90 (0.01)	0.78 (0.02)	0.96 (0.02)	5.26 (0.36)	0.69 (0.02)	**100.00** (0.00)
MOPNAR	172.80	**0.32** (0.04)	**0.95** (0.01)	7.55 (0.61)	∞	**0.93** (0.01)	0.80 (0.02)	**1.00** (0.01)	3.74 (0.24)	0.63 (0.05)	**100.00** (0.00)
NICGAR	24.00	0.24 (0.01)	0.92 (0.01)	3.83 (0.31)	12.27	0.88 (0.01)	**0.85** (0.01)	0.99 (0.00)	**2.00** (0.00)	**0.82** (0.01)	93.94 (2.29)

Table 2: Results for the datasets Segment, Sonar, Spambase, Stock, Stulong, Texture, Wine, Wdbc y Vowel in the comparison with NGAs

Algorithm	*#R*	$Av_{Sup}(\sigma)$	$Av_{Conf}(\sigma)$	$Av_{Lift}(\sigma)$	Av_{Conv}	$Av_{CF}(\sigma)$	$Av_{NetConf}(\sigma)$	$Av_{YulesQ}(\sigma)$	$Av_{Amp}(\sigma)$	$Av_{Div}(\sigma)$	$\%Tran(\sigma)$
Segment											
QAR-CIP-NSGAII	**176.60**	0.18 (0.03)	**1.00** (0.00)	**451.22** (40.06)	∞	**0.99** (0.00)	0.71 (0.02)	0.79 (0.02)	2.46 (0.07)	0.83 (0.01)	**100.00** (0.00)
MOPNAR	123.60	**0.30** (0.01)	0.99 (0.01)	17.70 (2.35)	∞	0.98 (0.01)	0.89 (0.05)	**1.00** (0.00)	2.66 (0.13)	0.65 (0.04)	99.99 (0.02)
NICGAR	12.60	0.22 (0.01)	0.99 (0.01)	4.91 (0.43)	∞	0.98 (0.01)	**0.97** (0.01)	**1.00** (0.00)	**2.00** (0.00)	**0.88** (0.01)	99.76 (0.26)
Sonar											
QAR-CIP-NSGAII	**123.00**	0.06 (0.02)	**0.95** (0.02)	**128.39** (15.96)	∞	**0.92** (0.03)	**0.87** (0.04)	0.97 (0.01)	2.38 (0.10)	**0.91** (0.04)	80.20 (12.03)
MOPNAR	71.00	**0.32** (0.05)	0.93 (0.02)	13.38 (7.66)	∞	0.89 (0.03)	0.71 (0.06)	**0.98** (0.01)	2.74 (0.14)	0.64 (0.04)	99.14 (1.68)
NICGAR	22.80	0.26 (0.03)	0.89 (0.02)	7.56 (5.59)	∞	0.81 (0.02)	0.77 (0.02)	0.97 (0.01)	**2.01** (0.02)	0.84 (0.02)	**100.00** (0.00)
Spambase											
QAR-CIP-NSGAII	**178.60**	0.29 (0.03)	0.92 (0.02)	**154.34** (19.12)	∞	0.86 (0.03)	0.62 (0.01)	0.91 (0.02)	4.50 (0.26)	0.64 (0.03)	**100.00** (0.00)
MOPNAR	83.40	**0.37** (0.08)	0.86 (0.07)	6.79 (1.09)	∞	0.79 (0.07)	0.58 (0.07)	0.94 (0.02)	4.17 (0.84)	0.58 (0.03)	**100.00** (0.00)
NICGAR	11.20	0.12 (0.02)	**0.95** (0.02)	73.02 (28.16)	∞	**0.90** (0.03)	**0.87** (0.04)	**0.98** (0.01)	**2.00** (0.00)	**0.84** (0.05)	76.75 (31.96)
Spectfheart											
QAR-CIP-NSGAII	**109.00**	0.17 (0.02)	0.90 (0.02)	**55.74** (9.50)	∞	0.84 (0.03)	0.70 (0.04)	0.94 (0.01)	3.04 (0.19)	0.79 (0.02)	96.11 (1.53)
MOPNAR	55.80	**0.42** (0.02)	0.92 (0.03)	12.27 (5.12)	∞	0.86 (0.03)	0.64 (0.05)	0.96 (0.02)	2.70 (0.08)	0.60 (0.05)	99.70 (0.67)
NICGAR	72.20	0.13 (0.01)	**0.98** (0.00)	29.01 (4.73)	∞	**0.92** (0.00)	**0.92** (0.02)	**1.00** (0.00)	**2.03** (0.05)	**0.89** (0.02)	**100.00** (0.00)
Stock											
QAR-CIP-NSGAII	**107.60**	0.08 (0.01)	0.94 (0.01)	**91.91** (43.28)	∞	**0.93** (0.01)	**0.90** (0.01)	**1.00** (0.00)	2.97 (0.07)	0.83 (0.04)	73.75 (6.75)
MOPNAR	105.20	0.26 (0.02)	0.93 (0.01)	12.51 (1.32)	∞	0.92 (0.01)	0.83 (0.02)	**1.00** (0.00)	2.95 (0.14)	0.59 (0.03)	**100.00** (0.00)
NICGAR	9.20	**0.28** (0.02)	**0.95** (0.01)	3.01 (0.18)	∞	**0.93** (0.02)	0.87 (0.01)	0.99 (0.00)	**2.07** (0.07)	**0.86** (0.02)	99.41 (0.23)
Stulong											
QAR-CIP-NSGAII	**153.80**	0.19 (0.03)	0.82 (0.01)	**39.32** (5.96)	∞	0.74 (0.01)	0.58 (0.02)	0.92 (0.01)	2.90 (0.05)	0.60 (0.02)	99.94 (0.09)
