# THE Quest of the MCM on n M on n Mod n B, n y c B, d y n n

yy, on  $o_{1}$ ,  $o_{1}$  M. e nd r A, c on COMAP r on  $o_{2}$ . M. c on r n Mod n M M, n n, n on con r,  $o_{1}$  nd d r,  $d_{r}$   $c \sim o_{2}$ , y  $o_{2}$  d  $o_{1}$  n od r, n and r of r of r. r of r o

# Contents

1	What is the MCM?	2
2	A Strong Paper	4
3	A Strong Team	9
4	A Strong Timeline	12
5	Searching for the Optimal Solution	16
6	Common Failures to Avoid	19
7	Closing Remarks	20
Α	2006 Questions	20

# 1 What is the MCM?

n. MM., pon. . n bop.od o

verse verse verdenden dnor er se By ern i se se

- CCrr C n.
- ono Mn on
- M , . 0, 0 ~

Add.on y.o. w.c. Bn/w.o. z, conzn.d o no c. od nd . c. m.o. d. m. ndn y. cond.d o. AM, z, MAA, z, nd. N/ M, z, o . w.c. woc. w.

### **Contest Rules & Logistics**

Yo, ..., do, con, y, y, y, nc, con, m, yo y no.dd o, c.n., , o, yo y, o, nc, yA, y, o, o, o, nc, yA, y, o, o, o, o, non.

The set of the set of

## • • •

Other than the control number, the paper must in no way identify the students, the advisor, or the school.

الم م d . d con جرب جمہ www.comap.com/undergraduate/contests/mcm/instructions.php

<sup>&</sup>lt;sup>†</sup>. , c n. ~ , , o . . c , c n. ~ , y, o y , o y ,

## History

···· n > .yo oo do . Bo d . · · · · o y n . M M

2000 onor Mn on Bron v non on n

#### **Background Research**

n vo da "n n o o vy v n y n od c v dy o o nd conconn n n n n n o dv o cn o o o o "n n n d n c y o d d n " dv v v A o h y /B. do nd on y nd o n on A . c An y o n . /n n nd d .y Modv c

## **Stylistic Considerations**

(x + co + c) = 0 (x + c) =

A on nd do y yo yo n n c.c.y... n c.c.y... don. ... or y n how A Novel Approach to... r. don. ... or y o dn. n.on. ... ddn. ... on ... n n.

A o nyon  $\neg$  n d c o n o  $\downarrow$  n n  $\neg$  n  $\downarrow$  n  $\neg$  n  $\neg$ 

no. Or the state of the state o

#### Programming

n ny M M.  $\lambda$  , won. where  $\lambda$  is a construction of  $\lambda$  is construction of  $\lambda$  is a constructio

Visualize data. Ln  $o_{3}$  c  $o_{3}$  c  $o_{3}$   $d_{2}$   $d_{3}$   $d_{3}$  d

Numerical algorithms. Bo con = n, n = c  $o_{x} = v$   $o_{x}$  n = n, n = n,

Debug. n cod n y no  $\neg$  n cod no o  $\neg$  d o  $\neg$  d y yo o n n on n  $\neg$   $\neg$   $\neg$  n  $\neg$  n  $\neg$   $\neg$  n  $\neg$   $\neg$  n  $\neg$   $\neg$   $\neg$  n n n d  $\neg$  c  $\circ$  n n o o o c  $\circ$  c  $\neg$  c d y yo y o  $\neg$  co $\circ$  c  $\neg$   $\neg$  no co  $\neg$   $\neg$  c nc  $\circ$  y

#### Writing

יא האיד con n .o באצא להאידי ב .. ח on אדי ח א באס אין א הלא אין א אין אין א .די . סדי אין א הדי oon אין פרא אדין ה n on א d n. אדי גבא

  $q \rightarrow \neg \neg \circ \circ \circ \circ \circ \cdots \rightarrow n d c \circ \neg \gamma$   $n \rightarrow \neg n d c \circ \neg \gamma$ 

Citations.

e e e con e la contra la contra de la contra

Mor. o. n. y ~ yo ~ . . y nd y ~ d o ~ rd y

## Thursday: The Contest Starts

 er e onder conder co

Monday:

## **Random Ascent Hill Climb**



## 6 Common Failures to Avoid

• • • • • • • n.dc • • d • ! n. • cdn • c.on • n.dd.op. c.on • • . • • oon • • • • •

Avoid arbitrary or unnecessary assumptions. o no. 0 - y = y = y = 0 or 0 - y = 0 y = 0 - y = 0 or 0 - 0 - 0 - 0 = 0nd n o y = 0 - 0 - 0 = 0

•y

# 7 Closing Remarks

· M Mr o.o. n. r no o. n.y.o. n c. y

BLMB, Accor A, Or

no , , , , on , , , , , , , n d o y , o , , o , nd c , o n, y, , , c, , o c n o d, n, , n , , , c n, c y d c o , o , o , o , o , y o d, n, , , n, no, , y, , n, n c n, , n, , no, , , , o , o d c, nd n, co, , o, e o , o, , , n, n c n, , n, , n d nc c c , , , n, , , , , , , no, nco on o, c no, c n, , n , , , , , , , , , , , , , , o, o nd n.

Annen nd. cont. n. the solution of the second of the secon

## References

B, A, M, nd oo o c n c , n M, M, n MLN, y, d.o. MM www.carroll.edu/~kcline/mcm.html ABL AX AN AN O O O O Y N N A Y http://www.gamasutra.com/features/20051026/gabler\_01.shtml BALY, BLAN, MANN, Ano, on contraction and n. . , n x .y co . n) ) ) BALX, BILAN, MANNANO, Oncourter, C.O.C. , n x y co . n) ) A B NAN N C An Y B 00 0 $A \rightarrow L_B$ ,  $n c q \rightarrow m q c q z o n n d c n n n Add on y y$ A. N. Condananna y, ncnca Lo a qo , n 🔉 🗴 L ce. 🔉 🍌 n nd 🚬 c NN YAN, B A, C z on oc n, on N, N,  $O_{1}$ a b b b b c nc b d Ann n c nc d Ann n c nc bMAX, LL  $\sim$   $L \sim \rho L d \sim N \sim 0$  n ANLAN, MAA M. od o Fnc. on Mn z. on o 6.  $N \xrightarrow{A} \cdots \xrightarrow{N} \cdots \xrightarrow{N} \cdots \xrightarrow{N} \cdots \xrightarrow{Z} \cdots \xrightarrow{N} \xrightarrow{N} \cdots \xrightarrow{N} \cdots$