MOPNAR	89.40	**0.31** (0.03)	**0.84** (0.02)	4.33 (0.38)	∞	**0.76** (0.02)	0.52 (0.02)	**0.93** (0.01)	2.69 (0.14)	0.50 (0.03)	**100.00** (0.00)
NICGAR	4.20	0.26 (0.07)	0.79 (0.03)	16.82 (19.90)	∞	0.62 (0.08)	**0.64** (0.06)	0.90 (0.03)	**2.04** (0.09)	**0.78** (0.06)	84.99 (7.01)
Texture											
QAR-CIP-NSGAII	**151.00**	0.14 (0.03)	**0.98** (0.01)	**785.39** (104.79)	∞	**0.97** (0.01)	0.79 (0.02)	0.84 (0.02)	2.66 (0.16)	0.78 (0.03)	99.87 (0.14)
MOPNAR	117.60	**0.29** (0.06)	0.97 (0.02)	14.26 (4.86)	∞	0.96 (0.02)	0.90 (0.04)	**1.00** (0.00)	2.83 (0.34)	0.62 (0.08)	**100.00** (0.00)
NICGAR	17.40	0.27 (0.02)	0.97 (0.00)	3.72 (0.39)	∞	0.95 (0.00)	**0.92** (0.01)	**1.00** (0.00)	**2.00** (0.00)	**0.82** (0.02)	95.85 (4.66)
Thyroid											
QAR-CIP-NSGAII	**216.60**	0.29 (0.03)	**0.93** (0.01)	**163.67** (40.48)	∞	**0.88** (0.01)	0.63 (0.02)	0.92 (0.01)	3.30 (0.15)	0.57 (0.03)	**100.00** (0.00)
MOPNAR	75.60	**0.37** (0.07)	0.92 (0.03)	11.43 (0.97)	∞	0.84 (0.02)	0.59 (0.04)	0.94 (0.01)	3.40 (0.56)	0.43 (0.06)	**100.00** (0.01)
NICGAR	6.20	0.23 (0.07)	**0.93** (0.02)	14.29 (9.46)	∞	0.80 (0.07)	**0.85** (0.02)	**0.95** (0.05)	**2.02** (0.05)	**0.79** (0.05)	98.16 (2.30)
Wdbc											
QAR-CIP-NSGAII	**126.80**	0.17 (0.02)	**0.99** (0.00)	**220.99** (35.03)	∞	**0.98** (0.00)	**0.96** (0.01)	**1.00** (0.00)	2.26 (0.07)	**0.85** (0.03)	98.57 (1.24)
MOPNAR	85.00	**0.33** (0.02)	0.98 (0.00)	15.45 (3.37)	∞	0.97 (0.00)	0.91 (0.02)	**1.00** (0.00)	2.56 (0.06)	0.58 (0.12)	**99.58** (0.51)
NICGAR	13.60	0.27 (0.03)	0.96 (0.02)	3.49 (0.39)	∞	0.93 (0.04)	0.90 (0.03)	0.99 (0.01)	**2.00** (0.00)	0.84 (0.01)	98.53 (2.10)
Vehicle											
QAR-CIP-NSGAII	**131.80**	0.16 (0.01)	**0.99** (0.00)	**107.11** (23.20)	∞	**0.98** (0.01)	**0.96** (0.01)	**1.00** (0.00)	2.35 (0.04)	0.83 (0.01)	**100.00** (0.00)
MOPNAR	107.40	**0.27** (0.03)	0.98 (0.01)	15.39 (2.89)	∞	**0.98** (0.01)	0.92 (0.02)	**1.00** (0.00)	2.55 (0.09)	0.64 (0.05)	**100.00** (0.00)
NICGAR	12.80	**0.27** (0.03)	0.97 (0.01)	3.46 (0.26)	∞	0.95 (0.02)	0.92 (0.01)	**1.00** (0.00)	**2.00** (0.00)	**0.86** (0.02)	99.98 (0.05)
Wine											
QAR-CIP-NSGAII	**122.20**	0.04 (0.00)	**0.97** (0.01)	**118.50** (4.75)	∞	**0.97** (0.01)	**0.95** (0.00)	**1.00** (0.00)	2.31 (0.09)	**0.92** (0.02)	83.94 (9.20)
MOPNAR	71.60	0.26 (0.03)	0.95 (0.02)	19.42 (9.74)	∞	0.93 (0.03)	0.81 (0.05)	**1.00** (0.00)	2.83 (0.11)	0.59 (0.03)	**100.00** (0.00)
NICGAR	6.60	**0.28** (0.01)	0.94 (0.01)	2.79 (0.18)	∞	0.90 (0.02)	0.84 (0.02)	0.99 (0.01)	**2.00** (0.00)	0.86 (0.00)	94.61 (0.85)
Vowel											
QAR-CIP-NSGAII	**84.40**	0.03 (0.00)	**0.95** (0.02)	**540.52** (58.59)	∞	**0.95** (0.02)	**0.92** (0.02)	**0.99** (0.01)	2.48 (0.12)	**0.94** (0.01)	84.19 (9.37)
MOPNAR	50.20	0.18 (0.03)	0.91 (0.04)	16.29 (2.97)	∞	0.90 (0.04)	0.75 (0.05)	**0.99** (0.01)	3.21 (0.20)	0.58 (0.05)	99.72 (0.63)
NICGAR	8.40	**0.27** (0.11)	**0.95** (0.05)	5.81 (2.57)	∞	0.92 (0.07)	0.89 (0.08)	0.95 (0.09)	**2.02** (0.05)	0.85 (0.01)	**100.00** (0.00)